

**2018 System Operation and
Remedial Action Progress
Griggs-Walnut Ground Water Plume
Superfund Site**

Prepared for

**Joint Superfund Project
Las Cruces, New Mexico**

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1. Introduction

Daniel B. Stephens & Associates, Inc. (DBS&A) has prepared this annual operation and maintenance (O&M) report for the Griggs-Walnut Ground Water Plume Superfund Site (the GWP site) on behalf of the Joint Superfund Project (JSP), which consists of the City of Las Cruces (CLC) and Doña Ana County (DAC). This report summarizes the progress made during the fifth and sixth years of operation of the groundwater remedy at the GWP site and addresses the requirements of Paragraphs 16, 24, and 28, and their subsections, of the statement of work (SOW) associated with the U.S. Environmental Protection Agency (EPA) Unilateral Administrative Order (UAO) for the O&M phase of the remedial action (RA) issued to the CLC and DAC pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (EPA Region 6 CERCLA Docket No. 06-05-07, dated December 19, 2017). A previous UAO and SOW were issued by EPA under which design and site-specific plans were completed and approved (including a pre-achievement O&M plan [DBS&A, 2012] and a sampling and analysis plan [SAP] [DBS&A, 2011]). The current UAO has an effective date of January 4, 2018. Updated site-specific plans, including a pre-achievement O&M plan and a SAP, were completed under the new UAO with an effective date of November 2018. Therefore, as the majority of the O&M activities discussed in this report were completed prior to the effective date of the updated site specific plans, the O&M activities (e.g., monthly system sampling) were completed primarily under the previously approved plans dated 2011 and 2012. The groundwater monitoring event described in this report was completed under the latest SAP approved in November 2018.

In 2017, EPA issued a new UAO for the GWP site outlining a new and updated SOW for the remedy. As part of this new SOW, the JSP was required to update the pre-achievement O&M plan per requirements within the SOW and submit them to EPA for approval. The pre-achievement O&M plan was updated, and was approved by EPA in a letter dated November 19, 2018. Because updates to the pre-achievement O&M plan, which includes the SAP, were taking place during the typical annual monitoring and reporting period, the annual groundwater monitoring event was not completed in 2017 (also, groundwater monitoring was not required by the previous modified administration order [MAO]); therefore, a 2017 annual report was not



prepared. The operational data from 2017 (e.g., groundwater volumes treated, monthly system sampling results) are included in this report.

1.1 Background

The GWP site is located in Las Cruces, New Mexico (Figure 1). In 1993, perchloroethene (PCE, also known as tetrachloroethene), a chlorinated solvent commonly used as a degreaser and a dry-cleaning agent, was detected in CLC municipal drinking water supply wells CLC 21 and CLC 27 during routine sampling performed by the New Mexico Environment Department (NMED). PCE was first detected in supply well CLC 18 in 1995. In 2000, PCE was first detected in CLC 24 at a concentration slightly less than 1 microgram per liter ($\mu\text{g/L}$). In October 2001, PCE was detected in CLC 24 at a concentration of 1.60 $\mu\text{g/L}$.

The GWP site was added to the EPA National Priorities List (NPL) of Superfund sites on June 14, 2001. At the time of listing, PCE had been detected in one CLC municipal drinking water supply well (CLC 18) at a concentration above the maximum contaminant level (MCL) of 5 $\mu\text{g/L}$ for PCE established by the Safe Drinking Water Act (SDWA). PCE had been detected in four additional CLC municipal wells (CLC 19, 21, 24, and 27) at concentrations below the MCL. The maximum PCE concentration reported in the plume was 50.2 $\mu\text{g/L}$, detected in CLC 18 in 2005. CLC 19, 21, and 24 are all currently off-line; CLC 18 and CLC 27 are part of the RA as described in this section.

The remedial investigation (RI) and feasibility study (FS) were performed by CH2M Hill under contract to the EPA (CH2M Hill, 2006a and 2006b). The Proposed Plan was prepared in December 2006 and the record of decision (ROD) issued by EPA on June 14, 2007 (U.S. EPA, 2007); these documents set forth the selected remedy for the GWP site: Remedial Alternative 4 from the FS (Enhanced Groundwater Extraction with Treatment). Construction of the remedy began in September 2011. On June 13, 2012, a final inspection was completed and signed off on by representatives from EPA, NMED, DBS&A, CLC, and Highland Enterprises (the Contractor). A preliminary close-out report was approved by EPA on July 20, 2012, officially accepting the remedy's construction.



The JSP has been operating the GWP groundwater remediation system (Figure 2) since August 2012. The remediation system consists of pumping contaminated groundwater from wells CLC 18 and CLC 27 to a centralized treatment facility. The treatment facility consists of a metal building, raw water and treated water equalization tanks, a low-profile, stacked-tray air stripper system, and a disinfection system. Water is pumped from CLC 18 and CLC 27 to a raw water equalization tank through 6-inch polyvinyl chloride (PVC) water lines. Transfer pumps convey water through the low-profile, stacked-tray air stripper units to a treated water equalization tank. Prior to treatment, an anti-scalant is injected into the raw water stream to mitigate scale within the air strippers.

The treatment facility can accommodate a total hydraulic flow of 500 gallons per minute (gpm), which is greater than the current combined total flow from the two extraction wells of approximately 300 gpm. The treated water is disinfected and then pumped through an 8-inch transmission line to tie into the existing distribution system at CLC 27. The treated water is conveyed to the Upper Griggs Reservoir through an existing 10-inch waterline and mixes in the reservoir with water from other municipal supply wells; it is then distributed into the CLC water supply system. Figure 3 provides a process flow diagram for the treatment process.

As detailed in the ROD, the remedial action objectives (RAOs) for the GWP site are as follows:

- RAO #1: Prevent human exposure to contaminated groundwater with PCE concentrations above the MCL (5 µg/L).
- RAO #2: Maintain capture of the PCE-contaminated groundwater plume above the MCL (5 µg/L).
- RAO #3: Restore groundwater to its beneficial use as a drinking water supply with PCE concentrations no greater than the MCL (5 µg/L).

As defined in the ROD, prior to remedial action, the groundwater plume was located generally between East Griggs Avenue and East Hadley Avenue, extending east to near Interstate 25 (I-25) and west to beyond North Solano Drive in Las Cruces. The extent of the plume at the



beginning of the RA is shown in Figure 4. The property uses in this area are predominantly recreational, light industrial/commercial, and residential.

1.2 Purpose

The purpose of this report is to summarize the 2017 and 2018 progress that has been made in addressing groundwater contamination at the GWP site. As required in Paragraph 28 of the SOW, this report includes the following:

- Description of progress made toward achieving performance standards
- System operating performance evaluation
- Groundwater hydrologic evaluation
- Groundwater quality evaluation
- Summary of permitting and regulatory activities
- Summary of problems or difficulties encountered and how they were or will be resolved

This report also describes the current status of deliverables required by the UAO and any actions taken or future plans. A groundwater monitoring evaluation report (Appendix A) and groundwater remediation optimization report (Appendix B) are included as required by Paragraphs 16 and 24, respectively, of the SOW; these reports address the content required in the third and fourth bullets above. The evaluation presented in this report will provide EPA with the information necessary to determine whether the remedial approach undertaken continues to be successful in achieving the remedial action objectives.



2. Progress Made Toward Meeting Remediation Goals

This section describes progress made toward achieving the RAOs as set forth in the ROD. During 2017 and 2018, the groundwater extraction and treatment system was operated on behalf of the JSP by the Las Cruces Utilities (LCU) staff. To achieve progress and to meet these requirements, the following tasks were completed:

- Groundwater extraction wells CLC 18 and CLC 27 were operated on a daily basis. CLC 27 was operated 24 hours a day. CLC 18 was operated for 4 hours a day until March 2018, when operation increased to 8 hours per day.
- The groundwater treatment system was operated on a 24 hour per day, 7 day a week (24/7) basis.
- CLC 18 and CLC 27 were sampled monthly for PCE.
- Raw (extracted) and finished (treated) water were sampled monthly for PCE.
- Exhaust air from AS-1 and AS-2 was sampled for monitoring of PCE concentration.
- Periodic maintenance and minor repairs were conducted per manufacturer's recommendations for equipment related to the extraction wells, conveyance system, and treatment system.
- The submersible pumps and motors in CLC 18 and CLC 27 were replaced, and pumping rates were increased in March 2018.
- Groundwater monitoring was conducted.

During this two-year reporting period, the extraction and treatment system operated for more than 97 percent of the time.



2.1 Progress Toward Attaining Performance Standards

The performance standards for this project include substantive requirements, criteria, and limitations that are specified in the ROD, the UAO, the SOW, the EPA-approved final remedial design, and other EPA-approved submissions, including the RA work plan. The JSP has met all substantive requirements to date, including submitting all documents required by the SOW from the UAO. The JSP has consistently operated the remediation system to extract PCE-contaminated water and treat it to concentrations below the MCL.

The uranium concentrations in CLC 18 and CLC 27 are below the EPA MCL of 30 µg/L. Arsenic concentrations in CLC 18 and CLC 27 are below the EPA MCL of 10 µg/L. No additional treatment to remove these constituents is required at this time. Although PCE degradation products (i.e., trichloroethene [TCE], cis-1,2-dichloroethene [DCE], and trans-1,2-DCE), benzene, and uranium were discussed in the ROD, the only remediation goal established was the SDWA MCL of 5 µg/L for PCE. As described in the ROD, naturally occurring substances—such as arsenic and uranium—are generally not addressed under EPA CERCLA authority, and therefore also do not have remediation goals. Progress toward the remedial goal is being achieved through the removal of PCE from groundwater by extraction and treatment.

2.2 Progress Toward Remedial Action Objectives

As outlined in the site ROD, the RAOs for groundwater at the GWP site were established in accordance with the *Presumptive Response Strategy and Ex Situ Treatment Technologies for Contaminated Ground Water at CERCLA Sites* (U.S. EPA, 1996), and are provided in Section 1.1.

To address RAO #1, the JSP worked with the New Mexico Office of the State Engineer (OSE) to put a new well drilling moratorium in place for the area in and adjacent to the PCE plume at the GWP site. The CLC has also ceased pumping wells within the plume that are not part of the extraction system for the GWP site. These two measures, combined with treatment, are effectively addressing RAO #1.



Pumping of CLC 27 and CLC 18 is meeting RAO #2 by capturing contaminated groundwater with PCE concentrations above 5 µg/L. Groundwater elevation and concentration data provide evidence that the PCE plume is decreasing in mass and remedial progress is being made (Appendices A and B). Figure 8 of Appendix A shows the December 2018/January 2019 water level elevation contours for the upper hydrogeologic zone (UHZ) overlain on the accompanying PCE concentrations in the UHZ. Figure 9 of Appendix A shows the December 2018/January 2019 water level elevation contours for the lower hydrogeologic zone (LHZ) overlain on the accompanying PCE concentrations in the LHZ. These figures demonstrate that the area of groundwater containing PCE concentrations above the MCL is being captured by the pumping of these two wells in the UHZ; additional discussion regarding capture in the LHZ is provided in Appendix A.

Progress toward restoring groundwater to beneficial use as a drinking water supply (RAO #3) continues through removal of PCE mass from the aquifer. Approximately 24.5 pounds of PCE was removed from the GWP in 2017 and 2018, bringing the total removed from the GWP since system startup to approximately 70 pounds.



3. System Monitoring and Operations Summary

This section provides a detailed description of the extraction and treatment system monitoring and laboratory analytical results. Total groundwater volumes extracted and total PCE mass removed for the period are also provided. The following subsections provide a more detailed summary and evaluation of the system operation and scheduled and unscheduled maintenance completed by LCU staff.

3.1 Treated Groundwater

Figure 1 provides a layout of the GWP site wells and treatment facility. Figure 2 provides a map of the treatment facility and extraction wells. LCU staff continued to perform remediation system process water and effluent air sampling per the previous SAP (DBS&A, 2011) through 2017 and 2018.

Remediation system sampling has included monitoring the extracted and treated groundwater for volatile organic compounds (VOCs) and total metals. The volume of water extracted and treated is also recorded. To ensure that air quality standards are not exceeded during the removal of VOCs via air stripping, air quality samples are also collected from the air stream that exits the GWP site. Tables 1a and 1b summarize the analytes that are being monitored.

Table 2 summarizes the frequency of remediation system sampling. Table 3 lists the alternative remediation system sampling locations. Table 4 summarizes the monthly volume pumped from CLC 18 and CLC 27 as reported to the OSE, as well as the PCE concentration in each well. Appendix C summarizes daily volumes pumped and treated for each well. Appendix D provides laboratory analytical reports for remediation system sampling.

To determine the mass removed, the mass of PCE leaving the system (as measured after treatment) is subtracted from the mass of PCE entering the system (as measured from the extraction wells):

$$\text{Raw Water PCE Mass} - \text{Finished Water PCE Mass} = \text{Mass Removed}$$



The mass entering the system is determined by calculating a weighted average to take into account the pumping strategy at CLC 18, as it only ran 4 to 8 hours per day:

$$\text{Raw Water PCE Mass} = \frac{\text{Conc}_{\text{CLC18}} * \text{Vol}_{\text{CLC18}} + \text{Conc}_{\text{CLC27}} * \text{Vol}_{\text{CLC27}}}{\text{Vol}_{\text{CLC18}} + \text{Vol}_{\text{CLC27}}}$$

This allows the mass removal calculation to be completed based on data for samples taken directly from the well, along with known volumes of extracted water. An alternative would consider the raw water concentration measured in the treatment building after the pump, which includes irregular mixing and impacts of volatilization in the storage tank, and is subject to variation in concentration depending on when the sample is collected (e.g., whether or not CLC 18 is running).

The mass exiting the system is determined by multiplying the treated water volume (calculated as the sum of the volume pumped from CLC 18 and the volume pumped from CLC 27) by the measured finished water concentration. Where the finished water concentration is below detection limits (all samples to date), the concentration is set to half of the detection limit for the purposes of the mass removal calculation:

$$\begin{aligned} \text{Finished Water PCE Mass} &= \text{Conc}_{\text{treated}} * \text{Vol}_{\text{treated}} \\ &= \text{Half the Detection Limit} * \text{Vol}_{\text{CLC18+CLC27}} \end{aligned}$$

This method of mass removal calculation has been used in all previous annual reports. Table 5 summarizes the weighted concentration of PCE in the raw water before treatment. Table 5 also provides finished water PCE concentrations and monthly totals of the treated water volume. In 2017, 11.0 pounds of PCE were removed; in 2018 13.5 pounds of PCE were removed. It should be noted that the raw volume and finished volume measurements will not match due to time differences between readings for the OSE and supervisory control and data acquisition (SCADA) system downloads, storage, and demand; however, for the purposes of all calculations, the volumes used were the volumes measured at the wellheads. In the groundwater remediation optimization report (Appendix B), mass removal for CLC 18 is calculated using a different technique based on a correlation between PCE concentration and specific conductance, which demonstrates good agreement with the method outlined above.



The combined weighted concentration of PCE entering the treatment system remained relatively constant throughout the reporting period, with a minimum concentration of 12.5 µg/L in October 2018 and a maximum concentration of 16.3 µg/L in February 2017 (Figure 5). As shown in Figure 5, the concentration of PCE in CLC 18 continues to exhibit wider monthly fluctuations, with a high of 18 µg/L in February 2017 and a low of <1.0 µg/L in October 2018. As discussed and illustrated in Appendix B, the PCE concentration varies over the operational time each day; therefore, the non-detect value in October is not believed to be representative of the concentration for the entirety of October (supported by a measured PCE concentration in November of 4.6 µg/L). The PCE concentration in CLC 27 remained stable over the reporting period, with an average of 14.6 µg/L.

The treatment system is operating as designed, and is effectively removing PCE; the finished water laboratory analytical results were all below detection limits over the reporting period (Table 5).

3.2 Air Emissions

All of the contaminants removed from groundwater are assumed to be released to the atmosphere. Potential air emissions from the air strippers were calculated based on the raw and finished concentrations of several contaminants, including PCE. The NMED Air Quality Bureau emissions standards for a no permit required (NPR) designation are 10 pounds per hour and 10 tons per year. The pounds-per-hour emission rate is calculated by dividing the calculated monthly mass of PCE removed in pounds by the number of hours in a month. The emission rate in tons per year was calculated by summing the calculated mass of PCE removed for the calendar year. The results of these calculations are summarized in Tables 6 and 7. The calculated emission rate for PCE is well below limits and the NPR designation is still valid. Confirmation air samples are collected to verify these results; air samples have consistently been below detection limits.



3.3 Summary of Operations

In 2017 and 2018, the remediation system had only a handful of operational shutdowns. The two extraction wells, CLC 18 and CLC 27, pumped a combined volume of 216,623,380 gallons of contaminated water. A total of 96,151,555 gallons was pumped in 2017 and a total of 120,471,826 gallons was pumped in 2018. The daily volumes pumped, per well and combined, are tabulated in Appendix C.

Table 8 provides monthly runtimes and percent runtime for each of the two extraction wells. The system operated for more than 98 percent of the time during the two-year reporting period. Runtimes are based on 24/7 operation of CLC 27. All other components of the treatment system cycle on and off as the raw and finished water tank levels reach their high and low set points. The use of CLC 27 operation as an indicator of remediation system runtime assumes that if water is coming into the system, it is being treated and leaving the system. It is possible that one or more pieces of equipment may be down, but if CLC 27 is operating, water is being treated. CLC 27 operated for 8,635 hours out of a possible 8,760 hours during the reporting period. CLC 18 was operated on a part-time basis and ran for 4 hours per day until March 2018, when the runtime was increased to 8 hours per day. The pump and motor in each well were replaced in March 2018. Pumping rates for the two wells before the pump and motor replacement averaged 175 gpm for CLC 18 and 156 gpm for CLC 27. After pump and motor replacement, CLC 18 pumped at about 88 gpm and CLC 27 pumped at approximately 214 gpm. Based on monthly maintenance memoranda from LCU staff and hours recorded by the SCADA system, the system was down for a total of 205 hours, with 103 hours due to scheduled maintenance and the replacement of the extraction well pumps and motors. The remaining 102 hours of down time were due to troubleshooting and repair of various equipment outages. Outages occurred on only 34 out of 730 days, with only the well re-equipping requiring outages of 24 hours or longer. Scheduled periodic maintenance was performed on the treatment system and required shutting down the system for only a few hours each time.

The longest system shut down period was for the removal and replacement of pumps and motors in extraction wells CLC 18 and CLC 27. This work was conducted by Rodgers & Co. from March 5 through 10, 2018. CLC 27 passed the bacteriological testing and was put back in



service on March 9, 2018. CLC 18 passed bacteriological testing and returned to service on March 10, 2018.

3.4 Summary of Maintenance Records

Regular semiannual maintenance was performed on the treatment system in March and September of each year. In 2017, the following unscheduled maintenance actions were performed:

- Replaced inoperable level transducer in tank T-1
- Replaced check valve on transfer pump #2
- Replaced ruptured motor seal and repaired the electrical motor in finished water pump P-2
- Replaced worn bushings, sample test cocks, and gauges
- Replaced worn diaphragm on peristaltic pump

In 2018, the following unscheduled maintenance actions were performed:

- Repaired blowers due to power outage
- Replaced overheating breaker on CLC 27 (after larger pump was installed)
- Replaced check valve on AS-2 transfer pump (May)
- Installed rebuild kit on chlorine injector pump #2
- Replaced check valve on AS-2 transfer pump (November)

In addition to maintenance on the remediation system, maintenance activities were completed on some of the monitoring wells in August and October 2018. These activities included extending the well vault on GWMW-01 approximately 15 inches due to previous construction activities that had changed adjacent grade, replacement of all quick connect fittings on each



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port on each FLUTE well, inspect and replace tubing as needed on FLUTE wells, and construction of a new well vault, concrete apron and well cap on MW-SF2.



4. Groundwater Monitoring and Evaluation

During 2017 and 2018, LCU staff continued to measure depth to groundwater in the appropriate wells on a monthly and quarterly schedule as prescribed in the previous SAP (DBS&A, 2011). As the updated SAP (DBS&A, 2018a) was approved in November 2018, the annual monitoring event (groundwater sampling and water level measurement) for 2017/2018 was completed in December 2018 and January 2019 in accordance with the updated SAP. This annual event was considered a baseline monitoring event as defined in the SAP. A report summarizing the activities and data collection of the baseline monitoring event is provided as Appendix E. Results of the baseline groundwater monitoring event include water level elevations for each well. Results of the groundwater elevations and PCE concentrations in the FLUTE wells indicated lack of integrity of the FLUTE well liners. Therefore, additional liner integrity testing of the FLUTE wells was completed in May 2019 and confirmed lack of integrity of the FLUTE liners. The well integrity testing procedures and results are summarized in Appendix F. Based on FLUTE sampling results and FLUTE well integrity testing (Appendix F), data from the FLUTE wells are rejected for this sampling event.

In May 2019, an attempt was made to sample CLC 20 to provide further plume definition to the south (CLC 20 is not in the updated SAP), but sampling efforts were unsuccessful and could not be completed in the time frame of this report.

John Shomaker & Associates, Inc. (JSAI) has updated the groundwater model for the GWP site based on all data collected. The groundwater model updates and their implications are summarized in Appendices A and B. Figure 6 shows the general extent of the PCE plume at the end of the reporting period.

Monitoring well elevations that have been used in previous years were taken from a variety of sources over time. To ensure consistent elevations, CLC provided an updated elevation survey of all wells in the groundwater monitoring network (Table A-1 of the groundwater monitoring plan [GWMP]). These elevations were used to calculate groundwater elevations in this report.



As specified in the pre-achievement O&M plan, the Terracon groundwater sampling team received training in the proper sampling and water level measurement techniques for FLUTE monitoring wells. This training was provided by Mr. Ian Sharp, Chief of Field Operations at FLUTE, on January 4, 2019 prior to sampling of these wells. Additional project team members present at the training included DBS&A project staff, including GWP site Quality Assurance Manager (QAM) Dr. Gregory Schnaar, and LCU staff. Documentation of this training, including an attendance list, is provided with Terracon's sampling report (Appendix E).

A groundwater monitoring program evaluation report is provided as Appendix A. The purpose of the evaluation report is to evaluate the effectiveness of the groundwater sampling and monitoring network in assessing the extent of the plume and the overall progress being made in operating the remedy to achieve the RAOs and remedial goals set forth in the ROD. The evaluation report includes hydrogeologic cross sections, with vertical extent of the plume defined for each hydrogeologic zone (Figures 4 and 5 of Appendix A), time-series graphs showing contaminant concentrations for each monitoring and extraction well (Appendix D of Appendix A), and horizontal extent of the PCE plume in each hydrogeologic zone (Figures 8 and 9 of Appendix A). As detailed in JSAI's report:

- The vertical and horizontal extents of the UHZ PCE plume are adequately defined by the groundwater monitoring network.
- Water quality sampling is no longer needed at GWMW-03 and NGMW-02 because all PCE results from sampling in the last 5 years (Table 9) have been below the detection limit. It is therefore reasonable to remove these wells from the monitoring program. Removal of GWMW-03 and NGMW-02 will not affect plume delineation because NGMW-03 (which will remain in the sampling program) provides the needed horizontal and vertical plume delineation northwest of the plume. Even though PCE results at GWMW-06 were non-detect in 2019, groundwater quality sampling will continue at that well, as it had not been recently sampled prior to 2019.
- Based on FLUTE sampling results and FLUTE well integrity testing (Appendix F), data from the FLUTE wells are being rejected for this sampling event. This lessens the overall certainty regarding plume definition in the LHZ. The NGMW wells with



GWMW-11 define the plume to the west/southwest, but definitive information on the northern and southern boundaries of the plume is not as robust.

The PCE plume definition in the LHZ is primarily based upon the previous sampling events. Due to FLUTE well data rejection, the extent of the PCE plume in the LHZ cannot be fully defined, particularly on the northern and southern boundaries. Based on water levels, water quality data in conventional wells, and current hydrologic conditions, the plume footprint in the LHZ is not anticipated to have dramatically changed from the plume footprint identified in 2017. In 2017, there were no PCE detections in CLC 20, indicating that the plume did not extend that far south. Although the data from GWMW-09 are rejected, the fact that detected concentrations at all ports were below the MCL indicates that the plume concentration in that area may be declining. These points are discussed in greater detail in Appendix A. Based on the results of this year's sampling and the well integrity testing, recommendations will be made regarding changes to the groundwater monitoring network in a technical memorandum prior to annual meetings with EPA in summer 2019.

A groundwater remediation optimization report is provided as Appendix B. The purpose of the optimization report is to evaluate whether modification of system operations is warranted to more efficiently and effectively proceed with contaminant mass capture and removal. As described in JSAI's report (Appendix B), the current remediation system configuration is adequate. JSAI's evaluation indicates the following:

- The two extraction wells are working effectively.
- The March 2018 pump replacement in each well has improved PCE mass removal.
- New extraction wells are not required at this time.
- Changes to municipal pumping of CLC 61 were recommended and implemented

These points are discussed in greater detail in Appendix B.



4.1 Groundwater Hydrologic Evaluation

As stated in Section 3, groundwater elevations in regional wells were measured monthly and quarterly according to the SAP, and groundwater elevations of the GWP site's monitoring wells occurred in December 2018 and January 2019 as part of the groundwater sampling event. In Appendices A and B, JSAI uses the water level data to define potentiometric surface contour maps for local and regional groundwater gradients at the GWP site. Also included in JSAI's reports are the pumping water levels over the two-year reporting period for the two extraction wells.

As in previous reports, the horizontal hydraulic gradient at the GWP site is fairly flat, with gradient generally directed toward the two extraction wells, CLC 18 and CLC 27. Regionally, the hydraulic gradient is also small. Small cones of depression can be observed around the GWP site extraction wells and other CLC production wells in the area. Further detail of hydrologic activity at the site is provided in Appendices A and B.

4.2 Groundwater Quality Evaluation

Table 10 lists sampling wells required by the SAP and the number of samples collected during this period of operation.

Table 11 lists the analyses performed on the groundwater samples. One round of groundwater sampling occurred during this reporting period in December 2018/January 2019. Table 12 summarizes the results from the December 2018/January 2019 sampling event, including the FLUTE well data that have been rejected. Historical PCE results are summarized in Table 9. Complete analytical reports for the sampling event are included in Terracon's groundwater monitoring report (Appendix E). The groundwater monitoring report includes details regarding well conditions and samples collected. As required in the pre-achievement O&M plan, FLUTE conducted training for sampling staff on proper techniques for measuring water levels, purging, and sampling inside of FLUTE type wells. FLUTE wells were sampled in accordance with the FLUTE well standard operating procedure (SOP) provided as an appendix to the updated SAP (DBS&A, 2018a).



TCE continues to be the only PCE degradation product detected in groundwater at the GWP site. Analytical results for cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride were below reporting limits for all samples collected in 2017 and 2018. TCE was detected in MW-SF10 at a concentration of 1.1 µg/L in December 2018. TCE was detected in GWMW-16-D with a maximum concentration of 1.3 µg/L in December 2018. TCE was also detected in GWMW-09 port 5 and GWMW-01 port 3 at concentrations of 1.9 µg/L and 1.3 µg/L, respectively. As in 2016, all concentrations are well below the 5 µg/L MCL for TCE.

The remaining compounds detected were fuel hydrocarbons. Benzene was detected in 8 samples collected at 2 wells (compared to 8 samples in 3 wells in 2016). Toluene was detected in 20 samples at 5 wells (compared to 25 samples at 5 wells in 2016). All toluene detections were in FLUTE wells. Because FLUTE wells are documented to leach toluene (Cherry et al., 2007), the toluene results from the FLUTE wells are biased high, and toluene results from FLUTE wells are therefore rejected. Detected benzene concentrations were consistently below the MCL of 0.005 milligrams per liter (mg/L). Acetone was also identified in multipoint wells GWMW-03, GWMW-06, GWMW-08, GWMW-09, NGMW-1, NGMW-2, and NGMW-3, but not in any of the standard wells at the site. The acetone detected in these wells is thought to be related to well construction activities, and is not indicative of a contaminant release. Figure 6 shows the approximate area of PCE detections at concentrations above 5 µg/L. The general shape of the plume remained the same. The only major difference in the plume area is that results from the December 2018/January 2019 groundwater monitoring event indicate that GWMW-09 does not maintain any ports with PCE concentrations elevated above the MCL. This is a FLUTE well and its data are rejected; however, the fact that PCE concentrations in all ports were below the MCL may indicate that this area is outside the plume. In Appendix A, JSAI describes a downward hydraulic gradient in the lower hydrogeologic zone that was induced by increased pumping from CLC 61 in 2018. Operation of CLC 61 was stopped in March 2019.

Appendix B provides a groundwater remediation optimization report written by JSAI that summarizes results of groundwater sampling and groundwater model updates with respect to efficacy of the remedy. CLC 18 is optimized at the current setting and is removing as much mass as possible on its current run schedule. CLC 27 has seen improved capture and removal



with increased pumping. JSAI recommends that CLC 27 pumping be increased in 2019 from 220 gpm to a range of 240 to 250 gpm; PCE concentrations will be monitored to evaluate if this change results in mass removal improvement.



5. Permitting and Regulatory Activities

In 2018, the primary regulatory activity for the GWP site was the update and implementation of the pre-achievement O&M plan per the revised SOW. As mentioned in Section 1.1, the new UAO and SOW were finalized and issued on December 21, 2017 with an effective date of January 4, 2018. A draft of the updated pre-achievement O&M plan was submitted for EPA review on April 4, 2018. Comments from EPA were received by the JSP in a letter dated September 14, 2018 and a final draft was submitted to EPA in October 2018. The final draft was approved by EPA in a letter dated November 19, 2018.

In accordance with the institutional control implementation and assurance plan (ICIAP) (DBS&A, 2018b), the JSP is required to contact OSE to verify that no well permits have been issued within the well permitting moratorium area defined by the plume's boundary in 2007 with an additional 500-foot buffer. No new wells have been permitted within the moratorium area. The JSP has also contacted the NMED Ground Water Quality Bureau (GWQB) and the NMED Petroleum Storage Tank Bureau (PSTB) to determine if any new releases have been reported in the plume footprint. No new releases have been reported. The letters to and responses from OSE, GWQB, and PSTB are included as Appendix G.



6. Difficulties Encountered

Overall, the remediation system is operating at high performance and is well maintained by LCU staff. Minor repairs and down time are summarized in Sections 3.3 and 3.4. This section details major challenges encountered over the reporting period and their completed or intended solutions.

6.1 Extraction Well Pump Replacement

As described in previous annual O&M reports, JSAI recommended that pumping rates should be changed to optimize and improve plume capture. In an effort to meet these pumping rates, the submersible pumps and motors in CLC 18 and CLC 27 were replaced in March 2018 to accommodate the adjusted pumping. As of March 2018, CLC 18 and CLC 27 are pumping at 88 gpm and 214 gpm, respectively (in contrast to 170 gpm and 156 gpm in 2016).

6.2 Wells Dry During Sampling

During the baseline groundwater sampling event, several of the monitoring wells were dry or contained inadequate volume to sample; therefore, groundwater level measurements and/or samples could not be collected. The dry wells included MW-3, MW-4, MW-5, MW-SF2, and MW-SF5. It was expected that these wells would become dry as the remediation system operates due to water table drawdown caused by pumping of extraction wells. The JSP will continue to attempt to collect groundwater level measurements and/or samples from these wells for two additional reporting periods. If after the two additional reporting periods no sample is able to be collected, the JSP will propose that these monitoring wells be removed from the groundwater monitoring plan, as described in the SAP.

6.3 Sampling Techniques

During the December 2018/January 2019 baseline groundwater sampling, the JSP's QAM performed an audit of process water sampling and groundwater sampling tasks performed by the sampling teams. The QAM observed and documented discrepancies between the methods



prescribed in the SAP and the methods performed by the sampling team. The QAM provided feedback to the sampling teams with items to change for the next sampling event. Some of the QAM's recommendations include changes to the SAP.



7. Data Validation and Verification

All data collected for this project undergo a series of review checks to ensure sufficient quality and conformity to the project's data objectives. The data validation and data verification process are important steps used to determine the integrity, suitability, and usability of the data. Data validation and verification were performed to confirm that the data collected via sampling and field measurements are as complete as possible and meet the site-specific data requirements and data quality objectives of the project, as described in the pre-achievement O&M plan (DBS&A, 2018c). Additionally, the SAP provides guidance on indicators of data quality. The data quality indicators are summarized in Table 13.

A report detailing the results of the data validation and verification effort is provided as Appendix H. The data validation report confirms that the air and water samples collected as part of the system monitoring and that subsequent analytical results are of sufficient quality and therefore meet the project quality control (QC) criteria; groundwater monitoring data are also generally found to meet the project QC criteria. As described in Appendix F, FLUTE well data for this year are rejected and do not meet the QC criteria. Recommendations for improvements identified in the data validation report will be incorporated in next year's annual sampling/reporting. Recommendations for changes to the groundwater monitoring network will be identified in a forthcoming technical memorandum.



8. Conclusions

Significant progress has been made toward achieving RAOs, as follows:

- A total of 745,175,756 gallons of groundwater has been extracted from the dissolved-phase plume at the GWP site.
- More than 70 pounds of PCE has been removed from the extracted groundwater, including approximately 24.5 pounds removed in 2017/2018.
- COCs have not been detected in the treated groundwater that has been returned to the public water supply distribution system at Griggs Reservoir.
- Groundwater elevation monitoring and groundwater modeling indicate that the area of groundwater containing detections of PCE in both the upper and lower hydrogeologic zones can be captured by remediation wells CLC 18 and CLC 27.

8.1 Status of Deliverables Required by the UAO

As required by the UAO, the pre-achievement O&M plan has been revised in accordance with the most recent SOW. This plan was approved by EPA in a letter dated November 19, 2018.

As agreed to by the EPA and the JSP, no annual O&M report was produced for the 2017 reporting period. However, this 2018 annual O&M report summarizes activities for both 2017 and 2018. The SOW requires submittal of the annual report on April 4 of each year. In March 2019, the JSP sought an extension on the submittal of the annual report due to the delay from review of the draft site plans in summer 2018. In a letter dated April 19, 2019, EPA granted an extension to June 4, 2019. This report will be submitted for EPA review by June 4, 2019, per the extension.

As required by the SOW, all plans associated with the pre-achievement O&M plan were reviewed. The only plan requiring changes this year is the SAP. A revised SAP is provided as



a concurrent deliverable to this annual report. A cover letter has been provided with the SAP that details the proposed changes.

8.2 Summary of Completed and Planned Work

The following work has been completed pursuant to the most effective operation and maintenance of the remedy:

- Extraction well pumps were replaced to accommodate optimal pumping rates.
- Pumping strategy has been modified per JSAI's recommendation to enhance capture of the PCE groundwater plume.
- The monitoring well network was updated from the network used in 2016 per the 2017 UAO (effective January 4, 2018) to exclude several monitoring wells and monitoring well ports and include several new monitoring wells, including the multi-port wells, NGMW-1, NGMW-2, and NGMW-3.
- The sampling team has received manufacturer training on sampling of FLUTE type wells per the SOP included as an appendix to the revised SAP.
- The JSP's QAM has conducted an audit of the sampling team's techniques and provided feedback on sampling techniques and clarification on items in the site-specific SAP, as needed.
- The pre-achievement O&M plan (which includes the SAP and the GWMP, among others) has been updated for clarity and to correct any minor errors encountered in the implementation of the work described therein.
- Well 61 pumping was discontinued in March 2019.

8.3 Recommendations

The JSP proposes the following to improve monitoring and remediation system efficacy:



- Install pressure transducers in GMMW-16(S,D) to collect daily water level data.
- Schedule 2019 and future sampling to occur prior to the coldest season in Las Cruces (December–February) to avoid sampling difficulties and freezing conditions.
- Increase pumping from CLC 27 from 220 gpm to a range of 240 to 250 gpm.
- Revisions to the groundwater monitoring program will be recommended in a subsequent technical memorandum.



References

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- CH2M Hill. 2006b. *Feasibility study report, Version 1.2, Griggs and Walnut Ground Water Plume Superfund Site, Las Cruces, New Mexico*. November 2006.
- Cherry, J.A., B.L. Parker, and C. Keller. 2007. A new depth-discrete multilevel monitoring approach for fractured rock. *Ground Water Monitoring and Remediation* 27(2): 57–70.
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- U.S. Environmental Protection Agency (U.S. EPA). 1996. *Presumptive response strategy and ex-situ treatment technologies for contaminated ground water at CERCLA sites, Final guidance*. EPA 540-R-96-023. October 1996.



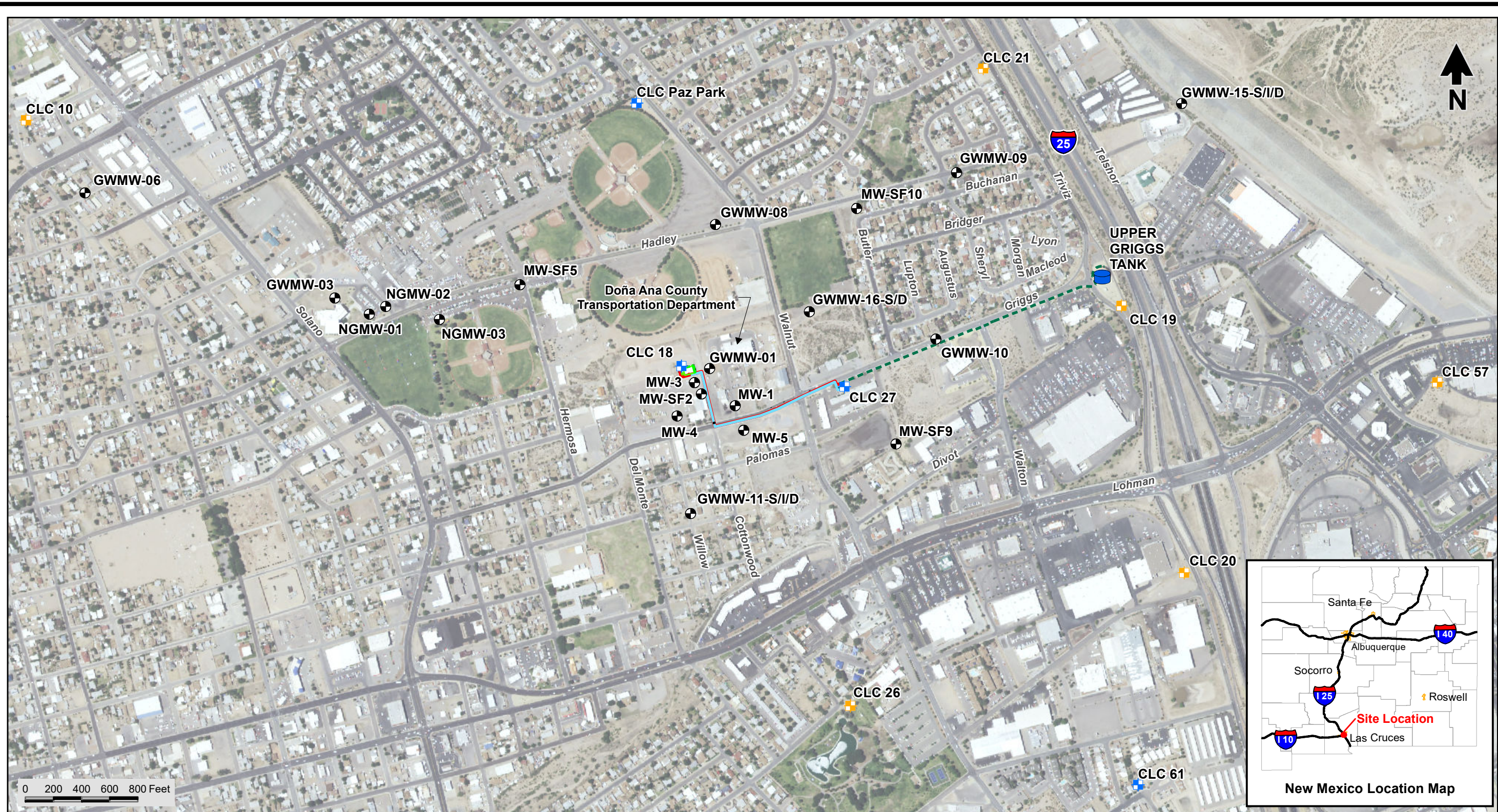
Daniel B. Stephens & Associates, Inc.

U.S. EPA. 2007. *Record of decision, Griggs and Walnut Ground Water Plume Superfund Site.*

June 2007. Available at <<http://www.donaanacounty.org/superfund/docs/GWPROD.pdf>>.

Figures

S:\PROJECTS\13.0251 CLC ENVIRONMENTAL SERVICES\GIS\MXD\REPORTS\2018 ANNUAL\FIG01 SITE MW LOC.MXD



Source: National Agricultural Imagery Program 2016

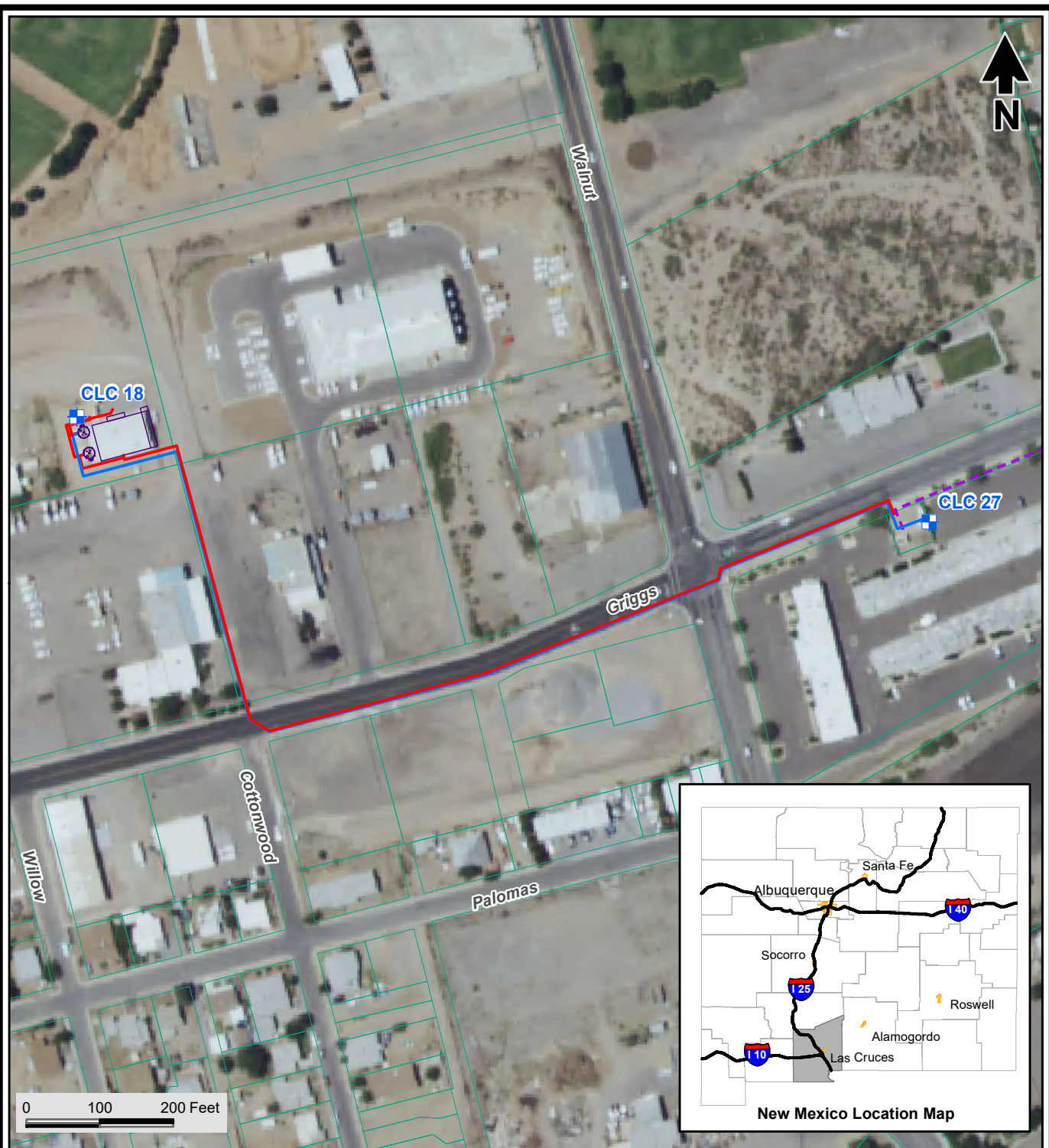
Explanation

- + Active CLC well
- + Inactive CLC well
- Monitor well
- CLC water reservoir
- Existing 10" water line to reservoir
- 6" raw water line
- 8" finished water line
- Treatment facility

**GRIGGS-WALNUT GROUND WATER PLUME SITE
REMEDIAL ACTION
Project Area Map**

Figure 1

S:\PROJECTS\13.0251_CLC_ENVIRONMENTAL_SERVICES\GIS\MXD\REPORTS\2018_ANNUAL\FIG02_GW_EXTRACTION_SITE.MXD



Source: National Agricultural Imagery Program August 2016

Explanation

- City of Las Cruces supply well
- Treatment facility
- 6" raw water line
- 8" treated water line
- - - Existing 10" water line to reservoir
- City of Las Cruces parcel boundary

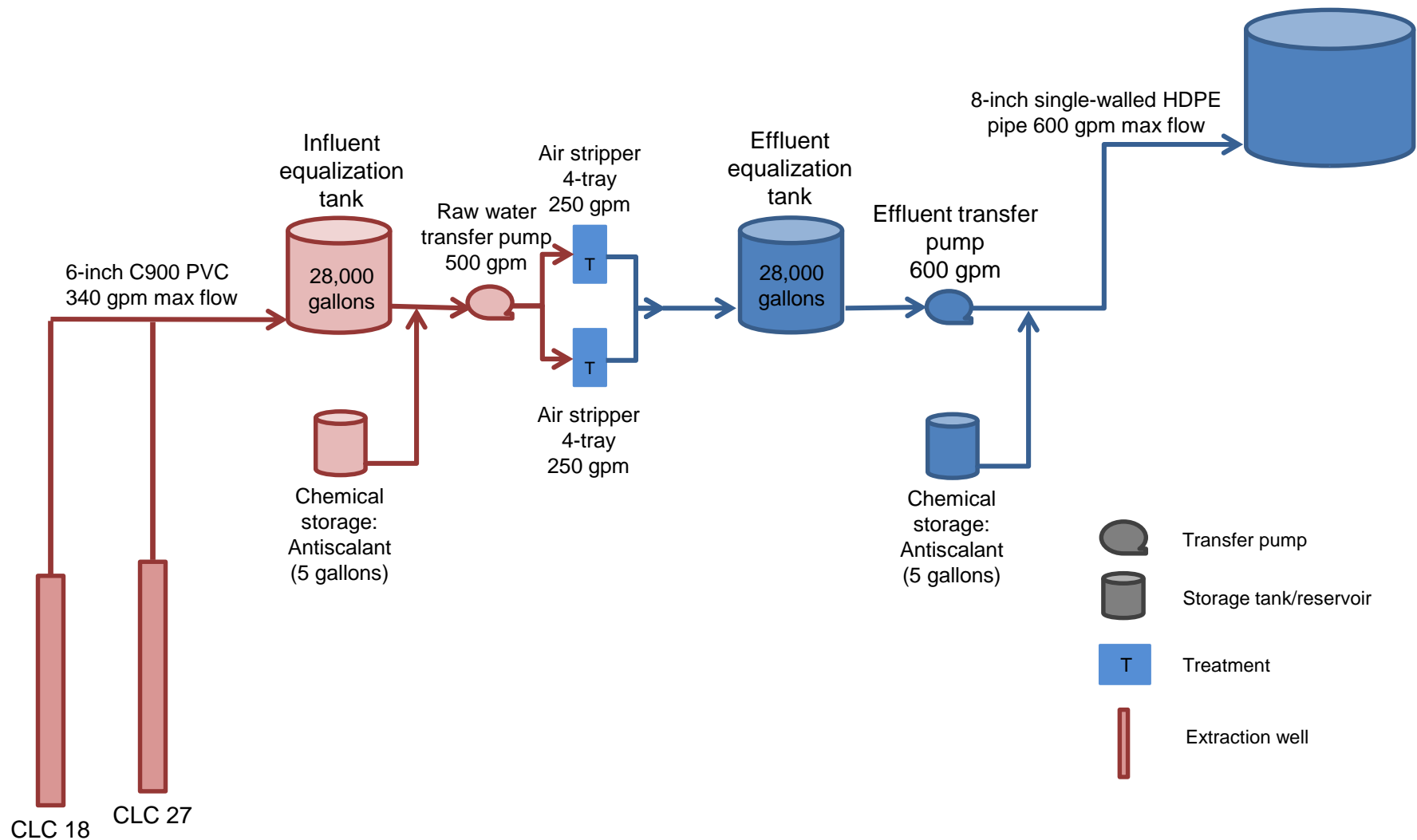
**GRIGGS-WALNUT GROUND WATER PLUME SITE
REMEDIAL ACTION
Groundwater Extraction Site**

Figure 2

Extraction Wells

Treatment

Upper Griggs Reservoir



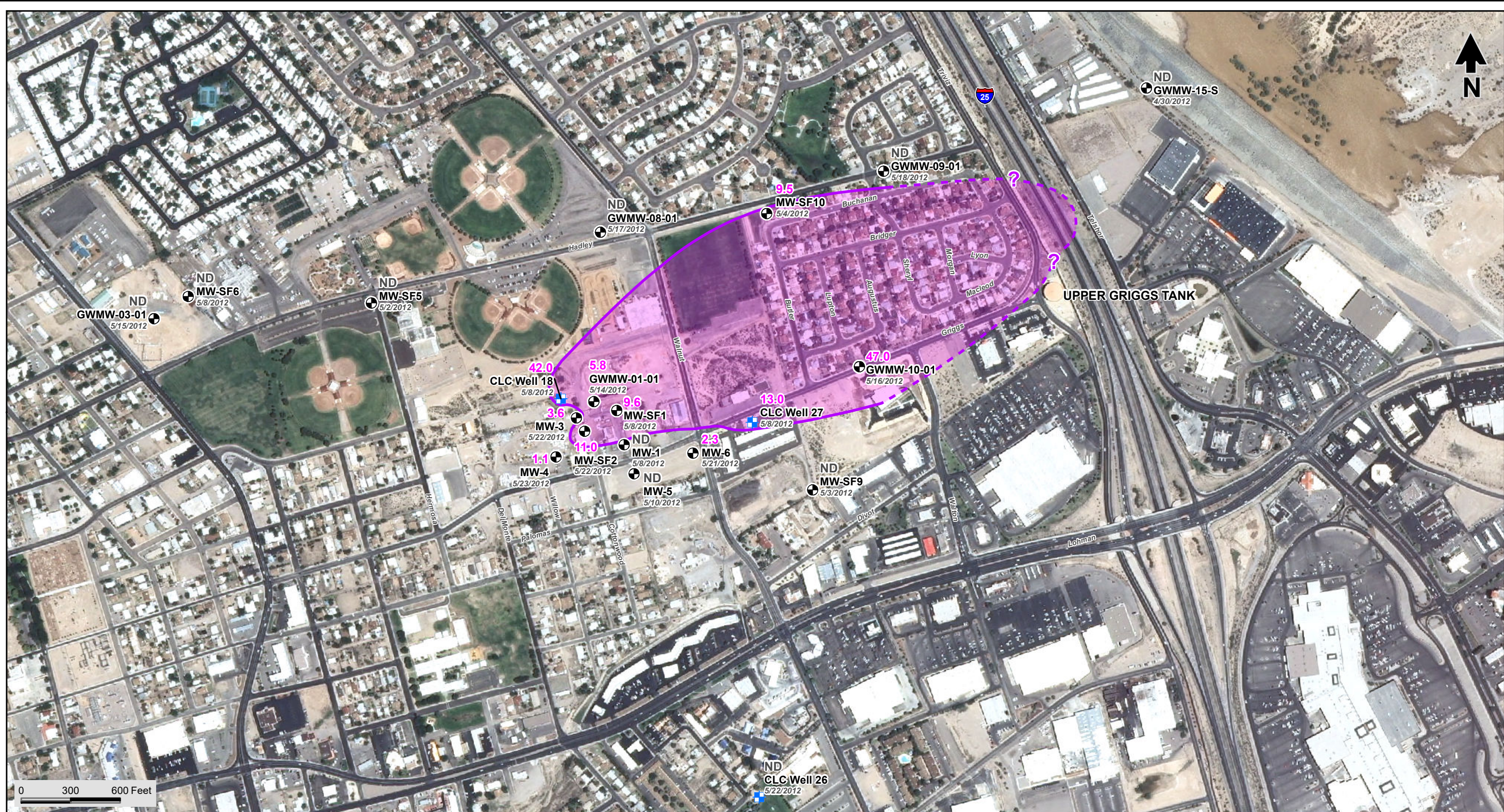
GRIGGS-WALNUT GROUND WATER PLUME SUPERFUND SITE
REMEDIAL ACTION
Remediation System Process Flow

Figure 3



Daniel B. Stephens & Associates, Inc.

2/28/19



Explanation

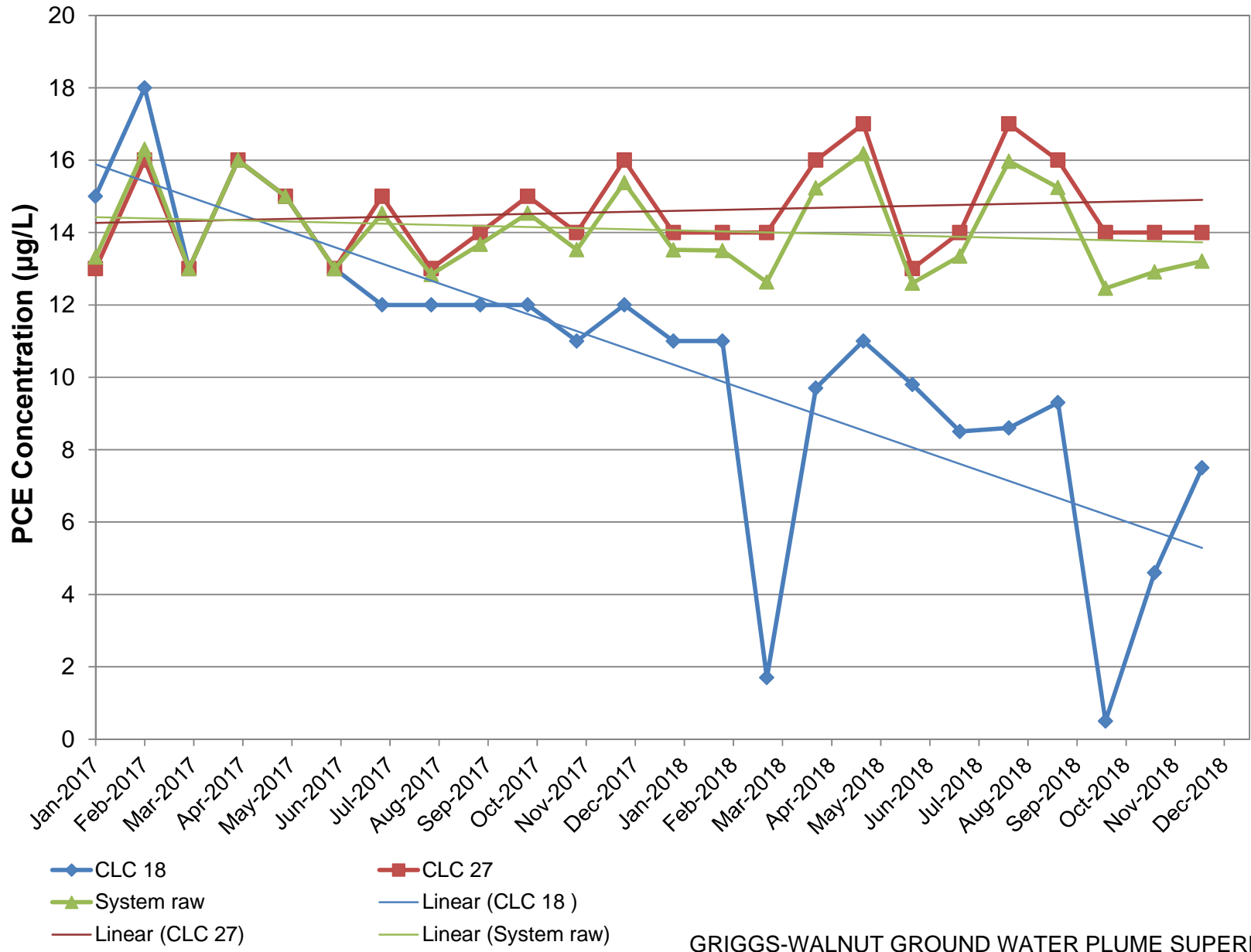
- Monitor well
- ⊕ CLC supply well
- PCE in groundwater, May 2012 (dashed where inferred)
- 2.3 Concentration (µg/L)
- MW-6 Well designation (port number)
- 5/21/2012 Sample date

Note: 1. ND = Not detected above reporting limit
 2. Plume reflects PCE concentrations as expressed in wells completed across the water table and in the shallowest port in the GMMW wells (Port 1).

Source: National Agricultural Imagery Program
 August 2009. Downloaded from RGIS.

**GRIGGS-WALNUT GROUND WATER PLUME SITE
 REMEDIAL ACTION
 PCE in Groundwater, May 2012**

S:\PROJECTS\13.0251_CLC_ENVIRONMENTAL_SERVICES\GIS\MXD\REPORTS\2018_ANNUAL\FIG04_PCE_GW_05_2012.MXD

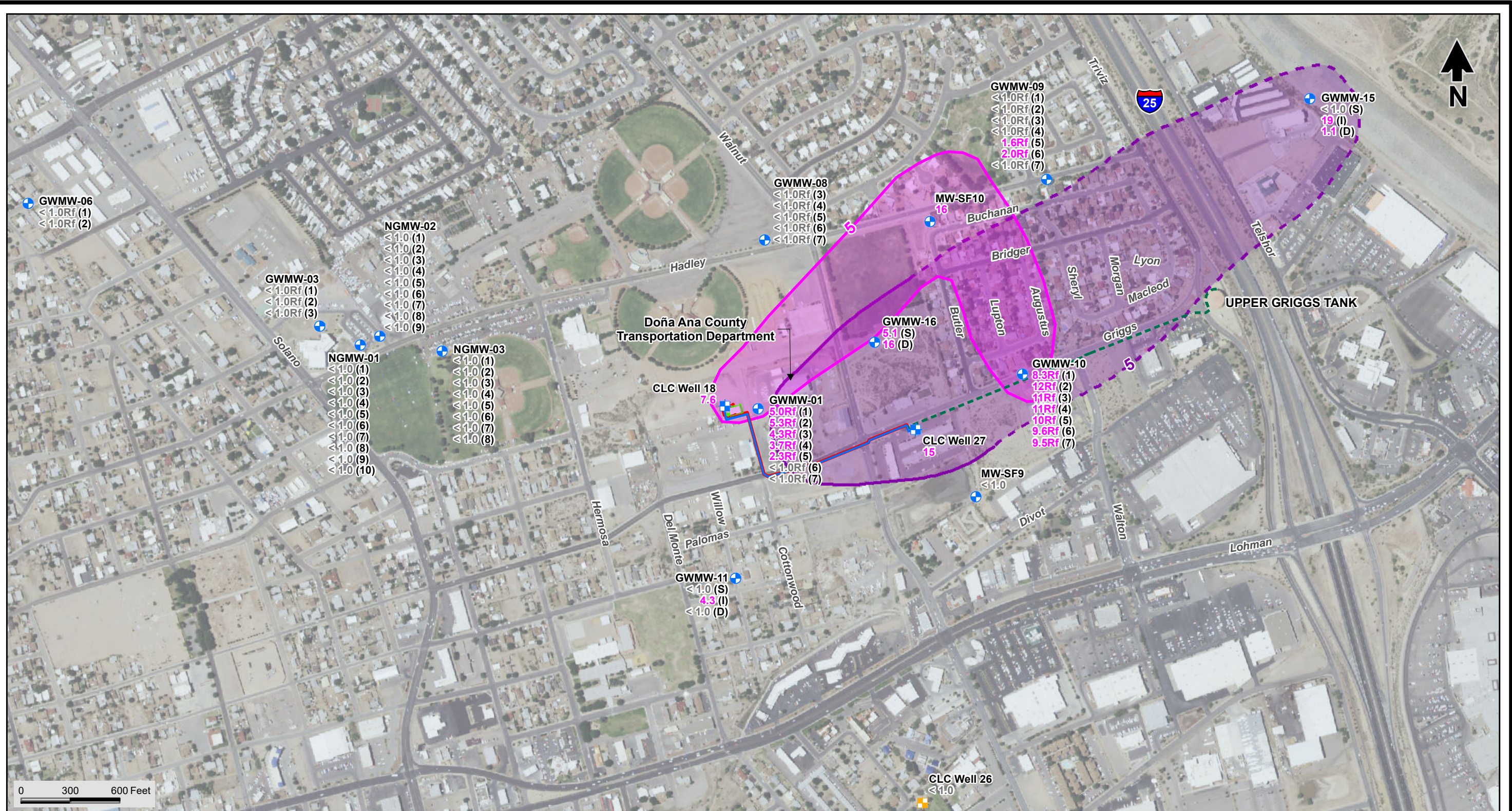


GRIGGS-WALNUT GROUND WATER PLUME SUPERFUND SITE
 REMEDIAL ACTION
Remediation System PCE Concentration

Figure 5



S:\PROJECTS\13.0251 CLC ENVIRONMENTAL SERVICES\GIS\MXD\REPORTS\2018 ANNUAL\FIG06 PCE GW 12 2018 UPPER AND LOWER HZ.MXD



Explanation

- Monitor well
- 6" raw water line
- PCE concentration contour (µg/L), upper
- Public supply well
- 8" finished water line
- PCE concentration contour (µg/L), lower (dashed where inferred)
- Inactive public supply well
- Treatment compound
- Existing 10" water line to reservoir

- MW-SF10** Well designation
- 16** Concentration (µg/L)
- < 1.0** Not detected above reporting limit
- Rf** Rejected, the data are unusable. FLUTE well liner lacks integrity.

Source: 1. National Agricultural Imagery Program May 2016.
2. PCE plume provided by Shoemaker and Associates.

**GRIGGS-WALNUT GROUND WATER PLUME SITE
REMEDIAL ACTION
PCE in Groundwater, December 2018**

Tables



Table 1a. Air Analytical Method and NMED Air Quality No Permit Required Emissions Standards

Emission	Analytical Method	Maximum Rate	
		lb/hr	ton/yr
Air	8260B	10	10

lb/hr = Pounds per hour
ton/yr = Tons per year

Table 1b. Groundwater Analytical Methodologies and Screening Levels

Analyte Class	Analytical Method	Concentration (µg/L)			
		Method Detection Limit ^a	Hall Environmental PQL	EPA MCL	NMWQCC Standard
Benzene	8260B	0.062	1.0	5	10
PCE	8260B	0.13	1.0	5	20
TCE	8260B	0.11	1.0	5	100
1,1-DCE	8260B	0.081	1.0	7	5
cis-1,2-DCE	8260B	0.20	1.0	70	NA
trans-1,2-DCE	8260B	0.18	1.0	100	NA
MTBE	8260B	0.24	1.0	6.2 ^b	NA
Vinyl chloride	8260B	0.18	1.0	2	1
Arsenic	200.8, ICPMS	0.5	1.0	10	100 ^c
Arsenic speciation	SM 3114B Mod.	2	2.0	10	100 ^c
Uranium	200.8, ICPMS	0.5	1.0	30	30 ^c

^a Method detection limit does not imply reporting limit.

^b EPA Region 6 medium-specific screening level (MSSL)

^c NMWQCC groundwater standards for arsenic and uranium apply to dissolved (filtered) concentrations.

µg/L = Micrograms per liter

EPA = U.S. Environmental Protection Agency

MCL = Maximum contaminant level

NMWQCC = New Mexico Water Quality Control Commission

ICPMS = Inductively coupled plasma mass spectrometry

PCE = Perchloroethene

TCE = Trichloroethene

DCE = Dichloroethene

NA = Not applicable

PQL = Practical quantitation limit



Table 2. Remediation System Sampling Frequency

Sample Location	Sample Matrix	Sample Point	Sample Method	Sample Analyses	Large Operational Change Sample Collection Schedule ^a	Normal Operation Sampling and Monitoring Schedule
CLC 18 wellhead	Groundwater	CLC18	Grab	EPA 8260B for VOCs	Sample after first hour of operation. Once per day for days 2 through 6 of system operation.	Sample once per month.
CLC 27 wellhead	Groundwater	CLC27	Grab	EPA 8260B for VOCs	Sample after first hour of operation. Once per day for days 2 through 6 of system operation.	Sample once per month.
Pump P-1 discharge	Groundwater	IS1	Grab	EPA 8260B for VOCs	Sample after first hour of operation of pump P-1. Every other day for first 6 days of operation.	Sample once per month.
Combined treated water after air stripping	Groundwater	ES0	Grab	EPA 8260B for VOCs	Sample after first 2 hours of operation of pump P-1. Once per day for days 2 through 6 of system operation.	Sample quarterly.
Treated water downstream of chlorine disinfection	Groundwater	ES1	Grab	EPA 8260B for VOCs	Sample after first 2 hours of operation of pump P-1. Once per day for days 2 through 6 of system operation.	Sample once per month or as directed.
C-1 air stripper emissions	Air	AS1	Grab	EPA 8260B for VOCs	Sample every other day for the first 6 days.	Sample quarterly.
C-2 air stripper emissions	Air	AS2	Grab	EPA 8260B for VOCs	Sample every other day for the first 6 days.	Sample quarterly.

^a For any large operational change the system will remain offline until startup is completed and normal operation is verified.

VOCs = Volatile organic compounds

Table 3. Alternative Remediation System Sampling Locations

Sample Location	Sample Matrix	Sample Point
Raw water transfer pump after anti-scalant injection	Groundwater	IS2
C-1 treated water	Groundwater	C1
C-2 treated water	Groundwater	C2
Tank 2 treated water	Groundwater	ES2



Table 4. Monthly Volume and PCE Concentration of Extracted Groundwater

Month	CLC 18		CLC 27	
	Groundwater Extracted (gallons)	Raw PCE Concentration (µg/L)	Groundwater Extracted (gallons)	Raw PCE Concentration (µg/L)
January 2017	1,286,651	15.0	6,783,262	13.0
February 2017	1,162,456	18.0	6,689,863	16.0
March 2017	1,303,911	13.0	7,329,035	13.0
April 2017	1,230,029	16.0	6,874,074	16.0
May 2017	1,294,217	15.0	6,652,371	15.0
June 2017	1,259,411	13.0	6,580,267	13.0
July 2017	1,236,639	12.0	6,579,235	15.0
August 2017	1,308,238	12.0	6,738,067	13.0
September 2017	1,266,754	12.0	6,525,041	14.0
October 2017	1,269,724	12.0	6,887,363	15.0
November 2017	1,259,665	11.0	6,691,606	14.0
December 2017	1,232,910	12.0	6,710,767	16.0
January 2018	1,283,608	11.0	6,769,004	14.0
February 2018	1,187,296	11.0	5,959,083	14.0
March 2018	1,010,831	1.70	8,056,700	14.0
April 2018	1,269,747	9.70	9,137,968	16.0
May 2018	1,301,018	11.0	8,238,619	17.0
June 2018	1,271,024	9.80	8,858,466	13.0
July 2018	1,310,989	8.50	9,796,961	14.0
August 2018	1,306,169	8.60	9,323,248	17.0
September 2018	1,247,352	9.30	9,784,380	16.0
October 2018	1,309,559	6.95 ^a	10,158,853	14.0
November 2018	1,274,806	4.60	9,745,900	14.0
December 2018	1,324,379	7.50	9,545,866	14.0
Total	30,207,382		186,415,998	

^a Sample analysis for October 2018 resulted in a non-detect for PCE in CLC 18. For the purposes of calculating mass removal, the values for September 2018 and November 2018 were averaged and this average value was used in calculating mass removed.

PCE = Perchloroethene
 µg/L = Micrograms per liter



Table 5. PCE Mass Removed

Month	PCE Concentration (µg/L)		Volume Treated (gallons)	Mass of PCE Removed (pounds)
	Raw	Finished		
January 2017	13.3	ND	8,069,913	0.9
February 2017	16.3	ND	7,852,319	1.0
March 2017	13.0	ND	8,632,946	0.9
April 2017	16.0	ND	8,104,103	1.0
May 2017	15.0	ND	7,946,588	1.0
June 2017	13.0	ND	7,839,678	0.8
July 2017	14.5	ND	7,815,873	0.9
August 2017	12.8	ND	8,046,305	0.8
September 2017	13.7	ND	7,791,795	0.9
October 2017	14.5	ND	8,157,087	1.0
November 2017	13.5	ND	7,951,271	0.9
December 2017	15.4	ND	7,943,676	1.0
January 2018	13.5	ND	8,052,613	0.9
February 2018	13.5	ND	7,146,379	0.8
March 2018	12.6	ND	9,067,531	0.9
April 2018	15.2	ND	10,407,714	1.3
May 2018	16.2	ND	9,539,638	1.2
June 2018	12.6	ND	10,129,489	1.0
July 2018	13.4	ND	11,107,950	1.2
August 2018	16.0	ND	10,629,417	1.4
September 2018	15.2	ND	11,031,732	1.4
October 2018	13.2	ND	11,468,412	1.2
November 2018	12.9	ND	11,020,706	1.1
December 2018	13.2	ND	10,870,245	1.2
Total			216,623,380	24.6

Note: For mass removal calculations, non-detect results are assumed to be one-half of the detection limit.
PCE = Perchloroethene
µg/L = Micrograms per liter
ND = Not detected



Table 6. PCE Concentrations in Ambient and Indoor Air

Month	Calculated PCE Ambient Air Concentration (lb/hr)	Calculated PCE Indoor Air Concentration ($\mu\text{g}/\text{m}^3$)
January 2017	0.001	0.0005
February 2017	0.002	0.0005
March 2017	0.001	0.0005
April 2017	0.001	0.0005
May 2017	0.001	0.0005
June 2017	0.001	0.0005
July 2017	0.001	0.0005
August 2017	0.001	0.0005
September 2017	0.001	0.0005
October 2017	0.001	0.0005
November 2017	0.001	0.0005
December 2017	0.001	0.0005
January 2018	0.001	0.0005
February 2018	0.001	0.0005
March 2018	0.001	0.0005
April 2018	0.002	0.0005
May 2018	0.002	0.0005
June 2018	0.001	0.0005
July 2018	0.002	0.0005
August 2018	0.002	0.0005
September 2018	0.002	0.0005
October 2018	0.002	0.0005
November 2018	0.002	0.0005
December 2018	0.002	0.0005

Note: For a conservative calculation, it is assumed that all mass removed based on water samples is discharged into the air.

PCE = Perchloroethene

lb/hr = Pounds per hour

$\mu\text{g}/\text{m}^3$ = Micrograms per cubic meter

Table 7. Calculated Air Emissions, 2013–2018

Contaminant of Concern	Calculated Air Emissions (tons per year)					
	2013	2014	2015	2016	2017	2018
PCE	4.76×10^{-3}	5.81×10^{-3}	5.45×10^{-3}	5.54×10^{-3}	5.52×10^{-3}	6.74×10^{-3}



Table 8. Monthly Runtime

Month	2017		2018	
	Total Runtime (hours)	Percent Runtime	Total Runtime (hours)	Percent Runtime
January	719.1	96.7%	740.1	99.5%
February	670.7	99.8%	672.0	100.0%
March	742.3	99.8%	634.0	85.2%
April	700.4	97.3%	717.4	99.6%
May	733.6	98.6%	740.7	99.6%
June	719.6	99.9%	717.9	99.7%
July	717.6	96.5%	744.0	100.0%
August	743.9	100.0%	743.5	99.9%
September	719.9	100.0%	717.3	99.6%
October	739.2	99.4%	744.0	100.0%
November	720.0	100.0%	720.5	100.0%
December	731.2	98.3%	744.0	100.0%
Total	8,657.5	98.8%	8,635.4	98.6%

Note: Runtimes are based on the 24/7 operation of CLC 27. All other components of the treatment system cycle on and off with tank levels. The use of CLC 27 operation assumes that if water is coming into the system, it is being treated and leaving the system. It is possible that one or more pieces of equipment may be down, but if CLC 27 is operating, water is being treated and the overall system is operating.



Table 9. PCE Results for Annual Groundwater Sampling, 2012–2018
Page 1 of 3

Well	PCE Concentration (µg/L)					
	2012	2013	2014	2015	2016	2018
CLC Paz Park Well	<1	<1	<1	<1	<1	NS
CLC 18	56	2.7	6	13	15	1.4
CLC 20	NS	<1	<1	<1	<1	NS
CLC 26	<1	<1	<1	<1	<1	<1
CLC 27	13	14	11	14	13	13
CLC 57	NS	<1	<1	<1	<1	NS
GWMW-01-01	5.8	11	1.3	3.8	9.8	5 Rf
GWMW-01-02	<1	<1	<1	<1	NS	5.3 Rf
GWMW-01-03	2.7	3.2	2	1.6	7	4.3 Rf
GWMW-01-04	<1	<1	<1	<1	<1	3.7 Rf
GWMW-01-05	3.2	<1	<1	<1	<1	2.3 Rf
GWMW-01-06	11	14	8	2.4	4.7	<1 Rf
GWMW-01-07	3.2	3.6	2.3	<1	<1	<1 Rf
GWMW-03-01	<1	<1	<1	<1	<1	<1 Rf
GWMW-03-02	<1	<1	<1	<1	<1	<1 Rf
GWMW-03-03	<1	<1	<1	<1	NS	<1 Rf
GWMW-03-04	NS	<1	<1	NS	NS	NS
GWMW-03-05	<1	<1	<1	NS	<1	NS
GWMW-03-06	<1	<1	<1	<1	<1	NS
GWMW-06-01	NS	NS	NS	NS	NS	<1 Rf
GWMW-06-02	NS	NS	NS	NS	NS	<1 Rf
GWMW-08-03	<1	<1	<1	<1	<1	<1 Rf
GWMW-08-04	<1	<1	<1	<1	<1	<1 Rf
GWMW-08-05	<1	<1	<1	<1	<1	<1 Rf
GWMW-08-06	<1	<1	<1	<1	<1	<1 Rf
GWMW-08-07	<1	<1	<1	<1	<1	<1 Rf
GWMW-09-01	<1	<10	<1	<1	<1	<1 Rf
GWMW-09-02	1.3	<20	<1	<1	13	<1 Rf
GWMW-09-03	<1	<10	1	5.1	9.2	<1 Rf
GWMW-09-04	1.2	<1	7.9	11	19	<1 Rf
GWMW-09-05	1.7	<10	1.5	16	<1	1.6 Rf
GWMW-09-06	<1	<10	<1	<1	<1	2 Rf
GWMW-09-07	<1	<10	<1	<1	5.1	<1 Rf

PCE = Perchloroethene

µg/L = Micrograms per liter

NS = Not sampled

Rf = Rejected, the data are unusable. FLUTE well liner lacks integrity.



Table 9. PCE Results for Annual Groundwater Sampling, 2012–2018
Page 2 of 3

Well	PCE Concentration (µg/L)					
	2012	2013	2014	2015	2016	2018
GWMW-10-01	47	<1	26	1.2	17	8.3 Rf
GWMW-10-02	14	7.1	11	4.4	18	12 Rf
GWMW-10-03	45	42	25	1.8	16	11 Rf
GWMW-10-04	4.5	3.7	1.3	1.2	13	11 Rf
GWMW-10-05	<1	<1	<1	<1	9	10 Rf
GWMW-10-06	<1	<1	<1	<1	7.3	9.6 Rf
GWMW-10-07	<1	<1	<1	4.2	7.5	9.5
GWMW-11-D	<1	<1	<1	<1	<1	<1
GWMW-11-I	<1	<1	<1	2	1.8	4.3
GWMW-11-S	<1	<1	<1	<1	<1	<1
GWMW-15-D	<1	<1	<1	<1	<1	1.1
GWMW-15-I	2.3	<1	1.1	6.1	5.6	19
GWMW-15-S	<1	<1	<1	<1	<1	<1
GWMW-16-S	NS	NS	NS	1.6	4.9	5.1
GWMW-16-D	NS	NS	NS	3.1	5	16
MW-1	<10	<5	<1	2.1	2.9	NS
MW-3	3.6	2.4	<1	NS	NS	NS
MW-4	1.1	4.2	1.6	NS	NS	NS
MW-5	<1	<1	<1	NS	NS	NS
MW-6	2.3	NS	NS	NS	NS	NS
MW-SF1	9.6	NS	NS	NS	NS	NS
MW-SF2	11	7.5	NS	NS	NS	NS
MW-SF4	NS	NS	<1	NS	NS	NS
MW-SF5	<1	<1	<1	1.1	1.1	NS
MW-SF6	<1	<1	<1	<1	<1	NS
MW-SF9	<1	<1	<1	<1	<1	<1
MW-SF10	9.5	12	NS	23	21	16
NGMW-01-01	NS	NS	NS	NS	NS	<1
NGMW-01-02	NS	NS	NS	NS	NS	<1
NGMW-01-03	NS	NS	NS	NS	NS	<1
NGMW-01-04	NS	NS	NS	NS	NS	<1
NGMW-01-05	NS	NS	NS	NS	NS	<1
NGMW-01-06	NS	NS	NS	NS	NS	<1

PCE = Perchloroethene

µg/L = Micrograms per liter

NS = Not sampled

Rf = Rejected, the data are unusable. FLUTE well liner lacks integrity.



Table 9. PCE Results for Annual Groundwater Sampling, 2012–2018
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Well	PCE Concentration (µg/L)					
	2012	2013	2014	2015	2016	2018
NGMW-01-07	NS	NS	NS	NS	NS	<1
NGMW-02-01	NS	NS	NS	NS	NS	<1
NGMW-02-02	NS	NS	NS	NS	NS	<1
NGMW-02-03	NS	NS	NS	NS	NS	<1
NGMW-02-04	NS	NS	NS	NS	NS	<1
NGMW-02-05	NS	NS	NS	NS	NS	<1
NGMW-02-06	Ns	Ns	Ns	Ns	Ns	<1
NGMW-02-07	NS	NS	NS	NS	NS	<1
NGMW-03-01	NS	NS	NS	NS	NS	<1
NGMW-03-02	NS	NS	NS	NS	NS	<1
NGMW-03-03	NS	NS	NS	NS	NS	<1
NGMW-03-04	NS	NS	NS	NS	NS	<1
NGMW-03-05	NS	NS	NS	NS	NS	<1
NGMW-03-06	NS	NS	NS	NS	NS	<1
NGMW-03-07	NS	NS	NS	NS	NS	<1
NGMW-03-08	NS	NS	NS	NS	NS	<1

PCE = Perchloroethene

µg/L = Micrograms per liter

NS = Not sampled

Rf = Rejected, the data are unusable. FLUTE well liner lacks integrity.



Table 10. Required Groundwater Sampling Locations

Sample Location	Number of Samples
CLC 18	30
CLC 26	1
CLC 27	30
GWMW-01 ^a	8
GWMW-03	3
GWMW-06	2
GWMW-08	5
GWMW-09 ^b	8
GWMW-10 ^b	8
GWMW-11-S	1
GWMW-11-I	1
GWMW-11-D	1
GWMW-15-S	1
GWMW-15-I	1
GWMW-15-D	1
GWMW-16-S	1
GWMW-16-D	1
MW-5	— ^c
MW-SF2	— ^c
MW-SF5	— ^c
MW-SF9	2
MW-SF10	1
NGMW-01	11
NGMW-02	10
NGMW-03	9

^a Includes samples from ports 1-7 and a duplicate from port 5.

^b Includes samples from ports 1-7 and a duplicate from port 2.

^c Unable to sample due to insufficient water within casing.



Table 11. Analytes Reported in Analysis of Groundwater Samples

Analyte	Units	Analyte	Units
1,1,1,2-Tetrachloroethane	µg/L	Bromomethane	µg/L
1,1,1-Trichloroethane	µg/L	Carbon disulfide	µg/L
1,1,2,2-Tetrachloroethane	µg/L	Carbon tetrachloride	µg/L
1,1,2-Trichloroethane	µg/L	Chlorobenzene	µg/L
1,1-Dichloroethane	µg/L	Chloroethane	µg/L
1,1-Dichloroethene	µg/L	Chloroform	µg/L
1,1-Dichloropropene	µg/L	Chloromethane	µg/L
1,2,3-Trichlorobenzene	µg/L	cis-1,2-DCE	µg/L
1,2,3-Trichloropropane	µg/L	cis-1,3-Dichloropropene	µg/L
1,2,4-Trichlorobenzene	µg/L	Dibromochloromethane	µg/L
1,2,4-Trimethylbenzene	µg/L	Dibromomethane	µg/L
1,2-Dibromo-3-chloropropane	µg/L	Dichlorodifluoromethane	µg/L
1,2-Dibromoethane (EDB)	µg/L	Ethylbenzene	µg/L
1,2-Dichlorobenzene	µg/L	Hexachlorobutadiene	µg/L
1,2-Dichloroethane (EDC)	µg/L	Isopropylbenzene	µg/L
1,2-Dichloropropane	µg/L	Methyl tert-butyl ether (MTBE)	µg/L
1,3,5-Trimethylbenzene	µg/L	Methylene chloride	µg/L
1,3-Dichlorobenzene	µg/L	Naphthalene	µg/L
1,3-Dichloropropane	µg/L	n-Butylbenzene	µg/L
1,4-Dichlorobenzene	µg/L	n-Propylbenzene	µg/L
1-Methylnaphthalene	µg/L	sec-Butylbenzene	µg/L
2,2-Dichloropropane	µg/L	Styrene	µg/L
2-Butanone	µg/L	tert-Butylbenzene	µg/L
2-Chlorotoluene	µg/L	Tetrachloroethene (PCE)	µg/L
2-Hexanone	µg/L	Toluene	µg/L
2-Methylnaphthalene	µg/L	trans-1,2-DCE	µg/L
4-Chlorotoluene	µg/L	trans-1,3-Dichloropropene	µg/L
4-Isopropyltoluene	µg/L	Trichloroethene (TCE)	µg/L
4-Methyl-2-pentanone	µg/L	Trichlorofluoromethane	µg/L
Acetone	µg/L	Uranium	mg/L
Arsenic	mg/L	Vinyl chloride	µg/L
Benzene	µg/L	Xylenes, total	µg/L
Bromobenzene	µg/L	pH	s.u.
Bromodichloromethane	µg/L	Temperature	°C
Bromoform	µg/L	Electrical conductivity	µmhos/cm



Table 12. Groundwater Analytical Results, December 2018/January 2019
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Sample ID	Concentration (µg/L)													
	1,2,4-TMB	MEK	2-Methyl Naphthalene	Acetone	Benzene	Ethylbenzene	Isopropylbenzene	MTBE	Naphthalene	PCE	Toluene	TCE	cis-1,2-DCE	trans-1,2-DCE
CLC Well 18	<1	<10	<4	<10	<1	<1	<1	<1	<2	1.4	<1	<1	<1	<1
CLC Well 26	<1	<10	<4	<10	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
CLC Well 27	<1	<10	<4	<10	<1	<1	<1	<1	<2	13	<1	<1	<1	<1
MW-5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-SF2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-SF5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-SF9	<1	<10	<4	<10	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
MW-SF9 (dup)	<1	<10	<4	<10	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
MW-SF10	<1	<10	<4	<10	<1	<1	<1	<1	<2	16	<1	1.1	<1	<1
GMMW-01 (1)	<1	<10	<4	<10	<1	<1	<1	<1	<2	5.0 Rf	ND RI	<1	<1	<1
GMMW-01 (2)	<1	<10	<4	<10	<1	<1	<1	<1	<2	5.3 Rf	ND RI	<1	<1	<1
GMMW-01 (3)	<1	<10	<4	<10	<1	<1	<1	<1	<2	4.3 Rf	ND RI	<1	<1	<1
GMMW-01 (4)	<1	<10	<4	<10	<1	<1	<1	<1	<2	3.7 Rf	ND RI	<1	<1	<1
GMMW-01 (5)	<1	<10	<4	<10	<1	<1	<1	<1	<2	2.3 Rf	1.1 RI	<1	<1	<1
GMMW-01 (5) (dup)	<1	<10	<4	<10	<1	<1	<1	<1	<2	2.3 Rf	1.1 RI	<1	<1	<1
GMMW-01 (6)	<1	<10	<4	<10	<1	<1	<1	<1	<2	ND Rf	3.4 RI	<1	<1	<1
GMMW-01 (7)	<1	<10	<4	<10	<1	<1	<1	<1	<2	ND Rf	1.1 RI	<1	<1	<1
GMMW-03 (1)	<1	<10	<4	<10	<1	<1	<1	<1	<2	ND Rf	5.1 RI	<1	<1	<1
GMMW-03 (2)	<1	13	<4	15	1.1	<1	<1	<1	<2	ND Rf	13 RI	<1	<1	<1
GMMW-03 (3)	<1	<10	<4	<10	<1	<1	<1	<1	<2	ND Rf	7.6 RI	<1	<1	<1
GMMW-06 (1)	<1	<10	<4	29 J+	<1	<1	<1	<1	<2	ND Rf	6.0 RI	<1	<1	<1
GMMW-06 (2)	<1	<10	<4	<10	<1	<1	<1	<1	<2	ND Rf	12 RI	<1	<1	<1
GMMW-08 (3)	<1	<10	<4	10	<1	<1	<1	<1	<2	ND Rf	ND RI	<1	<1	<1
GMMW-08 (4)	<1	<10	<4	<10	<1	<1	<1	<1	<2	ND Rf	1.5 RI	<1	<1	<1
GMMW-08 (5)	<1	<10	<4	<10	<1	<1	<1	<1	<2	ND Rf	2.1 RI	<1	<1	<1
GMMW-08 (6)	<1	<10	<4	<10	<1	<1	<1	<1	<2	ND Rf	1.9 RI	<1	<1	<1
GMMW-08 (7)	<1	<10	<4	11	<1	<1	<1	<1	<2	ND Rf	2.3 RI	<1	<1	<1
GMMW-09 (1)	<1	<10	<4	<10	<1	<1	<1	<1	<2	ND Rf	ND RI	<1	<1	<1
GMMW-09 (2)	<1	<10	<4	<10	2.2	<1	<1	<1	<2	ND Rf	16 RI	<1	<1	<1
GMMW-09 (2) (dup)	<1	<10	<4	<10	2.1	<1	<1	<1	<2	ND Rf	16 RI	<1	<1	<1
GMMW-09 (3)	<1	<10	<4	<10	3.2	<1	<1	<1	<2	ND Rf	40 RI	<1	<1	<1
GMMW-09 (4)	<1	<10	<4	<10	4	<1	<1	<1	<2	ND Rf	66 RI	<1	<1	<1

µg/L = Micrograms per liter
 ND = Not detected at or above reporting limit
 — = No sample collected within the reporting period; well dry at time of sampling
 J+ = Field blank sample submitted with the batch had a positive detect for acetone; the result should therefore be considered an estimate.
 Rf = Rejected, the data are unusable. FLUTE well liner lacks integrity.
 RI = Rejected, the data are unusable. FLUTE liner leaches constituent.



Table 12. Groundwater Analytical Results, December 2018/January 2019
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Sample ID	Concentration (µg/L)													
	1,2,4-TMB	MEK	2-Methyl Naphthalene	Acetone	Benzene	Ethylbenzene	Isopropylbenzene	MTBE	Naphthalene	PCE	Toluene	TCE	cis-1,2-DCE	trans-1,2-DCE
GWMW-09 (5)	<1	<10	<4	14	3.8	<1	<1	<1	<2	1.6 Rf	67 RI	<1	<1	<1
GWMW-09 (6)	<1	<10	<4	19	2.9	<1	<1	<1	<2	2.0 Rf	57 RI	<1	<1	<1
GWMW-09 (7)	<1	<10	<4	11	1.8	<1	<1	<1	<2	ND Rf	42 RI	<1	<1	<1
GWMW-10 (1)	<1	<10	<4	<10	<1	<1	<1	<1	<2	8.3 Rf	ND RI	<1	<1	<1
GWMW-10 (2)	<1	<10	<4	<10	<1	<1	<1	<1	<2	12 Rf	ND RI	<1	<1	<1
GWMW-10 (2) (dup)	<1	<10	<4	<10	<1	<1	<1	<1	<2	12 Rf	ND RI	<1	<1	<1
GWMW-10 (3)	<1	<10	<4	<10	<1	<1	<1	<1	<2	11 Rf	ND RI	<1	<1	<1
GWMW-10 (4)	<1	<10	<4	<10	<1	<1	<1	<1	<2	11 Rf	ND RI	<1	<1	<1
GWMW-10 (5)	<1	<10	<4	<10	<1	<1	<1	<1	<2	10 Rf	ND RI	<1	<1	<1
GWMW-10 (6)	<1	<10	<4	<10	<1	<1	<1	<1	<2	9.6 Rf	ND RI	<1	<1	<1
GWMW-10 (7)	<1	<10	<4	<10	<1	<1	<1	<1	<2	9.5 Rf	ND RI	<1	<1	<1
GWMW-11-S	<1	<10	<4	<10	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
GWMW-11-I	<1	<10	<4	<10	<1	<1	<1	<1	<2	4.3	<1	<1	<1	<1
GWMW-11-D	<1	<10	<4	<10	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
GWMW-15-S	<1	<10	<4	<10	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
GWMW-15-I	<1	<10	<4	<10	<1	<1	<1	<1	<2	19	<1	<1	<1	<1
GWMW-15-D	<1	<10	<4	<10	<1	<1	<1	<1	<2	1.1	<1	<1	<1	<1
GWMW-16-S	<1	<10	<4	<10	<1	<1	<1	<1	<2	5.1	<1	<1	<1	<1
GWMW-16-D	<1	<10	<4	<10	<1	<1	<1	<1	<2	16	<1	1.3	<1	<1
NGMW-1 (1)	<1	<10	<4	51	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-1 (2)	<1	<10	<4	34	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-1 (3)	<1	<10	<4	<10	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-1 (4)	<1	<10	<4	<10	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-1 (5)	<1	<10	<4	<10	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-1 (6)	<1	<10	<4	<10	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-1 (6) (dup)	<1	<10	<4	<10	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-1 (7)	<1	<10	<4	<10	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-1 (8)	<1	<10	<4	<10	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-2 (1)	<1	<10	<4	46	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-2 (2)	<1	<10	<4	36	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-2 (3)	<1	<10	<4	39	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-2 (4)	<1	<10	<4	32	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1

µg/L = Micrograms per liter
 ND = Not detected at or above reporting limit
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Table 12. Groundwater Analytical Results, December 2018/January 2019
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Sample ID	Concentration (µg/L)													
	1,2,4-TMB	MEK	2-Methyl Naphthalene	Acetone	Benzene	Ethylbenzene	Isopropylbenzene	MTBE	Naphthalene	PCE	Toluene	TCE	cis-1,2-DCE	trans-1,2-DCE
NGMW-2 (5)	<1	<10	<4	24	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-2 (6)	<1	<10	<4	32	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-2 (6) (dup)	<1	<10	<4	34	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-2 (7)	<1	<10	<4	<10	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-2 (8)	<1	<10	<4	29	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-3 (1)	<1	<10	<4	44	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-3 (2)	<1	<10	<4	47	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-3 (3)	<1	<10	<4	35	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-3 (4)	<1	<10	<4	<10	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-3 (5)	<1	<10	<4	38	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-3 (6)	<1	<10	<4	<10	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-3 (7)	<1	<10	<4	<10	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-3 (7) (dup)	<1	<10	<4	25	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1
NGMW-3 (8)	<1	<10	<4	<10	<1	<1	<1	<1	<2	<1	<1	<1	<1	<1

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 — = No sample collected within the reporting period; well dry at time of sampling
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 Rf = Rejected, the data are unusable. FLUTE well liner lacks integrity.
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Table 13. Data Quality Indicators

Indicator Parameter	Analytical Parameter	QC Sample	Acceptance Criteria for Laboratory Analysis
Accuracy (percent recovery)	VOCs	MS, MSD Blanks	50 to 150 percent recovery Less than CRQL
Precision (RPD)	VOCs	MS, MSD Field duplicates	30 percent RPD 50 percent RPD
Sensitivity (quantification limits)	Analytical tests	MS, MD, MSD Field duplicates	Not applicable
Completeness	The objective for data completeness is 90 percent.		
Representativeness	The sampling network analytical methods for this site are designed to provide data that are representative of site conditions.		
Comparability	The use of standard published sampling and analytical methods and the use of QC samples will ensure data of known quality. These data can be compared to other data of known quality.		

QC = Quality control

VOC = Volatile organic compound

MS = Matrix spike

MD = Matrix duplicate

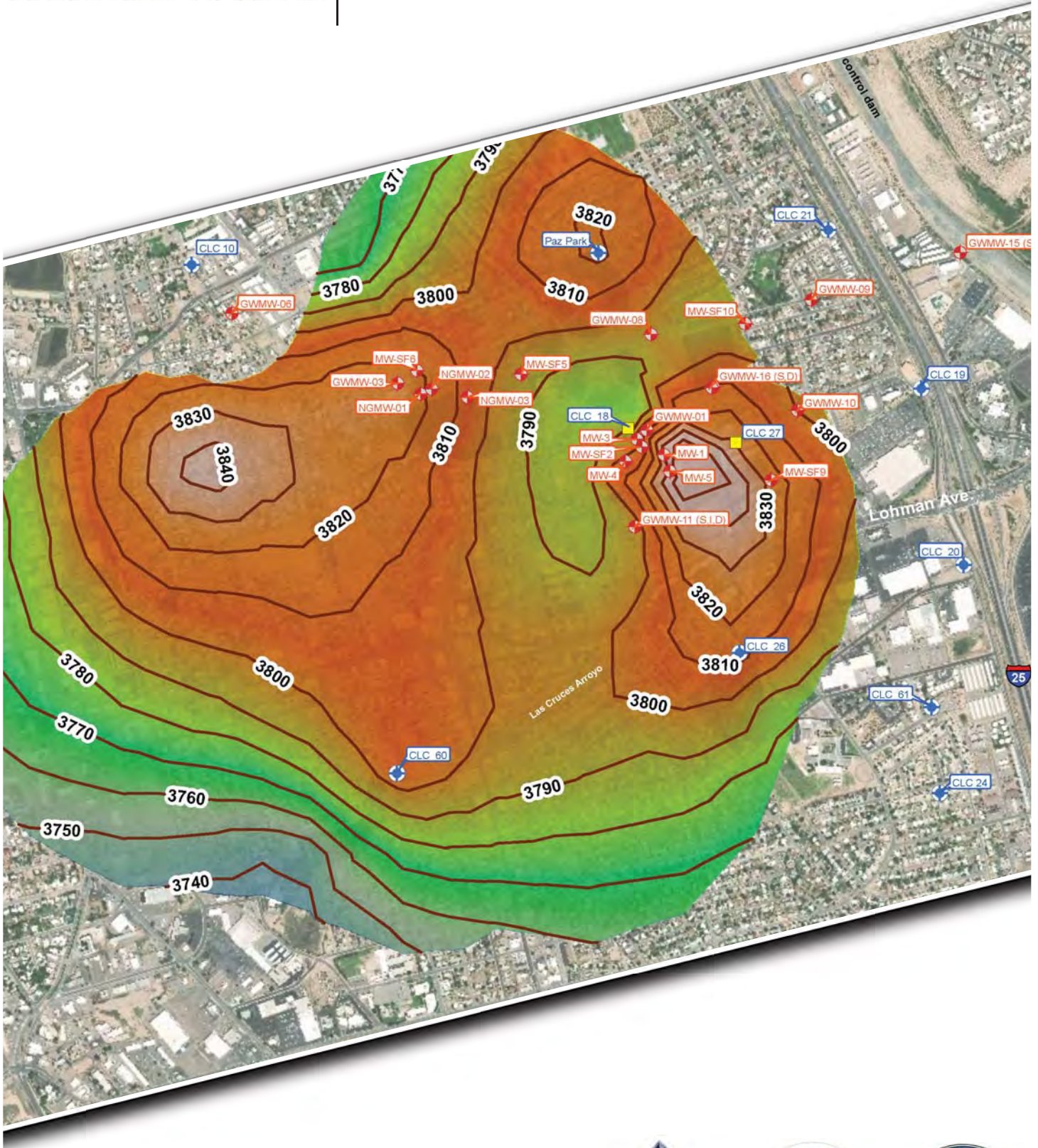
MSD = Matrix spike duplicate

CRQL = Contract-required quantitation limit

RPD = Relative percent difference

Appendix A
Groundwater Program
Evaluation Report

**GROUNDWATER PROGRAM EVALUATION REPORT
 GRIGGS AND WALNUT GROUNDWATER PLUME SUPERFUND SITE,
 LAS CRUCES, NEW MEXICO**



June 2019 prepared for



GROUNDWATER PROGRAM EVALUATION REPORT GRIGGS AND WALNUT GROUNDWATER PLUME SUPERFUND SITE, LAS CRUCES, NEW MEXICO

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City of Las Cruces
New Mexico



and

Doña Ana County
New Mexico



June 2019



**GROUNDWATER PROGRAM EVALUATION REPORT
GRIGGS AND WALNUT GROUNDWATER PLUME SUPERFUND SITE
LAS CRUCES, NEW MEXICO**

EXECUTIVE SUMMARY

John Shomaker & Associates, Inc. (JSAI) was subcontracted by Daniel B. Stephens & Associates, Inc. (DBS&A) to assist with the groundwater monitoring program annual evaluation for the Griggs and Walnut tetrachloroethene (PCE) plume for the Griggs and Walnut Joint Superfund Project (JSP), currently consisting of Doña Ana County and City of Las Cruces (CLC).

The purpose of the annual evaluation of Griggs and Walnut Site groundwater monitoring program is to ensure that sufficient groundwater data are being collected to assess whether operation of the extraction and treatment system is making adequate progress toward achieving the Remedial Action Objectives and Remedial Goals.

Data sources from the monitoring program include geologic logs from the RI/FS and subsequent monitoring well drilling projects, water-level data, water-quality data, groundwater-pumping data, and extraction well operational data.

The two distinct hydrogeologic zones, the UHZ and the LHZ, are primarily differentiated by the clay zone and water-level elevations measured in various multi-port and nested monitor wells screened at different depths. The UHZ and LHZ are not hydraulically connected across the Site where the clay zone is present, and but the UHZ and LHZ are hydraulically connected across the Site where the clay zone is absent. It was previously thought the UHZ and LHZ were hydraulically connected across the Site, but in varying degree of hydraulic communication (EPA, 2006, RI, p. 3-10). The revised geologic model defining the clay layer extent better explains the observed horizontal and vertical groundwater flow mechanisms, PCE plume distribution, and PCE plume capture by extraction wells in the UHZ and LHZ (see Figs. 2 through 8).

When considering the Site monitoring network and Las Cruces Utilities (LCU) regional monitoring network, there are adequate water-level data collected to evaluate groundwater flow direction in the UHZ (Fig. 7) and LHZ (Fig. 8). The hydraulic gradient across the Site is fairly flat, as defined by the 3,840- and 3,830-ft water-level elevation contours (Fig. 6), with a cone of depression shown at extraction well CLC 27. Given the flat hydraulic gradient, the re-surveying of measuring point elevations (Table 2; Appendix A) provides better confidence in the water-level elevation contouring efforts.

The Site telescope mesh refinement (TMR) model (JSAI, 2017) was updated with data collected from 2017 to 2018 and satisfactorily calibrated. Pumping from well CLC 61 was added to the model calibration. CLC 61 was not considered in previous TMR model analysis because it is screened much deeper (600 to 1,000 ft) than all other wells in the area and pumping at the time did not show much of an effect on Site monitoring data. New data and increased pumping from CLC 61 led to the inclusion of CLC 61 in the TMR model analysis. Findings indicate when CLC 61 is significantly pumped, it increases the rate of vertical groundwater flow where the clay layer is absent, particularly in the area of GWMW-09, GWMW-15, CLC 19, and CLC 20.

As indicated by the monitoring data at GWMW-15(S,I,D), and model calibration, pumping from CLC 61 appears to be affecting the vertical migration of the LHZ PCE plume. Reduced pumping from CLC 61 should reverse the effect of past pumping on plume migration as indicated by observed water-level trends at nearby CLC 20 and CLC 24. Well 61 has stopped pumping as of mid-March 2019, and water-level data are being collected and assessed.

The vertical and horizontal extent of the UHZ PCE plume is adequately defined by the Groundwater Monitoring network. Water-quality sampling is no longer needed from GWMW-03, and NGMW-02, because of consistent below detection PCE results. The extent of elevated PCE concentrations in the LHZ at GWMW-15-I is not well defined; however, GWMW-15 is on the upgradient side of the PCE plume and groundwater flow at this location is toward extraction CLC 27. The downgradient side of the LHZ PCE plume is not well defined east to southeast of GWMW-10. The JSP will develop a plan to improve LHZ monitoring to fill this data gap which will consider data quality objectives, cost benefit, readiness to implement, and access. This plan will be provided to EPA prior to the SOW required annual review meetings in Summer 2019.

Monitoring data from extraction wells CLC 18 and CLC 27 allow for performance evaluation and adequate calculation of PCE plume removal (see JSAI companion report titled *Optimization Assessment Report 2017 through 2018 Griggs and Walnut Groundwater Plume Superfund Site, Las Cruces, New Mexico*).

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- Figure 6. Bar graph of annual pumping from wells in the Griggs and Walnut Site area, Las Cruces, New Mexico.
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- Figure 13. Map showing telescoped groundwater flow model grid, Griggs and Walnut Site, Las Cruces, New Mexico.
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- Figure 15. Bar graph showing distribution of model calibrated residual error in heads.

APPENDICES
(follow illustrations)

- Appendix A. Las Cruces Utilities 2018 Griggs and Walnut Site plume monitoring point survey data
- Appendix B. Hydrographs for Griggs and Walnut Site plume monitoring network wells and selected City of Las Cruces wells
- Appendix C. Summary of Griggs and Walnut Site plume area pumping data
- Appendix D. Time-series graphs of Griggs and Walnut Site PCE concentration
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**GROUNDWATER PROGRAM EVALUATION REPORT
GRIGGS AND WALNUT GROUNDWATER PLUME SUPERFUND SITE
LAS CRUCES, NEW MEXICO**

1.0 INTRODUCTION

John Shomaker & Associates, Inc. (JSAI) was subcontracted by Daniel B. Stephens & Associates, Inc. (DBS&A) to assist with the assessment of the Griggs and Walnut tetrachloroethene (PCE) plume (“the Site”) and efficiency of the associated pump and treat system. This analysis was conducted for the Griggs and Walnut Joint Superfund Project (JSP), which currently consists of Doña Ana County and the City of Las Cruces (CLC). A location map is presented as Figure 1. JSAI previously assisted with the development of the groundwater flow and solute transport model for the Site Feasibility Study.

1.1 Background

The New Mexico Environment Department (NMED) first identified PCE contamination in 1993 in wells CLC 21 and CLC 27 (Fig. 1). NMED detected PCE in CLC 19 in 1994 and in CLC 18 in 1995. The Site was added to EPA’s National Priorities List (NPL) on June 14, 2001 (66 Federal Register 32235 [June 14, 2001]) based on data collected by NMED between 1993 and 2001. The Remedial Investigation began in 2002.

The EPA Remedial Investigation and Feasibility Study (RI/FS) was completed in 2006, the EPA Record of Decision (ROD) was issued in 2007, and EPA approved the remedial design in 2010. The Site pump and treat system began during September 2012, and it has been operated near continuously for the last 7 years.

As defined in the EPA 2017 Statement of Work (SOW), the JSP shall perform Pre-Achievement Operation and Maintenance until the Remedial Action Objectives and Remedial Goals are attained. An annual evaluation of the groundwater monitoring program is required to be completed as part of the Annual Operation and Maintenance report. Past JSAI annual evaluation reports are summarized in this report.

1.2 Purpose

The purpose of the annual evaluation of the Site groundwater monitoring program is to ensure that sufficient groundwater data are being collected to assess whether operation of the extraction and treatment system is making adequate progress toward achieving the Remedial Action Objectives and Remedial Goals.

2.0 DATA SOURCES

Data sources include geologic logs from the RI/FS and subsequent monitoring well drilling projects, water-level data, water-quality data, groundwater-pumping data, and extraction well operational data. Site data are collected by Las Cruces Utilities (LCU) and Terracon. The following is a summary of data collected, and JSAI's review of data collected as part of the evaluation of the groundwater monitoring program. Site monitoring point locations are shown on Figure 1.

2.1 Geologic Logs

JSAI reviewed the available geologic logs (lithologic and geophysical) to better define the top and bottom elevations of the clay layer that hydraulically separates the Upper Hydrogeologic Zone (UHZ) from the Lower Hydrogeologic Zone (LHZ). Since the RI/FS, additional geologic data have been obtained from logs from monitoring wells NGMW-01, NGMW-02, NGMW-03, and GWMW-16(S,D).

2.1.1 Definition of Clay Layer

The EPA RI/FS and JSAI (2006) Site Conceptual Model included the clay layer as part of the Upper Portion of the LHZ. The clay layer is known to impede vertical movement of groundwater, and lateral movement of groundwater at the water table in the UHZ. Geophysical log analysis from the GWMW series wells was used in the RI for identification of the top of the clay layer; however, the bottom of the clay layer and the extent were not fully defined in the RI.

Reinterpretation of geophysical logs involved a detailed analysis primarily of the resistivity log, with less reliance on the gamma ray log. The geophysical log analysis in the RI relied heavily on the gamma ray log for identification of the clay layers. The gamma ray log is influenced by borehole diameter and potassium content in fine sand, silt, and clay (Keys, 1997). In the Mesilla Basin, the short- and long-normal resistivity log can be reliably used to identify low-permeability confining layers where the log reads about 10 ohm/m with little to no separation between the short- and long-normal signals.

As experienced with the logging of GWMW-16-D, the clay layer is difficult to discern in drill cuttings when the thickness is less than 15 ft. For this reason, the wells with geophysical logs provide the most reliable definition of the clay layer, where the interpretation of the driller's log has the least reliable definition of clay layer.

JSAI developed a database comparing previous and current interpretations of the top and bottom elevation of the clay layer; a summary is presented as Table 1. Reference elevations were obtained from the 2018 survey presented in Appendix A. The difference between the JSAI (2017) geologic model and the current model is primarily due to change in reference ground-surface elevations and re-interpretation of resistivity logs. The top and bottom elevation of the clay layer were used to develop a three-dimensional geologic model of the Site. A map showing the confining clay layer extent and top of clay elevation contours is presented as Figure 2. A map showing the thickness of the clay unit is presented as Figure 3.

The updated understanding of the clay layer was used to revise the hydrogeologic cross-sections presented as Figures 4 and 5. The thickness and extent of the low-permeability silt and clay beds that divide UHZ from LHZ have influenced the lateral and vertical distribution of PCE in groundwater. At CLC 18, the clay layer separating the UHZ and LHZ creates a hydraulic barrier to vertical flow (Figs. 4 and 5). East of GWMW-16(S,D), the clay layer transitions to silt and sand allowing for vertical groundwater flow from the UHZ to the LHZ under downward head-gradient conditions, which may be influenced by regional pumping. The clay layer dividing the UHZ from LHZ is shaped like a bowl with CLC 18 near the low point (Fig. 2). The lithology at GWMW-16-D and re-assessment of geophysical logs helped define the configuration of the clay layer (Figs. 2 through 5).

2.2 Groundwater-Level Data

There are three types of groundwater-level data collected at the Site: 1) from conventional monitoring wells, 2) from multi-port FLUTE wells, and 3) from CLC water supply wells (active and inactive).

As identified in earlier annual evaluations by JSAI (2017), the measuring point elevations for many of the wells used to develop groundwater flow elevation contours for the Site were previously estimated from topographic data and therefore subject to error. Given the relatively flat hydraulic gradient across the Site, it was imperative that all measuring points were surveyed. The JSP had most groundwater-level measuring locations re-surveyed in 2018. Results are summarized in Table 2, and survey data are presented in Appendix A.

Groundwater-level monitoring frequency specified in the SOW requires monthly measurements from the extraction wells, quarterly monitoring from inactive City wells, and annual measurements from the remaining monitoring network. As a result of the LCU groundwater monitoring program, monitoring frequency at CLC 18, CLC 27, and the regional monitoring network has exceeded the SOW requirements.

2.2.1 Site Monitoring Network

Locations for wells in the Site monitoring network are shown on Figure 1. The GWMW series multi-port FLUTE wells help define the vertical extent of the PCE plume more so than the vertical head difference between the UHZ and LHZ. For GWMW series multi-port wells in the monitoring network, Port 1 typically is completed in the UHZ above the confining clay layer, and the remaining ports are below the clay layer.

There are 20 monitoring wells and ports used to monitor the UHZ (Table 2); however, several are starting to go dry (MW-2, MW-3, MW-4, MW-5, MW-SF2, MW-SF4, and MW-SF5) as the UHZ is dewatered. There are approximately 36 monitoring wells and ports used to monitor the LHZ. Conventional and paired conventional monitoring wells are primarily used for developing the Site groundwater-level elevation contours (groundwater-level data are more reliable from the conventional wells as compared to the multi-port FLUTE wells). Hydrographs for monitoring network wells are presented in Appendix B.

2.2.2 Regional Monitoring Network

LCU developed a regional groundwater-level monitoring program in 2011. Under the monitoring program, groundwater-level data have been collected at CLC supply wells based on a defined methodology and QA/QC process. Since mid-2011, the monitoring program has used a consistent methodology for collecting hand-measurements of groundwater levels from the majority of the CLC active and inactive supply wells on a monthly basis, and transducers have also recorded water levels on an hourly basis in twelve inactive wells. CLC groundwater-level data help define the regional groundwater-level elevation contours surrounding the Site. A summary of the 2018 groundwater-level data is provided in Table 2, and selected hydrographs are presented in Appendix B.

As discussed above, all Site regional monitoring network and monitoring wells were re-surveyed in 2018. The largest discrepancy in measuring point elevation between the surveyed elevations and the previously estimated elevations was observed in the regional monitoring network wells (Table 2).

Table 1. Summary of geologic log analysis for defining UHZ, clay layer, and LHZ

name	lithology	EPA RI Depth 1 (ft bgl)	EPA RI Depth 2 (ft bgl)	EPA RI thickness (ft)	JSAI Depth 1 (ft bgl)	JSAI Depth 2 (ft bgl)	JSAI thickness (ft)	data source	land surface elevation (ft amsl)	clay unit top elevation (ft amsl)	clay unit bottom elevation (ft amsl)	well bottom elevation (ft amsl)
GWMW-01	UHZ	0	238	238	0	250	250	re-interpretation of	4,038.00	3,788.00	3,746.00	3,458.00
GWMW-01	clay unit*	238	305	67	250	292	42	geophysical logs				
GWMW-01	LHZ	305	580	275	292	580	288	see log with notes				
GWMW-03	UHZ	0	195	195	0	148	148	re-interpretation of	3,976.68	3,828.68	3,728.68	3,412.68
GWMW-03	clay unit	195	252	57	148	248	100	geophysical logs				
GWMW-03	LHZ	252	564	312	248	564	316	see log with notes				
GWMW-04	UHZ	0	155	155	0	90	90	re-interpretation of	3,932.80	3,842.80	3,774.80	3,448.80
GWMW-04	clay unit	155	260	105	90	158	68	geophysical logs				
GWMW-04	LHZ	260	484	224	158	484	326	see log with notes				
GWMW-06	UHZ	0	150	150	0	92	92		3,946.30		3,796.30	3,440.30
GWMW-06	clay unit	150	220	70	92	92	0					
GWMW-06	LHZ	220	506	286	92	506	414					
GWMW-07	UHZ	0	183	183	0	124	124		3,937.40	3,813.40	3,759.40	3,437.40
GWMW-07	clay unit	183	220	37	124	178	54					
GWMW-07	LHZ	220	507	287	178	500	322					
GWMW-08	UHZ	0	215	215	0	225	225		4,020.26	3,795.26	3,760.26	3,440.26
GWMW-08	clay unit	215	272	57	225	260	35					
GWMW-08	LHZ	272	580	308	260	580	320					
GWMW-09	UHZ	0	237	237	0	230	230		4,051.39	3,821.39	3,801.39	3,311.39
GWMW-09	clay unit	237	250	13	230	230	0					
GWMW-09	LHZ	250	740	490	250	740	490					
GWMW-10	UHZ	0	265	265	0	265	265		4,064.84	3,799.84	3,794.84	3,404.84
GWMW-10	clay unit	265	275	10	260	270	5					
GWMW-10	LHZ	275	660	385	270	660	390					
GWMW-11	UHZ	0	230	230	0	228	228		4,022.92	3,794.92	3,728.92	3,459.92
GWMW-11	clay unit	230	295	65	228	268	40					
GWMW-11	LHZ	295	563	268	268	563	295					
GWMW-15	UHZ	0	290	290	0	290	290		4,081.31	3,791.31	3,791.31	3,458.31
GWMW-15	LHZ	290	623	333	290	623	333					
GWMW-16	UHZ	ND	ND	ND	0	220	220	GWMW-16-D	4,030.85	3,810.85	3,803.85	3,650.85
GWMW-16	clay unit	ND	ND	ND	220	227	7	lithologic log				
GWMW-16	LHZ	ND	ND	ND	227	380	153					
MW-1	UHZ				0	200	200		4,037.14			3,837.14
MW-2	UHZ				0	195	195	Souder, Miller & Assoc. (1998)	4,038.34	3,843.34		3,836.34
MW-2	clay unit				195	202	7	lithologic logs				
MW-3	UHZ				0	190	190		4,034.70			3,844.70
MW-4	UHZ				0	185	185		4,032.11			3,847.11
MW-5	UHZ				0	195	195		4,038.26			3,843.26
MW-6	UHZ				0	187	187		4,044.85	3,857.85		3,844.85
MW-6	clay unit				187	200	13					

EPA RI - Environmental Protection Agency Remedial Investigation
 UHZ - Upper Hydrogeologic Zone
 LHZ - Lower Hydrogeologic Zone

ft bgl - feet below ground level
 ft amsl - feet above mean sea level

Table 1. Summary of geologic log analysis for defining UHZ, clay layer, and LHZ (concluded)

name	lithology	EPA RI Depth 1 (ft bgl)	EPA RI Depth 2 (ft bgl)	EPA RI thickness (ft)	JSAI Depth 1 (ft bgl)	JSAI Depth 2 (ft bgl)	JSAI thickness (ft)	data source	land surface elevation (ft amsl)	clay unit top elevation (ft amsl)	clay unit bottom elevation (ft amsl)	well bottom elevation (ft amsl)
MW-SF10	UHZ				0	204	204		4,038.96			3,834.96
MW-SF4	UHZ				0	183	183		4,026.12			3,843.12
MW-SF5	UHZ				0	153	153		3,996.39			3,843.39
MW-SF6	UHZ				0	132	132		3,979.25			3,847.25
MW-SF9	UHZ				0	205	205		4,032.86			3,827.86
NGMW-01	UHZ				0	175	175	EA Engineering (2010)				
NGMW-02	UHZ				0	170	170	lithologic logs				
NGMW-03	UHZ				0	174	174					
CLC 18	UHZ				0	250	250		4,037.59	3,787.59	3,707.59	3,405.59
CLC 18	clay unit				250	330	80	driller's log				
CLC 18	LHZ				330	632	302					
CLC 27	UHZ				0	247	247		4,055.62		3,808.62	3,325.62
CLC 27	LHZ				247	730	483					
CLC 10	UHZ				0	136	136		3,938.42			
CLC 10	LHZ				136	381	245					
CLC 19	UHZ				0	265	265		4,063.52			
CLC 19	LHZ				265	675	410					
CLC 20	UHZ				0	272	272		4,073.34			
CLC 20	LHZ				272	680	408					
CLC 21	UHZ				0	276	276		4,075.25			
CLC 21	LHZ				276	700	424					
CLC 24	UHZ				0	240	240		4,041.01			
CLC 24	LHZ				240	591	351					
CLC 26	UHZ				0	200	200	lithologic log	4,013.15	3,813.15		
CLC 26	clay unit				200	260	60					
CLC 26	LHZ				260	715	455					
CLC 57	UHZ				0	285	285	driller's log	4,129.72			
CLC 57	LHZ				285	532	247	NMOSE Well Record				
CLC 60	UHZ				0	142	142		3,940.18	3,798.18	3,742.18	3,240.18
CLC 60	clay unit				142	182	40	geophysical log				
CLC 60	LHZ				182	700	518					
CLC 61	UHZ				0	215	215	driller's log	4,040.12	3,825.12	3,820.12	3,000.12
CLC 61	clay unit				215	215	0	NMOSE Well Record				
CLC 61	LHZ				215	1,040	820					
Paz Park	UHZ				0	190	190	driller's log	4,012.60	3,822.60	3,782.60	3,515.60
Paz Park	clay unit				190	220	30	NMOSE Well Record				
Paz Park	LHZ				220	497	267					

EPA RI - Environmental Protection Agency Remedial Investigation
 UHZ - Upper Hydrogeologic Zone
 LHZ - Lower Hydrogeologic Zone

ft bgl - feet below ground level
 ft amsl - feet above mean sea level

Table 2. Summary of Site monitoring point reference elevations and 2018 water-level data from the monitoring network

well	type	zone	EPA RI appendix F	JSAI (2017) measuring point elevation (ft amsl)	2018 surveyed measuring point elevation (ft amsl)	difference (2016 - 2018)	measurement date	2018 depth to water (ft bmp)	2018 water-level elevation (ft amsl)
CLC 10	inactive	LHZ	NS	3,936.00	3,939.42	-3.42	1/7/2019	97.50	3,841.92
CLC 18	extraction	UHZ/LHZ	NS	4,044.00	4,049.59	-5.59	1/7/2019	219.10	3,830.49
CLC 19	inactive	LHZ	NS	4,065.51	4,064.77	0.75	1/10/2019	227.80	3,836.97
CLC 20	inactive	LHZ	NS	4,072.00	4,074.51	-2.51	1/7/2019	240.70	3,833.81
CLC 21	inactive	LHZ	NS	4,076.15	4,075.25	0.90	1/7/2019	239.00	3,836.25
CLC 24	inactive	LHZ	NS	4,040.00	4,041.01	-1.01	1/7/2019	211.00	3,830.01
CLC 26	standby	LHZ	NS	4,011.00	4,014.15	-3.15	1/10/2019	178.90	3,835.25
CLC 27	extraction	LHZ	NS	4,050.00	4,057.12	-7.12	1/10/2019	266.40	3,790.72
CLC 28	inactive	LHZ	NS	4,061.86	4,061.65	0.21	12/3/2018	223.80	3,837.85
CLC 38	inactive	LHZ	NS	4,098.00	4,101.89	-3.65	12/19/2018	266.00	3,835.89
CLC 54	inactive	LHZ	NS	4,110.00	4,111.23	-1.23	1/8/2019	272.15	3,839.08
CLC 57	inactive	LHZ	NS	4,130.00	4,132.14	-2.14	1/8/2019	297.75	3,834.39
CLC 60	inactive	LHZ	NS	3,948.00	3,942.35	5.65	1/8/2019	102.70	3,839.65
CLC 61	active	LHZ	NS	4,013.00	4,041.37	-28.37	12/19/2018	205.70	3,835.67
GWMW-01	MW	UHZ/LHZ	4,035.70	4,035.70	4,036.27	-0.57	1/14/2019	192.41	3,843.86
GWMW-03	MW	UHZ/LHZ	3,975.20	3,975.20	3,975.81	-0.61	1/9/2019	126.91	3,848.90
GWMW-06	MW	UHZ	3,946.30	3,946.30	NS	---	1/14/2019	97.50	3,848.80
GWMW-08	MW	UHZ/LHZ	4,018.80	4,018.80	4,019.52	-0.72	1/7/2019	174.75	3,844.77
GWMW-09	MW	UHZ/LHZ	4,049.90	4,049.90	4,051.14	-1.24	1/10/2019	213.00	3,838.14
GWMW-10	MW	UHZ/LHZ	4,063.40	4,063.40	4,064.51	-1.11	1/8/2019	223.66	3,840.85
GWMW-11-I	MW	LHZ	4,021.42	4,021.42	4,022.74	-1.32	12/13/2018	186.57	3,836.17
GWMW-11-S	MW	UHZ	4,021.46	4,021.46	4,022.72	-1.26	12/13/2018	178.77	3,843.95
GWMW-11-D	MW	LHZ	4,021.46	4,021.46	4,022.67	-1.21	12/13/2018	186.95	3,835.72
GWMW-15-I	MW	LHZ	4,079.89	4,079.89	4,081.06	-1.17	12/13/2018	241.83	3,839.23
GWMW-15-S	MW	UHZ	4,079.84	4,079.84	4,081.03	-1.19	12/13/2018	241.35	3,839.68
GWMW-15-D	MW	LHZ	4,079.85	4,079.84	4,081.03	-1.19	12/13/2018	241.93	3,839.10
GWMW-16-D	MW	LHZ	ND	4,031.00	4,033.07	-2.07	12/14/2018	196.11	3,836.96
GWMW-16-S	MW	UHZ	ND	4,031.00	4,032.73	-1.73	12/14/2018	190.06	3,842.67
MW-1	MW	UHZ	4,035.34	4,034.75	4,037.14	-2.39	12/13/2018	193.60	3,843.54
MW-3	MW	UHZ	4,032.78	4,032.78	4,034.56	-1.78	12/13/2018	dry	dry
MW-4	MW	UHZ	4,029.70	4,029.70	4,031.59	-1.89	12/13/2018	dry	dry
MW-5	MW	UHZ	4,034.36	4,034.36	4,036.25	-1.89	12/14/2018	192.00	3,844.25
MW-SF2	MW	UHZ	4,033.35	4,033.35	4,035.71	-2.36	12/13/2018	191.80	3,843.91
MW-SF5	MW	UHZ	3,993.65	3,992.93	3,995.63	-2.70	12/13/2018	148.70	3,846.93
MW-SF9	MW	UHZ	4,030.58	4,030.08	4,032.35	-2.27	12/14/2018	191.75	3,840.60
MW-SF10	MW	UHZ	4,036.75	4,036.53	4,038.66	-2.13	12/13/2018	195.80	3,842.86
Paz Park	irrigation	LHZ	NS	4,013.00	4,012.60	0.40	1/7/2019	174.00	3,838.60
NGMW-01	MW	UHZ	ND	3,975.48	NS	----	12/13/2018	127.05	3,848.43
NGMW-02	MW	UHZ	ND	3,980.79	NS	----	12/13/2018	132.40	3,848.39
NGMW-03	MW	UHZ	ND	3,985.11	NS	----	12/12/2018	137.04	3,848.07

EPA RI - Environmental Protection Agency Remedial Investigation
 UHZ - Upper Hydrogeologic Zone
 LHZ - Lower Hydrogeologic Zone

ft bgl - feet below ground level
 ft amsl - feet above mean sea level

2.3 Pumping Data

The New Mexico Office of the State Engineer (NMOSE) requires metered monthly pumping for all LCU supply wells, including Site extraction wells CLC 18 and CLC 27. Meters are required by the NMOSE to be calibrated, and metered volumes reported to the NMOSE. Other than extraction wells CLC 18 and CLC 27, active pumping wells in the Site area include CLC 61, and at Paz Park. Average monthly and annual pumping rates for 2017 and 2018 are summarized in Table 3. Site area pumping data from 1958 to current are presented in Appendix C.

Table 3. Summary of 2017 and 2018 pumping for the Griggs and Walnut Site area

month	CLC 18 average (gpm)		CLC 27 average (gpm)		Paz Park average (gpm)		CLC 61 average (gpm)	
	2017	2018	2017	2018	2017	2018	2017	2018
Jan	26.5	30.4	137	152	0	0	0	36
Feb	30.0	31.3	167	148	0	0	0	916
Mar	30.5	24.8	166	181	21	7	237	1,224
Apr	32.4	28.1	161	212	35	28	1,108	1,241
May	30.2	29.1	152	185	46	35	1,208	1,251
Jun	30.3	28.9	155	206	61	28	1,194	1,257
Jul	26.8	29.3	145	220	32	28	396	1,244
Aug	29.4	29.2	153	209	31	21	0	1,221
Sep	30.4	29.0	154	227	29	28	0	1,227
Oct	29.6	29.5	158	228	24	7	0	1,193
Nov	30.3	29.7	156	226	24	0	0	1,215
Dec	28.7	29.2	153	214	3	0	0	441
annual	30	29.0	155	201	26	15	345	1,039

gpm - gallons per minute

CLC 18 was pumped according to a designed schedule for 2017 and 2018. Prior to March 2018, the designed schedule was 4 hrs/day at a rate of 180 gallons per minute (gpm). The pump for CLC 18 was replaced during the first week of March 2018, and the designed schedule was changed to 8 hrs/day at a rate of 90 gpm. Based on the designed schedule for optimum UHZ plume extraction, average monthly pumping rate for CLC 18 is 30 gpm.

CLC 27 was pumped near continuously for years 2017 and 2018. The pump was replaced in the first week of March 2018, and average monthly pumping rate increased (Table 3) from about 150 gpm to 220 gpm. CLC 27 primarily extracts the LHZ PCE plume.

Paz Park Well operates during the irrigation season (Table 3) at a rate of about 220 gpm for 4 to 7 hrs/day. CLC 61 pumped from March 2017 through July 2017 and was operated near continuously from February to December in 2018.

2.4 Monitoring Network Water-Quality Data

All Site monitoring network groundwater-quality data were collected by Terracon (2019). JSAI reviewed Terracon (2019) and included results in the evaluation of the monitoring system. The primary constituent of concern for the Site is PCE; however, other parameters such as detectable concentrations of toluene, and field measurements of specific conductance were used in the evaluation of the monitoring system and understanding the nature and extent of the PCE plume. After a rigorous QA/QC analysis and integrity testing, the JSP rejected FLUTE well data from the 2018 sampling event, and historic toluene and arsenic data for the FLUTE wells, as the FLUTE liners are known to leach toluene and arsenic (see DBSA, 2019). Rejected data are denoted in Table 4 and are shown on illustrations for information only. A summary of the Site monitoring network and detected PCE concentrations is presented as Table 4. Time-series graphs of PCE concentration are presented in Appendix D.

General chemistry and specific conductance groundwater data were compiled from the monitoring network to examine the correlation between elevated specific conductance and PCE concentrations, which has previously been used as one basis for estimating PCE concentrations and mass removal (JSAI, 2013; JSAI, 2016). Almost all wells with elevated specific conductance also have detectable concentrations of PCE; however, there are some monitoring points that have elevated specific conductance and no detectable PCE. All wells with specific conductance values less than 800 $\mu\text{S}/\text{cm}$ do not have detectable PCE concentrations (Fig. 12a).

Table 4. Summary of monitoring well network and PCE data summary

sample location	northing (NMSP NAD 83, feet)	easting (NMSP NAD 83, feet)	land surface elevation (ft amsl)	port ID	depth of screen interval (ft bgl)	from	to	type well	Hydrogeologic Zone	RI/FS 2005 PCE (µg/L)	remedial design 2009 PCE (µg/L)	system startup 2012 PCE (µg/L)	2016 PCE (µg/L)	2017 PCE (µg/L)	current 2018 PCE (µg/L)
CLC 18	479,033.01	1,483,114.82	4,037.59		315 - 516	315	516	extraction	UHZ	35.0	48.0	42.0	13.0	15.0	7.6
CLC 20*	477,570.53	1,486,690.77	4,073.34		380 - 673	380	673	supply	LHZ	---	---	2.3	<1.0	<1.0	NR
CLC 26	476,624.54	1,484,299.63	4,013.15		410 - 700	410	700	supply	LHZ	---	---	<1.0	<1.0	<1.0	---
CLC 27	478,884.10	1,484,258.63	4,055.62		430 - 524	430	524	extraction	LHZ	---	11.0	5.8	14.0	13.0	15.0
CLC 57*	478,920.91	1,488,486.58	4,129.72		408 - 516	408	516	supply	LHZ	---	---	<1.0	<1.0	<1.0	NR
GWMW-01	479,017.60	1,483,309.20	4,038.00	1	210 - 220	210	220	multi-port FLUTe	UHZ	5.3	---	5.8	3.8	9.8	5.0Rf
				2	270 - 280	270	280		clay unit/LHZ	21.0	---	<1.0	<1.0	---	5.3Rf
				3	330 - 340	330	340		LHZ	1.0	---	2.7	1.6	7.0	4.3Rf
				4	420 - 430	420	430		LHZ	2.0	---	<1.0	<1.0	<1.0	3.7Rf
				5	460 - 470	460	470		LHZ	3.4	---	3.2	<1.0	<1.0	2.3Rf
				6	515 - 525	515	525		LHZ	6.2	---	11.0	2.4	4.7	<1.0Rf
				7	560 - 570	560	570		LHZ	2.1	---	3.2	<1.0	<1.0	<1.0Rf
GWMW-03	479,519.70	1,480,641.70	3,976.68	1	140 - 150	140	150	multi-port FLUTe	UHZ	0.3	1.6	<1.0	<1.0	<1.0	<1.0Rf
				2	225 - 235	225	235		clay unit/LHZ	0.5	<1.0	<1.0	<1.0	<1.0	<1.0Rf
				3	270 - 280	270	280		LHZ	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0Rf
				4	320 - 330	320	330		LHZ	<0.5	<1.0	<1.0	<1.0	---	---
				5	410 - 420	410	420		LHZ	---	<1.0	<1.0	<1.0	---	---
				6	460 - 470	460	470		LHZ	---	---	<1.0	<1.0	<1.0	---
GWMW-06	480,268.30	1,478,866.50	3,946.30	1	100 - 110	100	110	multi-port FLUTe	UHZ	10.0					<1.0Rf
				2	165 - 175	165	175		clay unit/LHZ	<0.5					<1.0Rf
GWMW-08	480,044.80	1,483,349.70	4,020.26	1	190 - 200	190	200	multi-port FLUTe	UHZ	---	---	---	---	---	---
				2	255 - 265	255	265		LHZ	---	---	---	---	---	---
				3	305 - 315	305	315		LHZ	<0.5	---	<1.0	<1.0	<1.0	<1.0Rf
				4	380 - 390	380	390		LHZ	<0.5	---	<1.0	<1.0	<1.0	<1.0Rf
				5	430 - 440	430	440		LHZ	<0.5	---	<1.0	<1.0	<1.0	<1.0Rf
				6	490 - 500	490	500		LHZ	<0.5	---	<1.0	<1.0	<1.0	<1.0Rf
				7	535 - 545	353	545		LHZ	<0.5	---	<1.0	<1.0	<1.0	<1.0Rf
GWMW-09	480,413.50	1,485,066.60	4,051.39	1	240 - 250	240	250	multi-port FLUTe	clay unit/LHZ	0.6	<1.0	<1.0	<1.0	<1.0	<1.0Rf
				2	295 - 305	295	305		LHZ	19.0	13.0	1.3	<1.0	<1.0	<1.0Rf
				3	355 - 365	355	365		LHZ	14.0	9.0	<1.0	5.1	13.0	<1.0Rf
				4	410 - 420	410	420		LHZ	16.0	29.0	1.2	11.0	9.2	<1.0Rf

PCE - tetrachloroethene
 UHZ - Upper Hydrogeologic Zone
 LHZ - Lower Hydrogeologic Zone
 R - PCE results rejected, shown for information only

ft amsl - feet above mean sea level
 ft bgl - feet below ground level
 µg/L - micrograms per liter
 * - water-level data only SOW, table 1)

Table 4. Summary of monitoring well network and PCE data summary (concluded)

sample location	northing (NMSP NAD 83, feet)	easting (NMSP NAD 83, feet)	land surface elevation (ft amsl)	port ID	depth of screen interval (ft bgl)	from	to	type well	Hydrogeologic Zone	RI/FS 2005 PCE (µg/L)	remedial design 2009 PCE (µg/L)	system startup 2012 PCE (µg/L)	2015 PCE (µg/L)	2017 PCE (µg/L)	current 2018 PCE (µg/L)
GWMW-09	480,413.50	1,485,066.60	4,051.39	5	480 - 490	480	490		LHZ	18.0	20.0	1.7	16.0	19.0	1.6Rf
				6	550 - 560	550	560		LHZ	0.2	<1.0	<1.0	<1.0	<1.0	2.0Rf
				7	630 - 640	630	640		LHZ	<1.8	<1.0	<1.0	<1.0	<1.0	<1.0Rf
GWMW-10	479,228.80	1,484,919.30	4,064.84	1	250 - 260	250	260	multi-port FLUTE	UHZ	3.2	31.0	47.0	1.2	5.1	8.3Rf
				2	320 - 330	320	330		LHZ	14.0	36.0	14.0	4.4	18.0	12.0Rf
				3	370 - 380	370	380		LHZ	16.0	46.0	45.0	1.8	16.0	11.0Rf
				4	440 - 450	440	450		LHZ	14.0	15.0	4.5	1.2	13.0	11.0Rf
				5	505 - 515	505	515		LHZ	0.2	<1.0	<1.0	<1.0	9.0	10.0Rf
				6	560 - 570	560	570		LHZ	0.4	<1.0	<1.0	<1.0	7.3	9.6Rf
				7	620 - 630	620	630		LHZ	0.2	<1.0	<1.0	4.2	7.5	9.5Rf
GWMW-11-S	477,982.10	1,483,180.70	4,022.92		190 - 205	190	205	conventional	UHZ	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0
GWMW-11-I	477,982.40	1,483,180.50	4,022.92		299 - 314	299	314	conventional	LHZ	<0.5	<1.0	<1.0	2.0	1.8	4.3
GWMW-11-D	477,982.50	1,483,180.80	4,022.92		525 - 540	525	540	conventional	LHZ	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0
GWMW-15-S	480,920.00	1,486,661.60	4,081.31		289 - 304	289	304	conventional	UHZ	18.0	2.6	<1.0	<1.0	<1.0	<1.0
GWMW-15-I	480,920.10	1,486,661.20	4,081.31		460 - 475	460	475	conventional	LHZ	<0.5	<1.0	2.6	6.1	5.6	19.0
GWMW-15-D	480,919.90	1,486,661.20	4,081.31		581 - 596	581	596	conventional	LHZ	<0.5	<1.0	<1.0	<1.0	<1.0	1.1
GWMW-16-S	479,474.88	1,484,021.82	4,031.16		185 - 205	185	205	conventional	UHZ				1.6	4.9	5.1
GWMW-16-D	479,469.58	1,484,002.31	4,030.85		350 - 370	350	370	conventional	LHZ				3.1	5.0	16.0
MW-1*	478,754.90	1,483,492.60	4,037.75		187 - 197	187	197	conventional	UHZ	0.2	---	<5.0	2.1	2.9	---
MW-3*	478,919.20	1,483,203.60	4,034.70		180 - 190	180	190	conventional	UHZ	6.4	---	2.4	---	---	---
MW-4*	478,681.50	1,483,079.60	4,032.11		175 - 185	175	185	conventional	UHZ	1.0	---	4.2	---	---	---
MW-5	478,579.70	1,483,553.90	4,038.26		182 - 192	182	192	conventional	UHZ	0.5	---	<1.0	---	---	---
MW-SF2	478,837.80	1,483,252.90	4,035.87		184 - 199	184	199	conventional	UHZ	8.3	---	7.4	---	---	---
MW-SF5	479,614.90	1,481,960.00	3,996.39		138 - 153	138	153	conventional	UHZ	1.7	---	<1.0	1.1	<1.0	---
MW-SF9	478,481.90	1,484,636.70	4,032.86		188 - 203	188	203	conventional	UHZ	<0.5	---	<1.0	<1.0	<1.0	<1.0
MW-SF10	480,157.00	1,484,357.30	4,038.96		194 - 204	194	204	conventional	UHZ	17.0	---	10.0	23.0	21.0	16.0
NGMW-01	479,405.24	1,480,889.09	3,975.48		115 - 165	115	165	conventional	UHZ						<1.0
NGMW-02	479,459.44	1,481,007.09	3,980.79		115 - 165	115	165	conventional	UHZ						<1.0
NGMW-03	479,368.81	1,481,387.33	3,985.11		115 - 165	115	165	conventional	UHZ						<1.0

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2.5 CLC 18 and CLC 27 Operational Data

As part of the remedial design, in 2010 CLC 18 and CLC 27 were modified by performing partial plugback so pumping would occur from the upper screen section where the PCE plume is present without clean groundwater contributions from the lower screen section. Following modifications, step-drawdown pumping tests and water-quality analyses were performed on CLC 18 and CLC 27 (JSAI, 2011).

Since start up, groundwater level, metered diversions, and PCE concentration data have been collected from CLC 18 and CLC 27. A specific conductance sensor was installed on the CLC 18 discharge line and connected to an LCU Supervisory Control and Data Acquisition (SCADA) system. The specific conductance data were used to optimize the pumping cycle for CLC 18. For 2017 and 2018, CLC 18 specific conductance data were collected every 15 minutes. CLC 18 and CLC 27 also have meters and transducers that are connected to the LCU SCADA system. Pumping and non-pumping groundwater-level data were collected on 15 minute intervals. Trained LCU Operators also measured monthly water levels from CLC 18 and CLC 27.

3.0 HYDROGEOLOGIC ANALYSIS

Some modifications to the original Site Conceptual Model (SCM) developed by EPA for the RI/FS have been made by JSAI as new data have become available. These changes in the SCM inform how the groundwater monitoring program is evaluated and whether operation of the extraction and treatment system is making adequate progress toward achieving the Remedial Action Objectives and Remedial Goals.

3.1 Hydrostratigraphic Units

The two distinct Site hydrogeologic zones, the UHZ and the LHZ, are primarily differentiated by the clay zone and groundwater elevations measured in various multi-port and nested monitor wells screened at different depths. The UHZ and LHZ are not hydraulically connected across the Site where the clay zone is present; however, the UHZ and LHZ are hydraulically connected across the Site where the clay zone is absent (see Table 5). It was previously assumed the UHZ and LHZ were hydraulically connected across the Site, but in varying degree of hydraulic communication (EPA, 2006).

Updates to the SCM are illustrated by new developed clay layer elevation and thickness contours (Figs. 2 and 3) and hydrogeologic cross sections (Figs. 4 and 5). Figure 2 shows the elevation of the top of clay layer and clay-layer depression at CLC 18. A preferential flow path is defined as the topographic lows in the top of clay layer that form a channel trending from GWMW-03 to CLC 18, and then to MW-SF10 (Fig. 2). Clay layer topographic highs likely limit groundwater flow in the UHZ, particularly where the top of clay is near the water table.

The thickness and extent of the low-permeability silt and clay beds that divide the UHZ from the LHZ have influenced the lateral and vertical distribution of PCE in groundwater (Fig. 4). At CLC 18, the clay layer separating the UHZ and LHZ creates a hydraulic barrier to vertical flow. East of GWMW-16(S,D), the clay layer transitions to silt and sand allowing for vertical groundwater flow from the UHZ to LHZ under downward head-gradient conditions influenced by pumping CLC 27 and other regional municipal wells completed in the LHZ.

3.2 Groundwater Flow

Groundwater flow has been predominantly west to east across the Site since PCE was first detected (JSAI, 2006). The PCE plume moves from west to east in the UHZ until it is able to migrate vertically into the LHZ, except where the cone of depression has formed around CLC 18. The UHZ and LHZ eastward groundwater flow was previously established, at least in part, by municipal well pumping along the I-25 corridor (CLC 18, CLC 19, CLC 20, CLC 21, CLC 24, CLC 26, and CLC 27) that occurred between 1960 and 2000 (JSAI, 2006). The north to south oriented groundwater trough caused by pumping along the I-25 corridor has varied in size with total pumping rate. Figure 6 presents a bar graph of annual CLC pumping since 1958.

3.2.1 Horizontal Flow Direction

Regional groundwater elevation contours and direction of flow for December 2018 data are presented on Figure 7. The hydraulic gradient across the regional vicinity of the Site is fairly flat (0.003 to 0.0004 ft/ft), as defined by the 3,840- and 3,830-ft water-level elevation contours (Fig 7), with a cone of depression shown at CLC 27.

Current (winter 2018-19) groundwater-level elevation contours for the UHZ at the Site are presented on Figure 8. Groundwater flow in the UHZ at the Site is generally toward the east with a localized cone of depression induced by extraction at CLC 18. East of GWMW-16 and MW-SF10 the water-level contours resemble the groundwater trough caused by historical pumping along the I-25 corridor. Groundwater flow at GWMW-15 is to the southwest (Fig. 8).

Current (winter 2018-19) groundwater-level elevation contours for the LHZ at the Site are presented on Figure 9. Groundwater flow in the LHZ is toward the cone of depression formed by extraction at CLC 27 and toward the groundwater trough south of extraction well CLC 27 caused by historical pumping along the I-25 corridor and from CLC 61.

3.2.2 Vertical Head Gradient

The head difference between the UHZ and LHZ is about 6 to 10 ft where the clay layer is present, and less where the clay layer is absent (Table 5). Past groundwater-level data (2002 to 2006) from the multi-port FLUTE wells also revealed a similar distribution of head differences due to the clay layer, where wells GWMW-01, GWMW-03, and GWMW-08 show a 5 to 10 ft head difference between Port 1 and the lower ports, and GWMW-09 and GWMW-10 do not show a significant head difference between the upper and lower ports (see hydrographs in Appendix B). Groundwater-level data from the conventional monitoring wells are considered more accurate as compared to the FLUTE wells for the purpose of evaluating the groundwater vertical gradient.

CLC 61 is screened much deeper (600 to 1,000 ft) than other wells in the area and when significantly pumped may induce vertical groundwater flow where the clay layer is absent along the I-25 corridor, particularly in the area of GWMW-10, GWMW-15, CLC 19, and CLC 20. The effect of CLC 61 pumping is not apparent from groundwater-level elevation contouring analysis (see Figs. 7 through 9). However the groundwater-level effects of CLC 61 pumping have become apparent through more detailed monitoring from CLC 19, CLC 20, CLC 24, and CLC 26 over the past few years (See Appendix B), where drawdown and recovery cycles in Site wells are easily correlated to CLC 61 pumping. Since start up in 2012, CLC 61 pumping is the only significant pumping in the Site area other than pumping from CLC 18 and CLC 27 (Fig. 6). CLC 61 was pumped near continuously during 2018 (Table 3).

Table 5. Summary of head difference between Upper and Lower Hydrogeologic Zones measured in well pairs

well	hydrogeologic zone	December 2018 depth to water (ft amsl)	head difference ¹ (ft)
GWMW-11-S GWMW-11-D	Upper ² Lower	3,843.95 3,835.72	8.23
GWMW-15-S GWMW-15-D	Upper ³ Lower	3,839.68 3,839.10	0.58
GWMW-16-S GWMW-16-D	Upper ² Lower	3,842.67 3,836.96	5.71
MW-1 CLC 18	Upper ² both	3,843.54 3,833.90	9.64

¹ Positive number indicates a higher head in the Upper than the Lower Hydrogeologic Zone.

² Clay layer between Upper and Lower Hydrogeologic Zone is present.

³ Clay layer between Upper and Lower Hydrogeologic Zone is not present.

ft amsl - feet above mean sea level

3.3 Geochemical Characteristics

Time-series graphs of available specific conductance data are presented as Figure 10. CLC 21, the first well with detected PCE, had a dramatic increase in specific conductance values during the 1970s and 1980s (Fig. 10). Since the RI/FS process (2001 to 2006), elevated PCE concentrations in extraction CLC 18 and CLC 27 have coincided with elevated specific conductance (Fig. 10). A correlation was previously made between specific conductance and PCE concentrations at CLC 18 (JSAI, 2013). Since that time, continuous monitoring of specific conductance at CLC 18 has been used to optimize capture of the UHZ PCE plume.

A sulfate versus chloride plot is presented as Figure 11. Groundwater with low total dissolved solid content, sulfate, and chloride concentrations resembles background, prior to irrigation return influences and LHZ water quality prior to Site PCE release. CLC 10 has not been influenced by irrigation returns as indicated by low specific conductance values, and low sulfate and chloride concentrations. With easterly groundwater flow direction, the irrigation returns are originating from City Parks between GWMW-03 and GWMW-08 along East Hadley Street (the highest specific conductance measurement has been observed in the vicinity

of GWMW-03 at monitoring well MW-SF6). Groundwater monitoring results at NGMW-01, NGMW-02, NGMW-03, and MW-SF5 (Fig. 8) show non-detect PCE concentrations for the park irrigation area, indicating groundwater currently influenced by irrigation returns does not have detectable PCE concentrations.

Specific conductance and PCE data were compiled from the Site monitoring network and CLC 18 to better understand the relationship between the two parameters. As shown on Figure 12, there is a wide range of specific conductance values from the monitoring network (500 to 2,000 $\mu\text{S}/\text{cm}$). At the Site monitoring wells, low specific conductance always results in non-detectable PCE, and elevated specific conductance can be associated with non-detectable PCE and detectable PCE concentrations. For CLC 18, the correlation between PCE and specific conductance has clearly changed for the time periods 2014 and 2017-2018 (Fig. 12b). As the UHZ PCE plume is removed by CLC 18 pumping, the correlation between specific conductance and PCE concentration has changed so that the equivalent specific conductance values are now associated with lower PCE concentrations. For example, at a specific conductance of 1,500 $\mu\text{S}/\text{cm}$, PCE concentrations from 2017-2018 were approximately 5 to 8 $\mu\text{g}/\text{L}$, as compared to greater than 20 $\mu\text{g}/\text{L}$ for 2014.

3.4 PCE Plume

Since remedial system start up in 2012, the Site PCE plume has been decreasing in size and concentration (see Table 4 and graphs in Appendix D). Prior to system start up PCE concentrations were commonly above 20 $\mu\text{g}/\text{L}$, and most all 2018 results were below 18 $\mu\text{g}/\text{L}$. Winter 2018-19 PCE concentrations are shown with the groundwater elevation contours on Figures 8 and 9.

3.4.1 Horizontal Extent

The PCE plume horizontal extent above the clay layer in the UHZ is confined to an elongated area between CLC 18 and MW-SF10 (Fig 8). Monitoring wells MW-1, GWMW-01 Port 1, GWMW-11-S, and GWMW-16-S define the 5 $\mu\text{g}/\text{L}$ PCE extent. PCE concentrations at extraction CLC 18 and in UHZ monitoring wells (MW and MW-SF series) have significantly decreased over time (see graphs in Appendix D), indicating the UHZ plume is decreasing in concentration and size.

The horizontal extent in the LHZ has shifted from the extent defined from 2016 data. The highest concentrations in the LHZ are observed in CLC 27, GWMW-15-I, and GWMW-16-D (Fig. 9). It is difficult to determine based on the available data if the PCE concentrations at GWMW-15-I are isolated from the primary plume mass in LHZ, and the extent of the PCE plume downgradient and southeast of GWMW-10. Recommendations to address this data gap will be made in a technical memorandum provided to EPA prior to the annual review meeting this summer.

Over the past several years, concentrations of PCE have been increasing at GWMW-11-I (see Table 4), but are still below the action level of 5 µg/L. Groundwater flow direction at GWMW-11-I is toward CLC 27. It is possible that detectable concentrations of PCE at GWMW-11-I are not related to the Site plume.

3.4.2 Vertical Extent

The vertical extent of the PCE plume in the UHZ is controlled by the confining clay layer; however, due to downward gradient, the UHZ PCE plume vertically migrates to the LHZ where the clay layer is absent (Fig. 4). The best indicator of vertical movement of the plume due to downward gradient is the observed changes in PCE concentration over the last few years at GWMW-15-S and GWMW-15-I. GWMW-15-S PCE concentration was 18 µg/L in 2005, but below 5 µg/L by 2009. GWMW-15-I PCE concentration was below 5 µg/L in 2005, but increased to 19 µg/L between system start up in 2012 to current (see Fig. D8 in Appendix D). Given the time frame for GWMW-15, the rate of vertical plume movement is 19 ft/yr or 0.05 ft/day.

At system start up in 2012, Ports 1 through 3 at GWMW-10 had elevated PCE and Ports 4 through 7 were below detection limits. By 2016, Ports 1 through 6 had elevated PCE and Port 7 was below the detection limit. Winter 2018-19 data were rejected therefore it is difficult to assess vertical plume movement in the area of GWMW-10 for 2018. Currently, the vertical extent of the PCE plume is not defined at GWMW-10.

3.5 Site Conceptual Model Summary

The revised geologic model has identified preferential flow pathways on top of the clay layer (Fig. 2) that explain the movement of the UHZ PCE plume toward extraction well CLC 18 and MW-SF10.

Eastward groundwater flow was established by municipal pumping that began in the 1960s (Fig. 6). The PCE plume previously migrated east to southeast until intercepted by municipal well pumping (CLC 19 and CLC 21). Pumping at wells CLC 54 and CLC 57, between 1988 to 2002, caused the eastward migration of the PCE plume to GWMW-15.

The vertical extent of PCE plume in the UHZ is controlled by the confining clay layer; however, due to downward gradient, the UHZ PCE plume vertically migrates to the LHZ where the clay layer is absent. CLC 18 captures the PCE in the UHZ above the clay layer, where CLC 27 captures the PCE plume in the UHZ where the clay layer is absent and in the LHZ.

4.0 NUMERICAL MODEL UPDATE

The Griggs and Walnut groundwater-flow and solute-transport model (JSAI, 2006) was used for the EPA Remedial Investigation and Feasibility Study (EPA, 2006). The model was updated in 2009 (JSAI, 2009). Additional model updates have been made from 2017 through 2019 and are summarized in this report.

The discontinued pumping from municipal wells surrounding the Site has resulted in a reduction in the need for using the full extent of the original model, and model-simulated pumping outside of the plume area. Using the original model, the Site telescope mesh refinement (TMR) model was constructed (JSAI, 2017). Area of the telescope mesh refinement is shown on Figure 13. The main objective of the TMR model was to better simulate local hydraulic influences of the clay layer on plume capture that could not be made with the original model.

The TMR model consists of the original five model layers with 66 rows and 66 columns, and model cell dimensions of 200 by 200 ft. The TMR model grid with the Site monitoring network is shown on Figure 14. Visual MODFLOW Pro (Waterloo Hydrogeologic, 2011) software was used to run the MODFLOW model.

It was assumed that year-2012 Site conditions, prior to pumping CLC 18 and CLC 27, represented a steady-state condition. The steady-state condition was simulated by adding general head boundaries (GHB) for groundwater inflow at the northwest corner of Layer 1 and groundwater outflow along the north, west, and south sides of Layer 5. Previous additional calibration measures included the following:

1. Reduced hydraulic conductivity of the clay layer in Layer 2 from 1 ft/day to 0.01 ft/day
2. Reduced specific yield from 0.15 to 0.10
3. Increased hydraulic conductivity in layer 4 from 5 to 10 ft/day

The model update consisted of incorporation of annual pumping data and all available water-level data for calibration. Measured model input data were extended through the end of 2018. Appendix C lists the simulated annual pumping from wells CLC 18, CLC 27, and CLC 61 in terms of averaged rate per modeled stress period. The only pumping simulated in the model includes CLC 18 from Layer 1, CLC 27 from Layer 3, and CLC 61 from Layers 4 and 5. Previous TMR modeling efforts (JSAI, 2017) did not include pumping from CLC 61 because groundwater level elevation contouring efforts did not reveal drawdown effects from CLC 61 pumping, and the pumping from CLC 61 was less frequent and at lower rates than in 2018. Transient groundwater-flow simulations included the time period from May 2012 to May 2028.

4.1 TMR Model Calibration

Several common statistical measures for comparing observed hydraulic heads with simulated hydraulic heads were used to assess the new calibration of the groundwater flow model: root-mean-squared error (RMSE), mean absolute error (MAE), mean error (ME), correlation coefficient (r), and coefficient of determination (r^2). All of these statistics are well known and are defined elsewhere (e.g., Anderson and Woessner, 1992; Davis, 1986). The normalized RMSE (ratio of RMSE to total range in observed heads) is also considered. For perfect calibrations, the RMSE, MAE, and ME tend to zero, whereas r and r^2 tend to one. The correlation coefficient and the coefficient of determination measure the linear relationship between simulated and observed hydraulic heads. The closer r and r^2 are to one, the better the fit between the observed and modeled data.

Groundwater-head calibration results are shown on the hydrographs in Appendix E and calibration results are also presented in Figure 15. The model-simulated heads reasonably matched observed heads in the Upper and Lower Hydrogeologic Zones. A total of 43 available data points were used to compare measured water levels for the 11 active calibration target locations. The histogram on Figure 15 shows that 93% (40 out of 43) of the absolute residual values are less than 2 ft and that 100% (43 out of 43) are less than 5 ft. Calibration statistics are summarized in Table 6.

The model shows an acceptable correlation between observed and simulated water levels ($r^2 = 0.944$) with a normalized RMSE of 8.5 percent. The RMSE is a measurement of the spread of residuals (differences between simulated and observed values). If the normalized RMSE is small—typically less than 10 to 15 percent—then a “good” calibration is generally indicated (ESI, 2011) and the remaining errors are considered to be a negligible part of the overall model response (Anderson and Woessner, 1992).

Table 6. Summary of model calibration statistics for historical transient simulation 2012 to 2018

statistics of calibration targets	result
number of targets	43
range in observed head	14.37
mean observed head	3841.5
maximum residual (ft)	2.6
minimum residual (ft)	-2.3
RMSE (ft)	1.22
standard deviation of residual error (ft)	1.2
bias (mean error in ft)	-0.32
normalized RMSE	0.085
R-squared	0.944

5.0 EFFECTIVENESS OF MONITORING NETWORK

Primary data from the monitoring network include measured groundwater levels, metered pumping, and PCE concentration from collected samples. The SOW (EPA, 2017) requires monthly water-level monitoring from CLC 18 and CLC 27, quarterly water-level monitoring from inactive City wells in the Site area, and annual water-level monitoring from the monitoring well network. Groundwater-level monitoring and metered pumping from the extraction wells and active and inactive City wells is performed monthly by LCU; however, most City wells have transducers with daily data collection. Groundwater-quality data are collected from the monitoring network annually.

The effectiveness of the monitoring system is based on the ability to characterize and monitor the contaminated groundwater plume over time. Two general categories for characterizing the groundwater plume include defining the groundwater flow direction and defining the extent of the PCE plume.

5.1 Groundwater Flow Direction

The water-level monitoring program provides adequate data for determining groundwater flow direction in the UHZ and in the LHZ on a regional and local scale. Time-series water-level data are critical for calibration of the model used to assess remedial progress and effectiveness of the monitoring network. Daily water-level data from transducers installed in GWMW-16(S,D) would help better define the influences of extraction well pumping on the UHZ and LHZ. Otherwise, there are adequate groundwater-level data for characterizing the groundwater plume and defining the groundwater flow direction as shown on Figures 8 and 9.

5.2 Defining Extent of PCE Plume

The PCE plume in the UHZ is well defined by the monitoring network, and no additional monitoring points or sampling frequency are needed to characterize the plume or define the extent. Repair or replacement of GWMW-10 will elucidate potential UHZ impact at that location; a plan will be proposed to EPA in a subsequent JSP memorandum. Water-quality sampling is no longer needed from GWMW-03 and NGMW-02 because of consistent below detection PCE concentrations and because NGMW-03 provides the required information for plume definition in this area.

The PCE plume in the LHZ is defined on the west and north sides. The extent of elevated PCE concentrations in the LHZ at GWMW-15-I is not well defined; however, GWMW-15 is on the upgradient side of the PCE plume and groundwater flow at this location is toward extraction well CLC 27 (Fig. 9). The extent of the PCE plume downgradient and southeast of GWMW-10 is not well defined by the monitoring network, as shown on Figure 9. The vertical extent of the LHZ PCE plume is otherwise defined by GWMW-11 and GWMW-15. Recent cessation of pumping at CLC 61 (March 2019) is expected to minimize the potential for induced vertical PCE plume movement. Model simulations indicate the cessation of pumping from CLC 61 will cause the water level of the southern edge of the LHZ PCE plume to rebound so it is more readily captured and extracted by CLC 27 pumping.

The JSP will develop a plan to improve LHZ monitoring to fill the data gap around GWMW-10, which will consider data quality objectives, cost benefit, readiness to implement, and access.

6.0 SUMMARY OF FINDINGS

The two distinct hydrogeologic zones, the UHZ and the LHZ, are primarily differentiated by the clay zone and water-level elevations measured in various multi-port and nested monitor wells screened at different depths. The UHZ and LHZ are not hydraulically connected across the Site where the clay zone is present, and but the UHZ and LHZ are hydraulically connected across the Site where the clay zone is absent. It was previously thought the UHZ and LHZ were hydraulically connected across the Site, but in varying degree of hydraulic communication (EPA, 2006). The revised geologic model defining the clay layer extent better explains the observed horizontal and vertical groundwater flow mechanisms, PCE plume distribution, and PCE plume capture by extraction wells in the UHZ and LHZ (see Figs. 2 through 9).

When considering the Site monitoring network and LCU regional monitoring network, there are adequate groundwater-level data collected to evaluate groundwater flow direction in the UHZ (Fig. 8) and LHZ (Fig. 9). The hydraulic gradient across the Site is fairly flat, as defined by the 3,840 and 3,830 ft water-level elevation contours (Fig. 7), with a cone of depression shown at CLC 27. Given the flat hydraulic gradient, the re-surveying of measuring point elevations (Table 2; Appendix A) provides better confidence in the water-level elevation contouring efforts.

The Site telescope mesh refinement (TMR) model (JSAI, 2017) was updated with data collected from 2017 to 2018 and satisfactorily calibrated. Pumping from CLC 61 was also added to the model calibration and simulations. CLC 61 is screened deeper (600 to 1,000 ft) than all other wells in the area and when significantly pumped (as observed in 2018) has the potential to induce vertical groundwater flow where the clay layer is absent, particularly in the area of GWMW-10, GWMW-15, CLC 19, and CLC 20.

As indicated by the monitoring data at GWMW-15(S,I,D) and GWMW-10, and model simulations, pumping from CLC 61 may have affected the vertical migration of the LHZ PCE plume. CLC 61 pumping was discontinued in March 2019.

The vertical and horizontal extent of the UHZ PCE plume is adequately defined by the groundwater monitoring network. Water-quality sampling is no longer needed from GWMW-03 and NGMW-02, because of consistent below detection PCE results. The LHZ PCE plume is not completely defined downgradient and southeast of GWMW-10. Model simulations indicate the cessation of pumping from CLC 61 will cause the water level on the southern boundary of the LHZ PCE plume to rebound and be more readily captured and extracted by CLC 27 pumping. Well 61 stopped pumping as of March 2019, and water-level data are being collected and assessed. The JSP will develop a plan to improve LHZ monitoring to fill the data gap around GWMW-10.

Monitoring data from CLC 18 and CLC 27 allow for performance evaluation and adequate calculation of PCE plume removal (see JSAI companion report titled *Optimization Assessment Report 2017 through 2018 Griggs and Walnut Groundwater Plume Superfund Site, Las Cruces, New Mexico*).

7.0 RECOMMENDATIONS

The following recommendations are based on review of all Site monitoring data, analysis of data, and results from the updated TMR groundwater flow model calibration.

1. Field parameters from Site monitoring events should be tabulated (similar to table E-2c in RI report, EPA, 2006) and entered into the project database. The tabulated data would then be accessible for QA/QC analysis of sampling results.

2. Daily groundwater-level data from transducers installed in GWMW-16(S,D) would help better define the influences of extraction well pumping on the UHZ and LHZ.
3. Water-quality sampling is no longer needed from GWMW-03 and NGMW-02 because of consistent below detection PCE results and the UHZ PCE plume is located much father east at extraction well CLC 18.
4. Pumping from CLC 61 stopped in March 2019. Pumping from CLC 61 should be reduced to 500 ac-ft/yr or less or temporarily discontinued until water level rebound on the southern boundary of the LHZ PCE plume area is observed.
5. The JSP will develop a plan to improve LHZ monitoring to fill the data gap around GWMW-10, which will consider data quality objectives, cost benefit, readiness to implement, and access.

8.0 REFERENCES

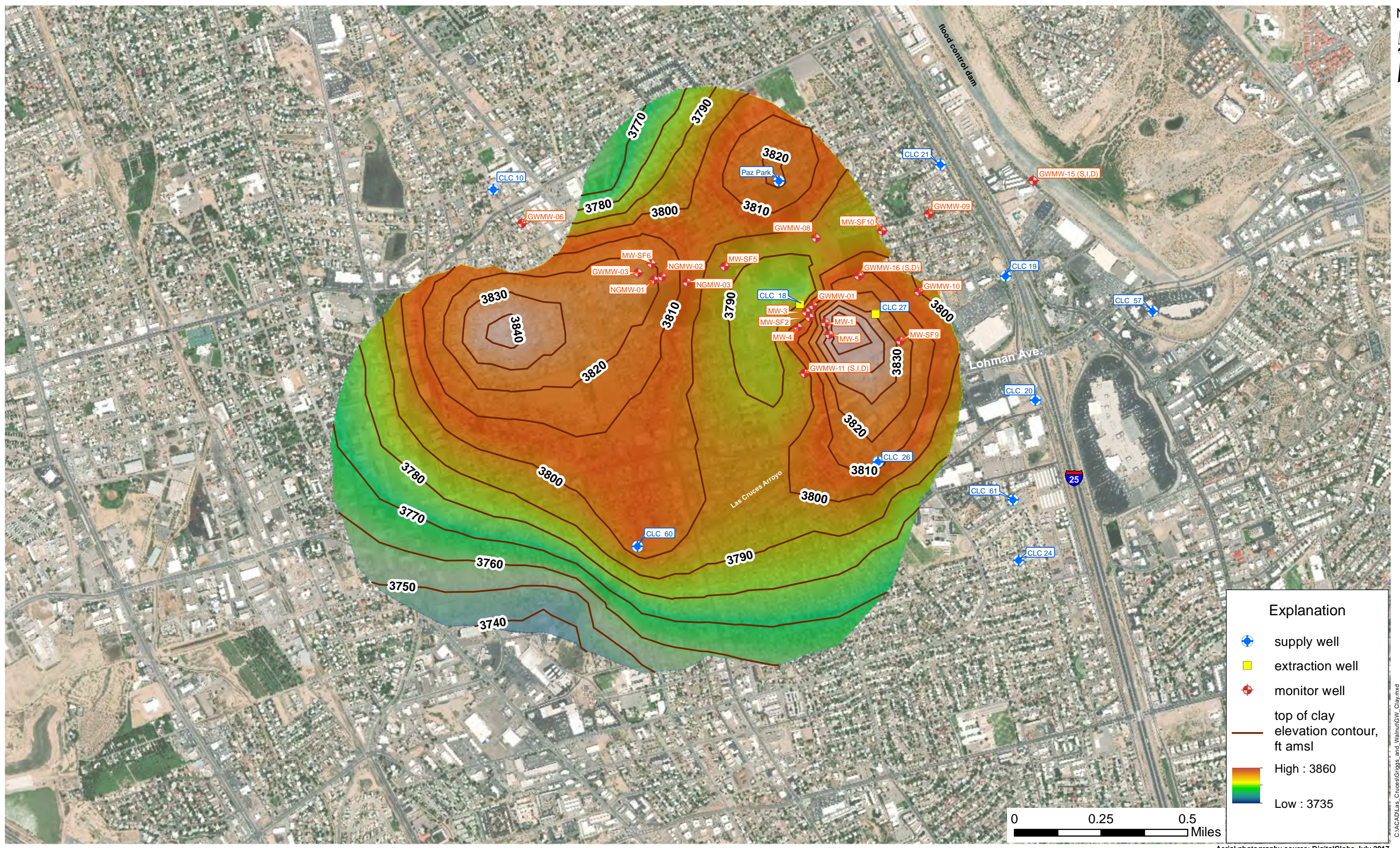
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ILLUSTRATIONS

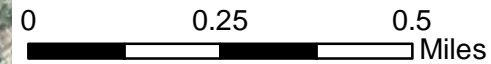


Figure 1. Aerial photograph of the Griggs and Walnut Site showing monitoring network, Las Cruces, New Mexico.



Explanation

- ◆ supply well
- extraction well
- ◆ monitor well
- top of clay elevation contour, ft amsl
- High : 3860
- Low : 3735



Aerial photography source: DigitalGlobe July 2017

Figure 2. Aerial photograph of the Griggs and Walnut Site showing top of clay layer elevation contours and clay layer extent, Las Cruces, New Mexico.

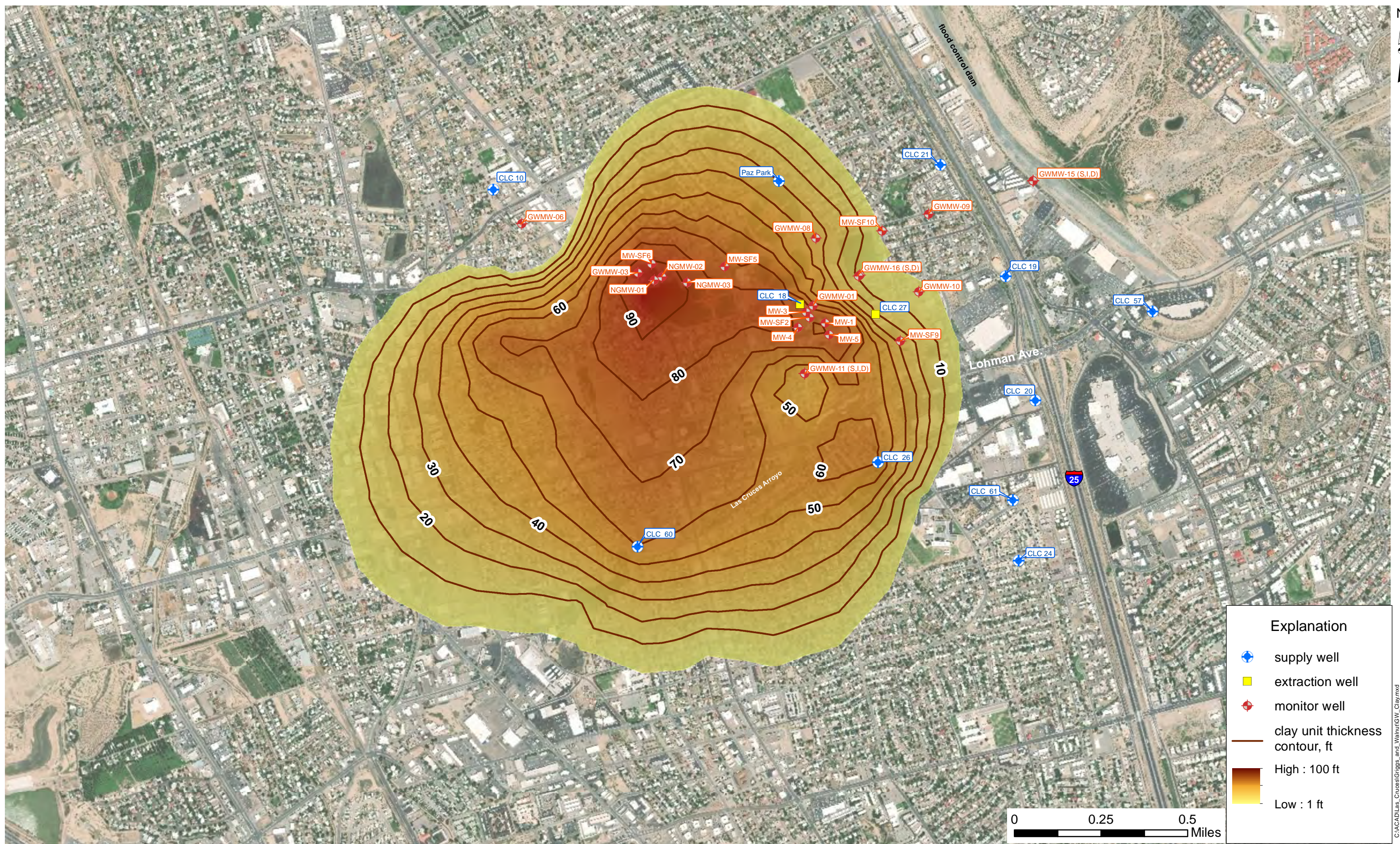
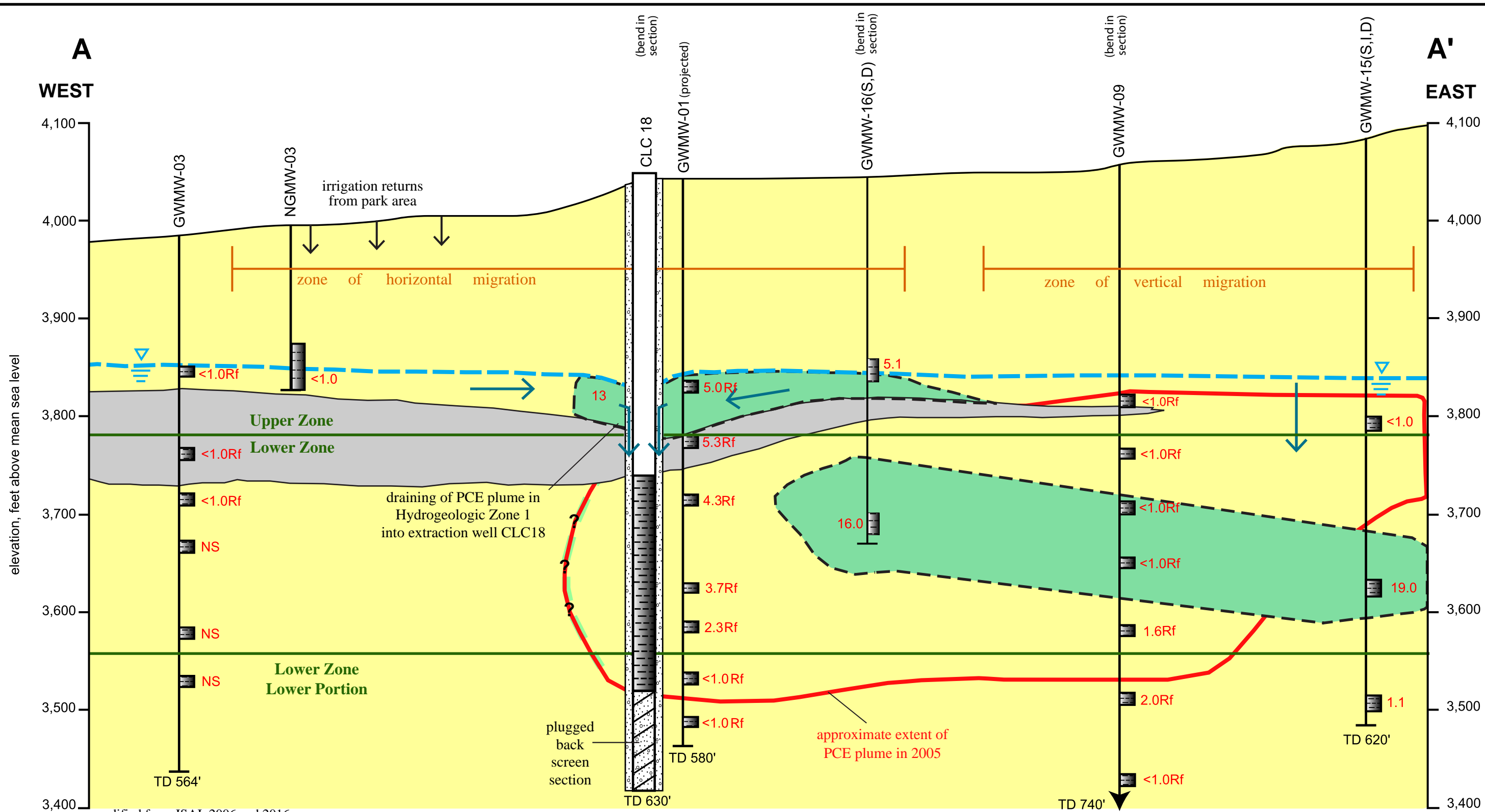


Figure 3. Aerial photograph of the Griggs and Walnut Site showing clay layer extent and thickness contours, Las Cruces, New Mexico.



modified from JSAI, 2006 and 2016

EXPLANATION	
	predominantly sand, silt, and clay
	predominantly sand and gravel
	PCE concentrations >5 µg/L (2018)
	approximate water table (wells not to horizontal scale)
	screen section
	direction of flow
2.3	PCE concentration, µg/L (2018)
Rf	rejected, the data are unusable, FLUTE well liner lacks integrity
- - -	dashed where inferred

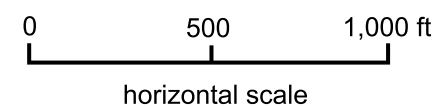
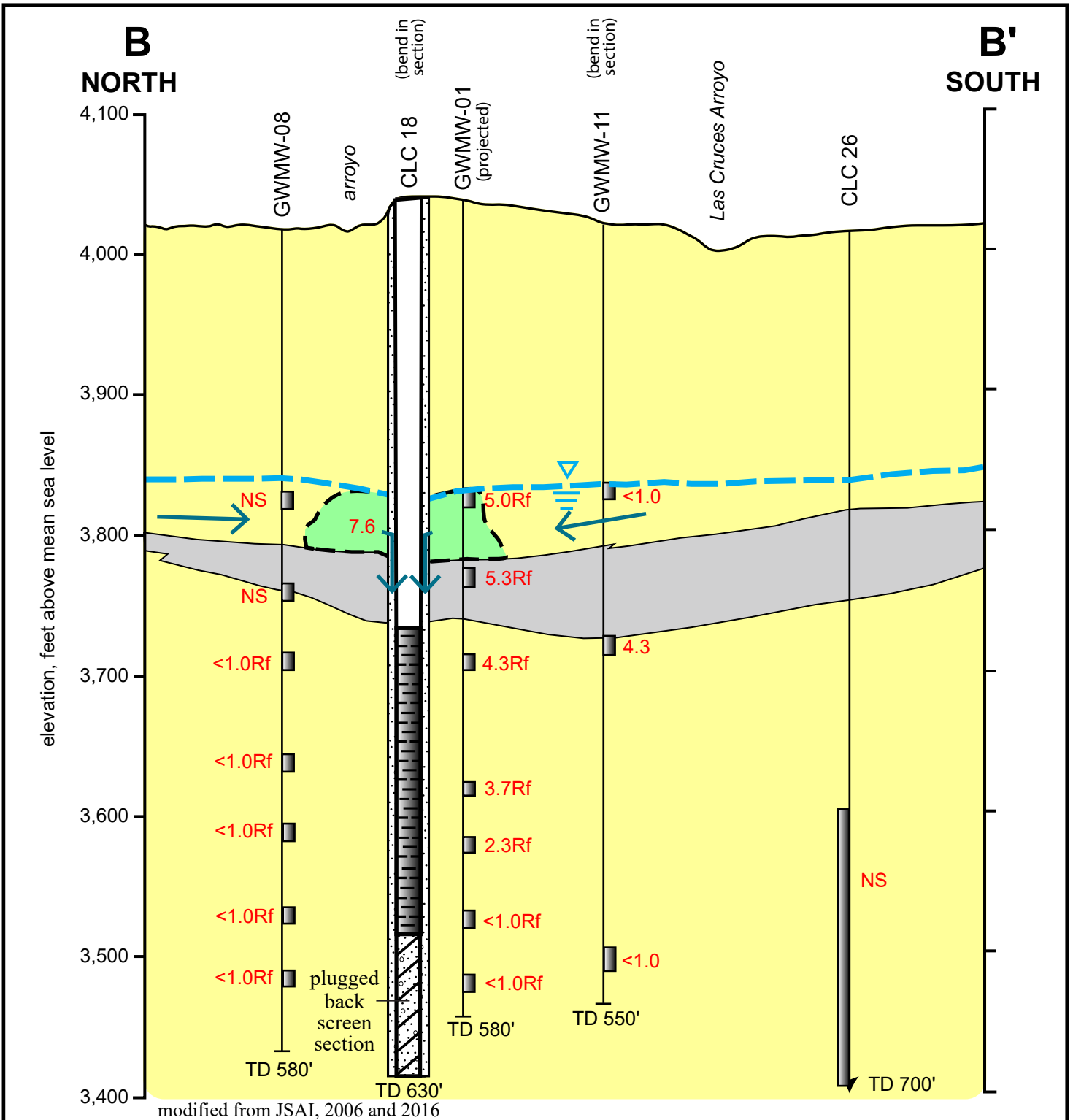









Figure 4. Hydrogeologic cross-section A-A' with winter 2018 PCE concentrations, Griggs and Walnut Site, Las Cruces, New Mexico.



EXPLANATION

	predominantly sand, silt, and clay		screen section
	predominantly sand and gravel		approximate water table
	PCE concentrations >5 µg/L (2018)	2.3	PCE concentration, µg/L (2018)
	direction of flow (CLC18 not to horizontal scale)	Rf	rejected, the data are unusable, FLUTe well liner lacks integrity
			dashed where inferred

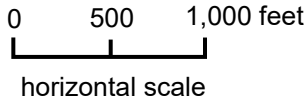


Figure 5. Hydrogeologic cross-section B-B' with winter 2018 PCE concentrations, Griggs and Walnut Site, Las Cruces, New Mexico.

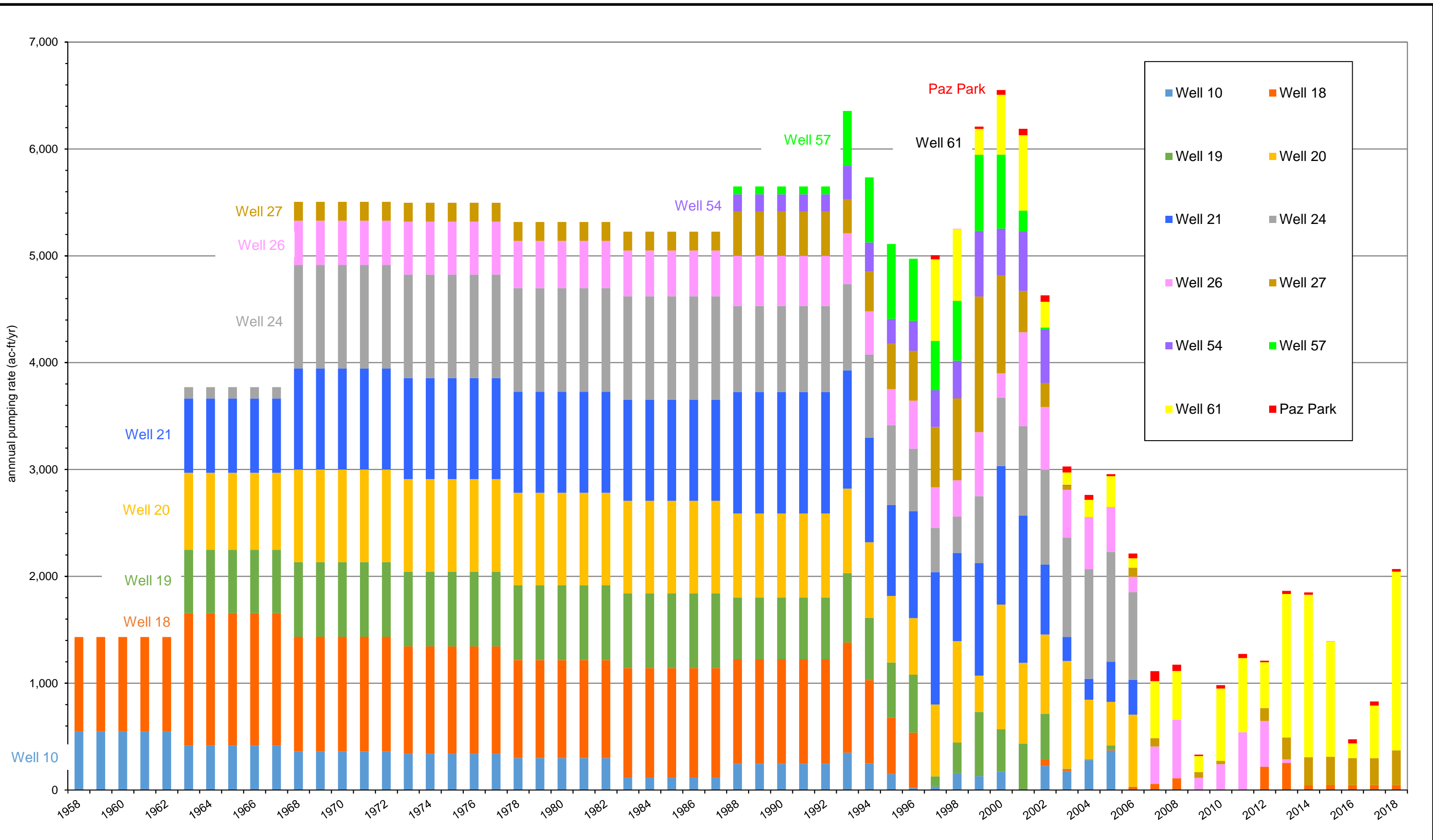


Figure 6. Bar graph of annual pumping from wells in the Griggs and Walnut Site area, Las Cruces, New Mexico.

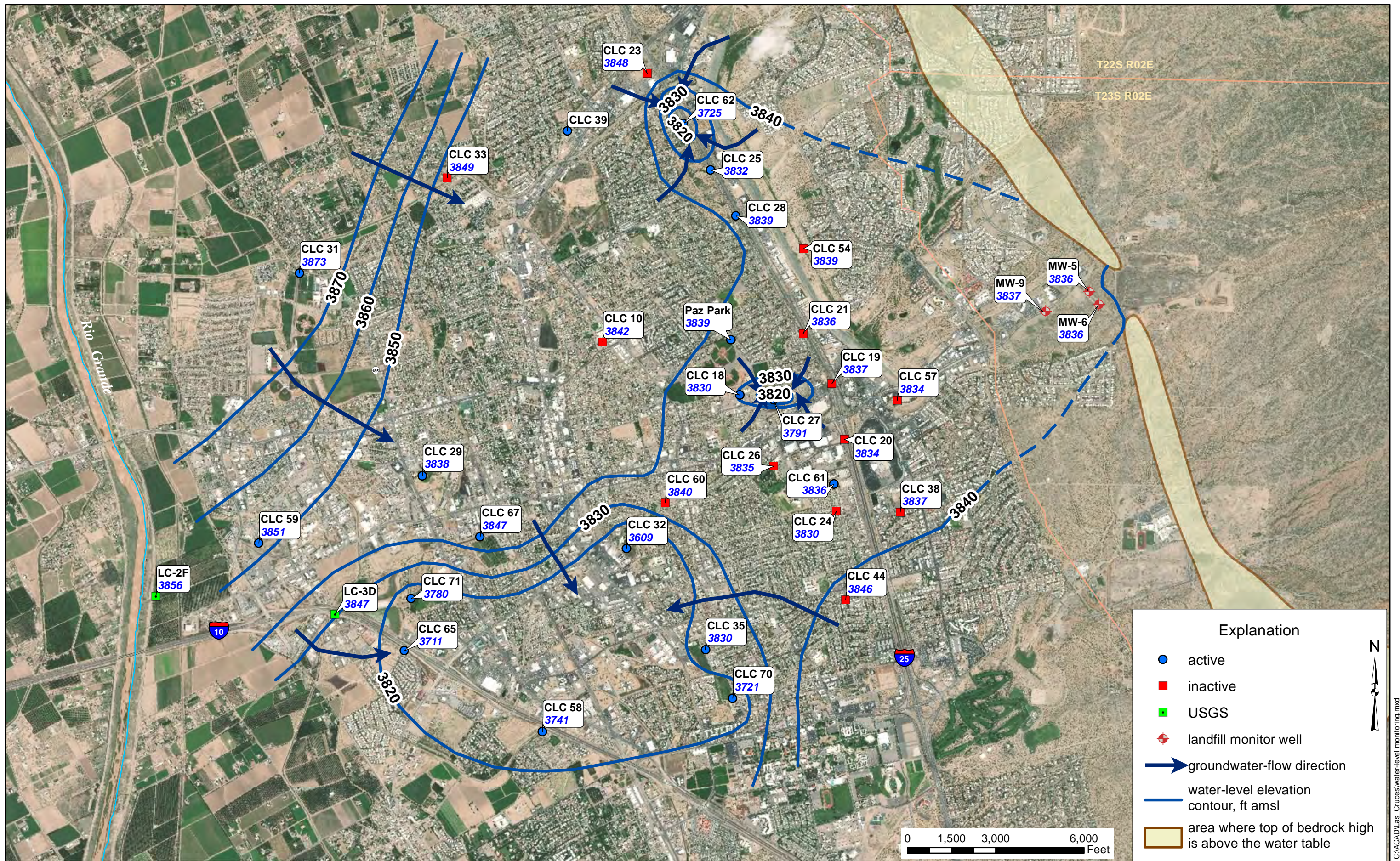


Figure 7. Aerial photograph showing December 2018 water-level elevation contours, Las Cruces, New Mexico.

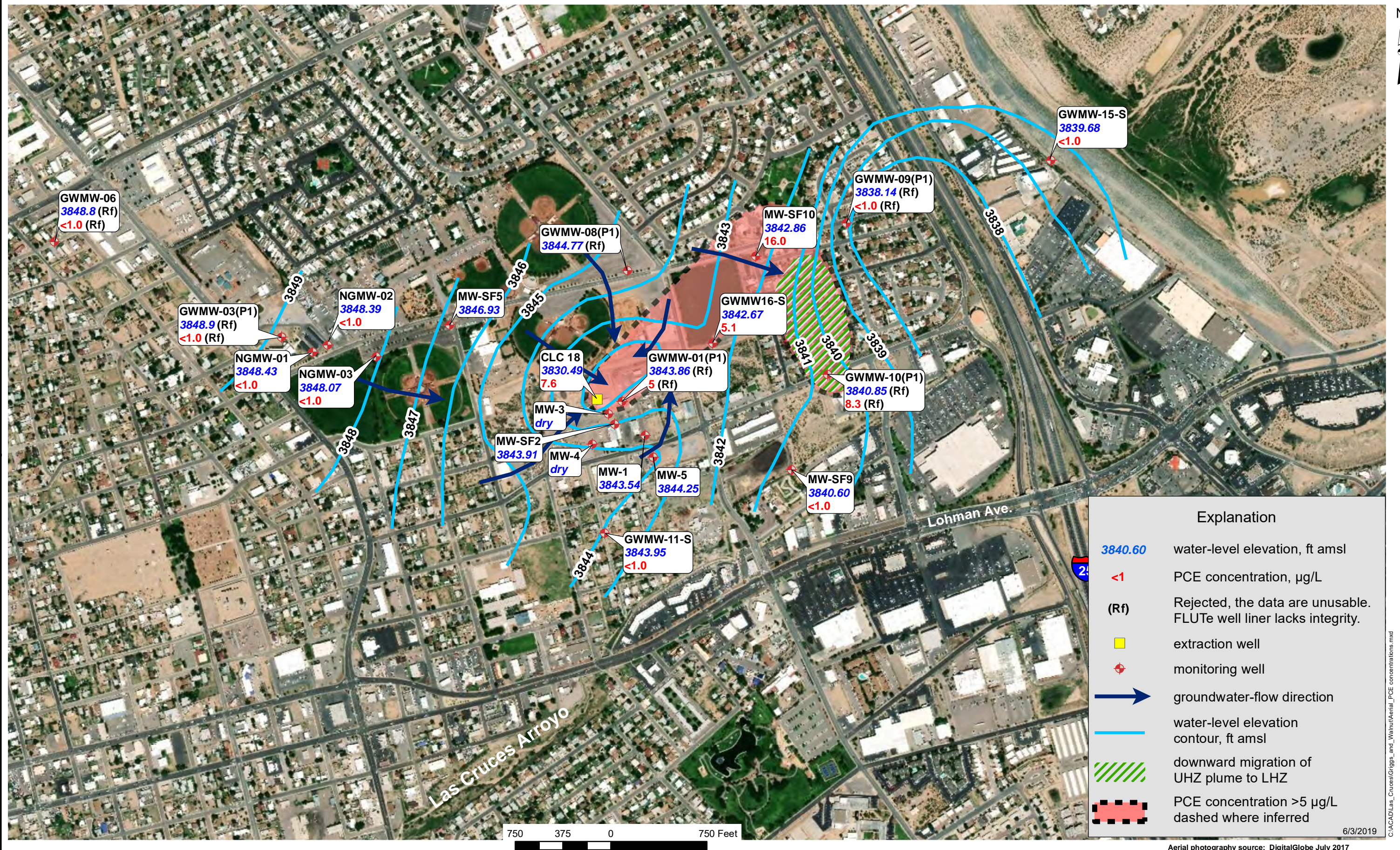


Figure 8. Aerial photograph showing December 2018 water-level elevation contours and PCE concentrations for the Upper Hydrogeologic Zone, Griggs and Walnut Site, Las Cruces, New Mexico.

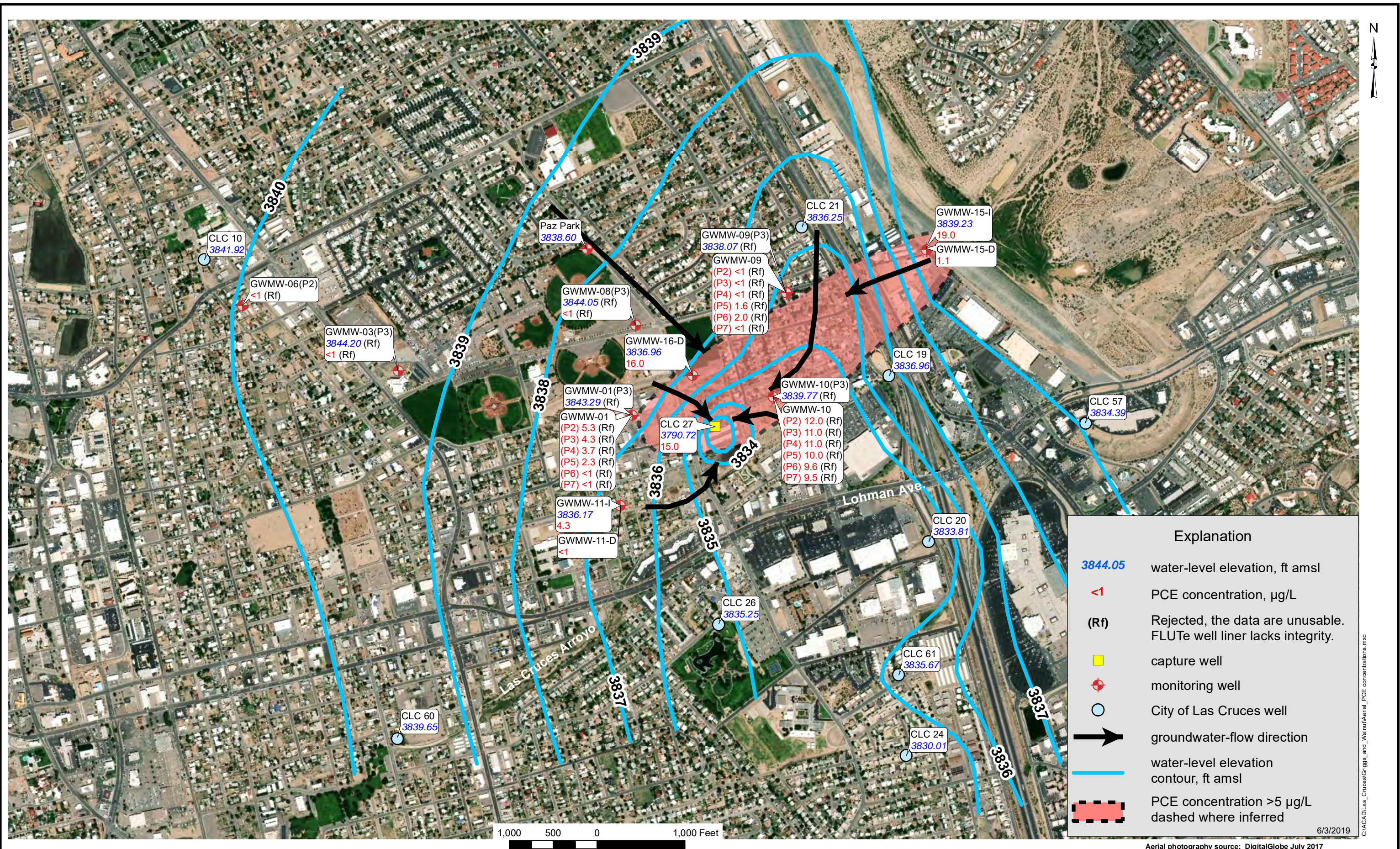


Figure 9. Aerial photograph showing December 2018 water-level elevation contours and PCE concentrations for the Lower Hydrogeologic Zone, Griggs and Walnut Site, Las Cruces, New Mexico.

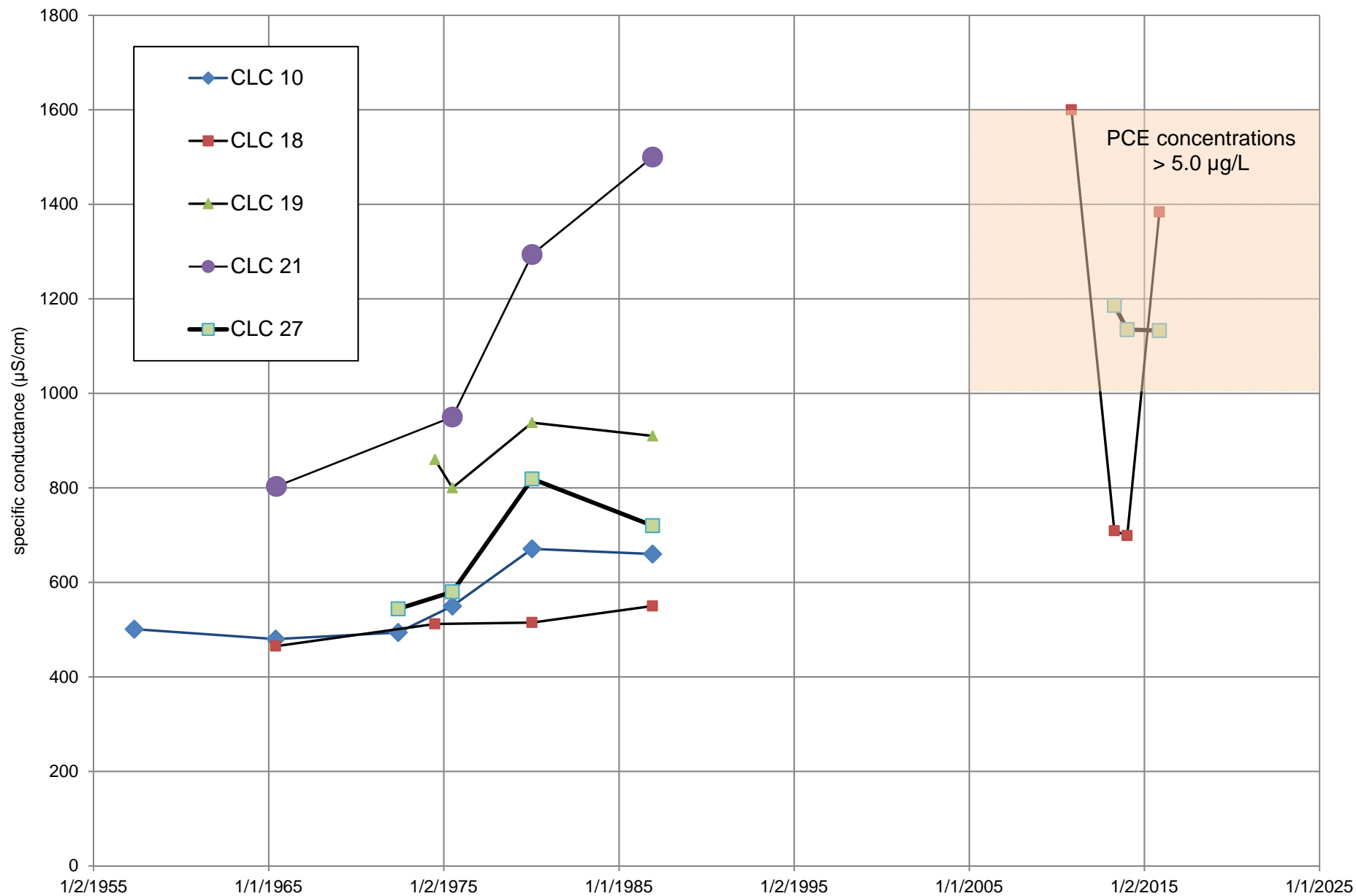


Figure 10. Time-series graph of specific conductance measured in City of Las Cruces municipal wells located in the Griggs and Walnut Site area, New Mexico.

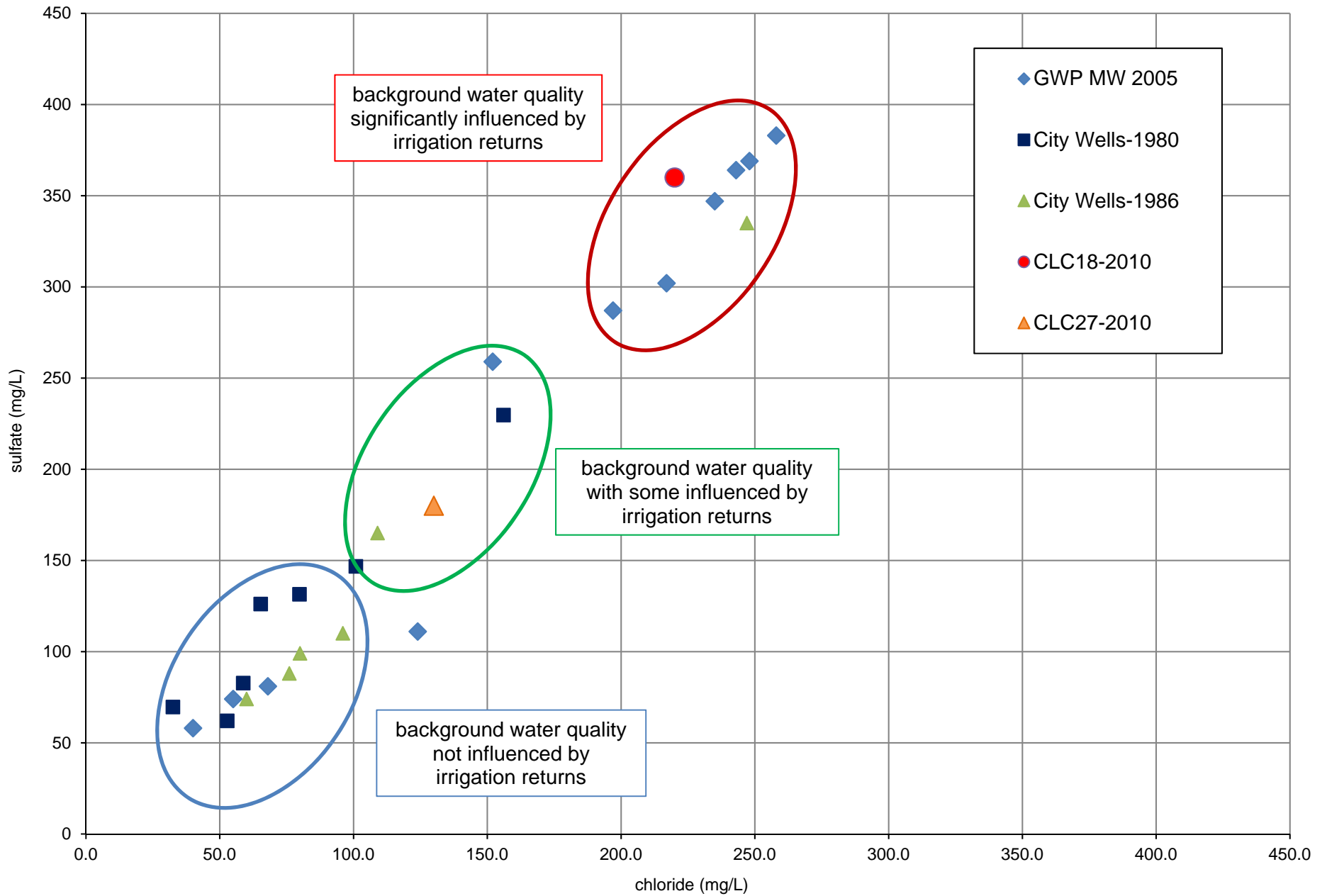


Figure 11. Graph of sulfate versus chloride, Griggs and Walnut Site area, Las Cruces, New Mexico.

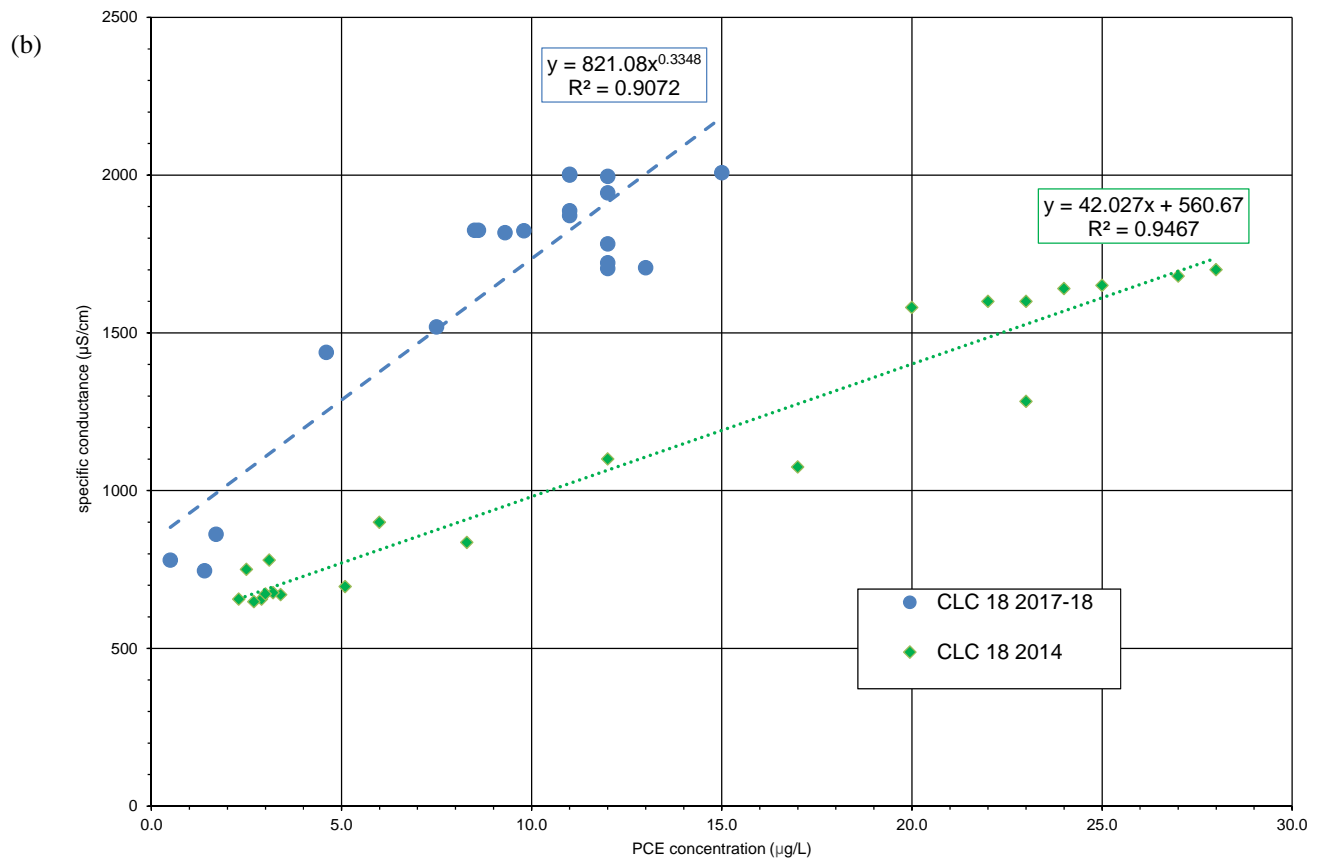
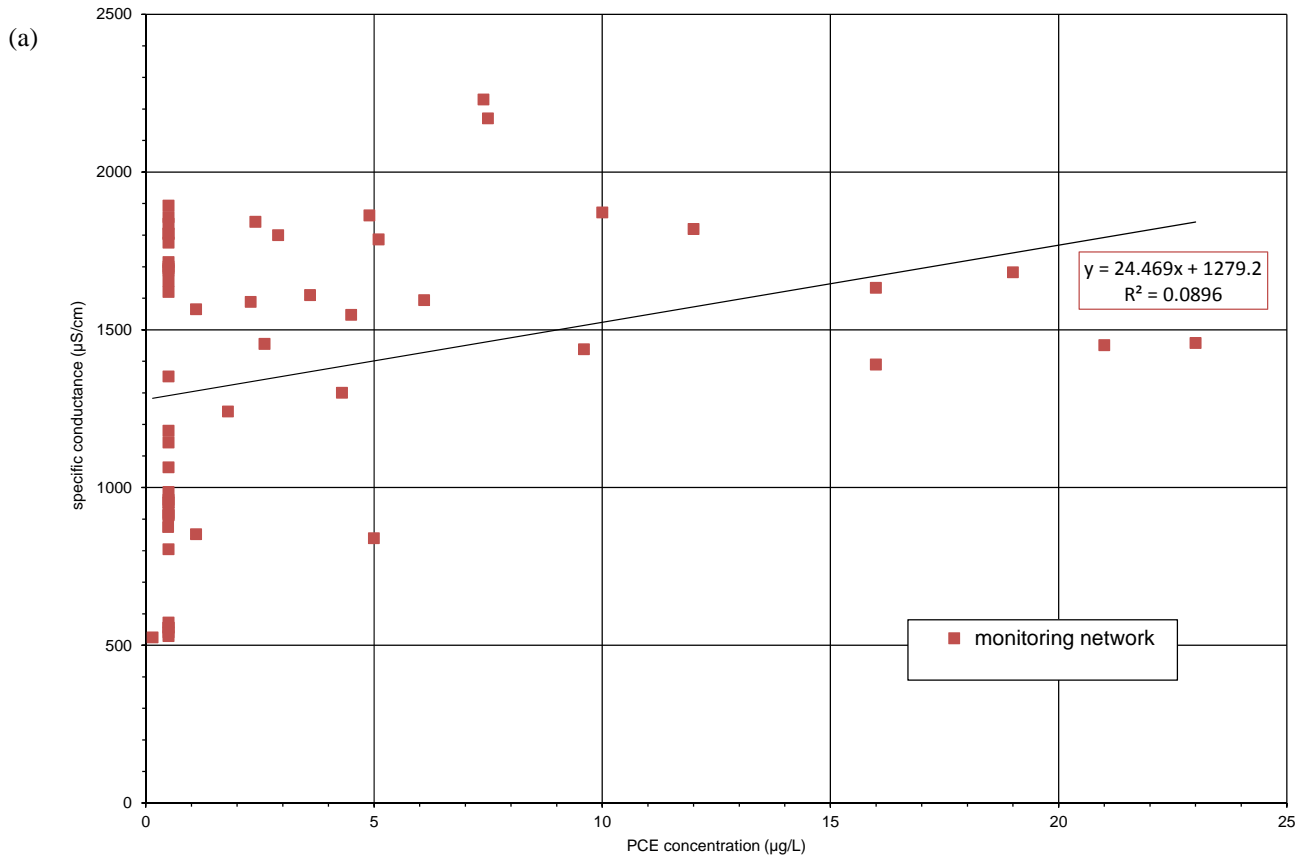


Figure 12. Graph of specific conductance versus PCE concentration for the monitoring network (a) and for CLC 18 (b), Griggs and Walnut Site area, Las Cruces, New Mexico.

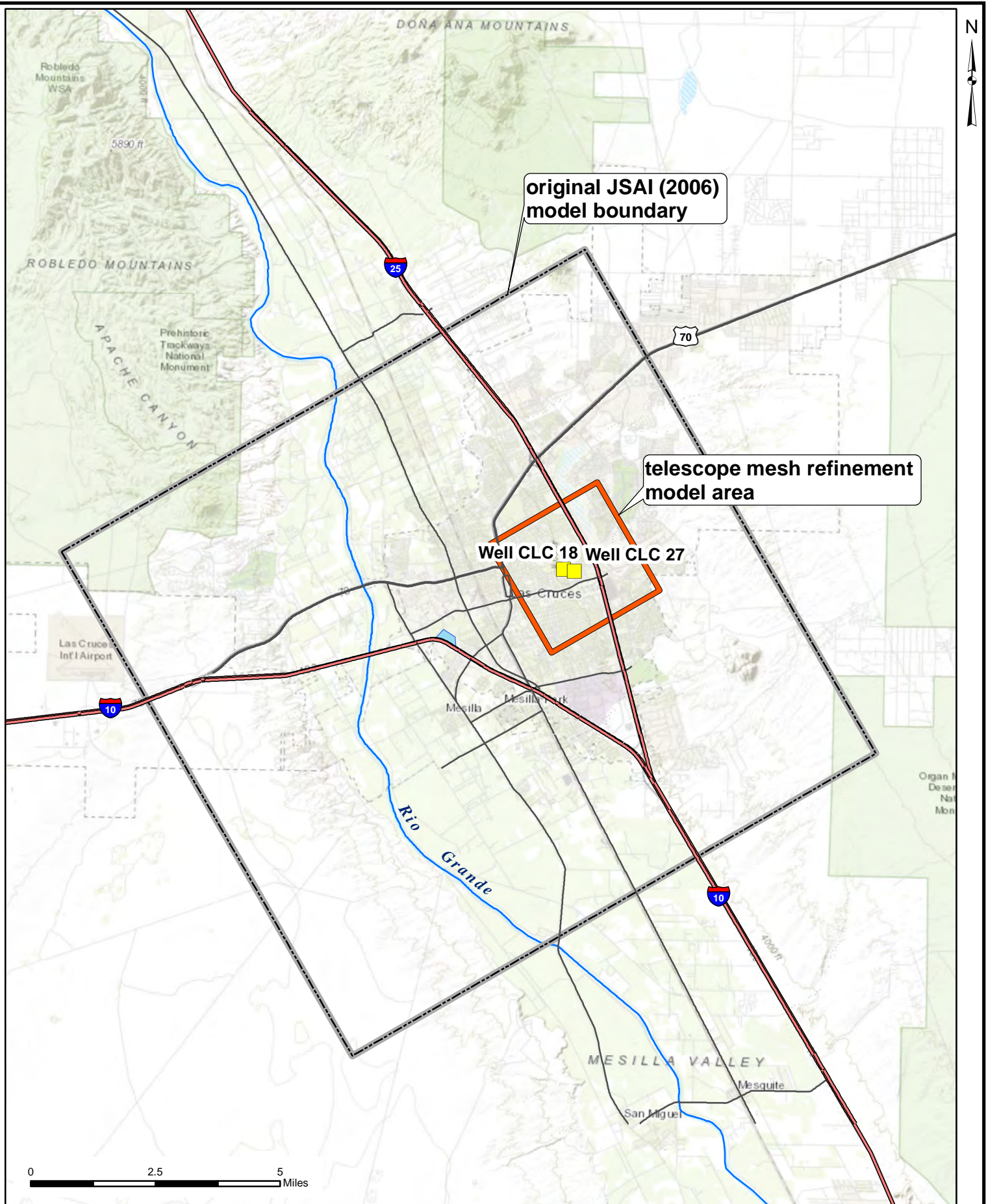


Figure 13. Topographic map showing telescope mesh refinement (TMR) groundwater-flow model grid, Griggs and Walnut Site, Las Cruces, New Mexico.

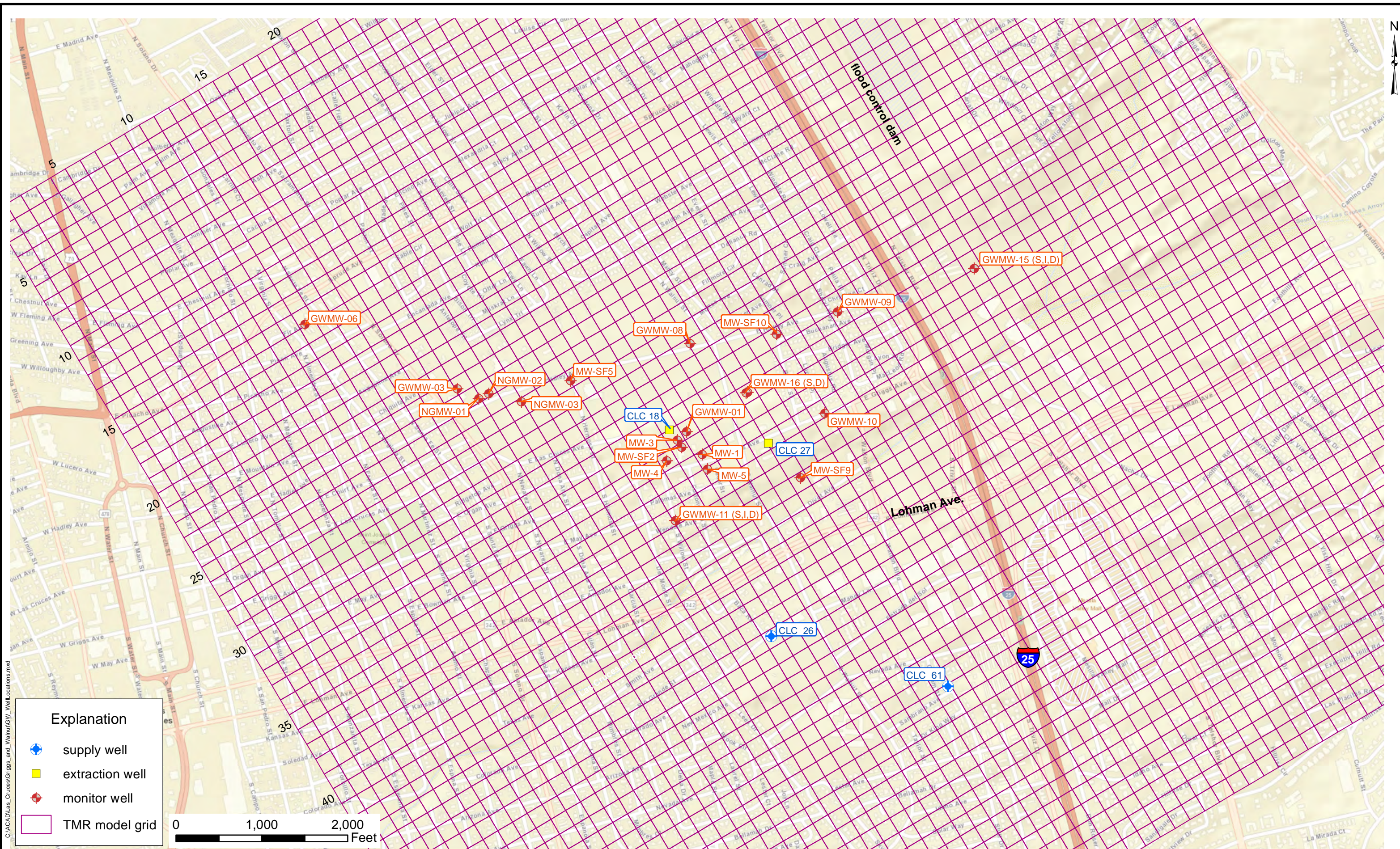


Figure 14. Map showing telescope mesh refinement (TMR) groundwater-flow model with Griggs and Walnut Site monitoring network, Las Cruces, New Mexico.

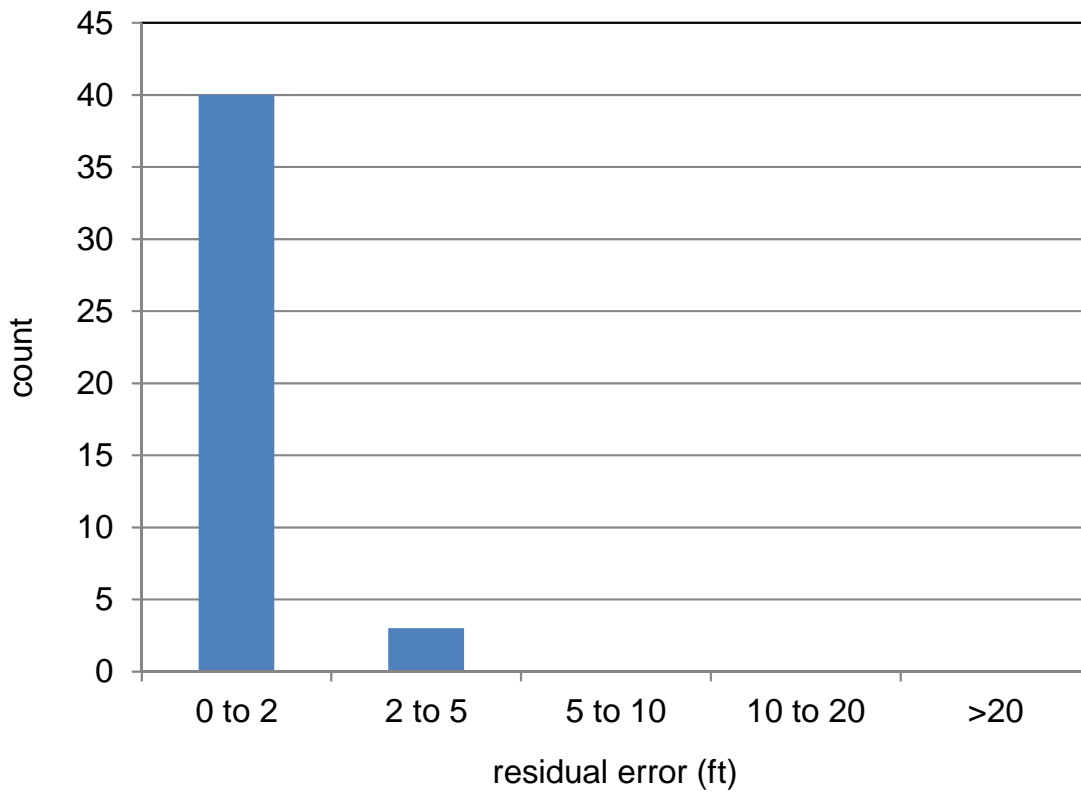
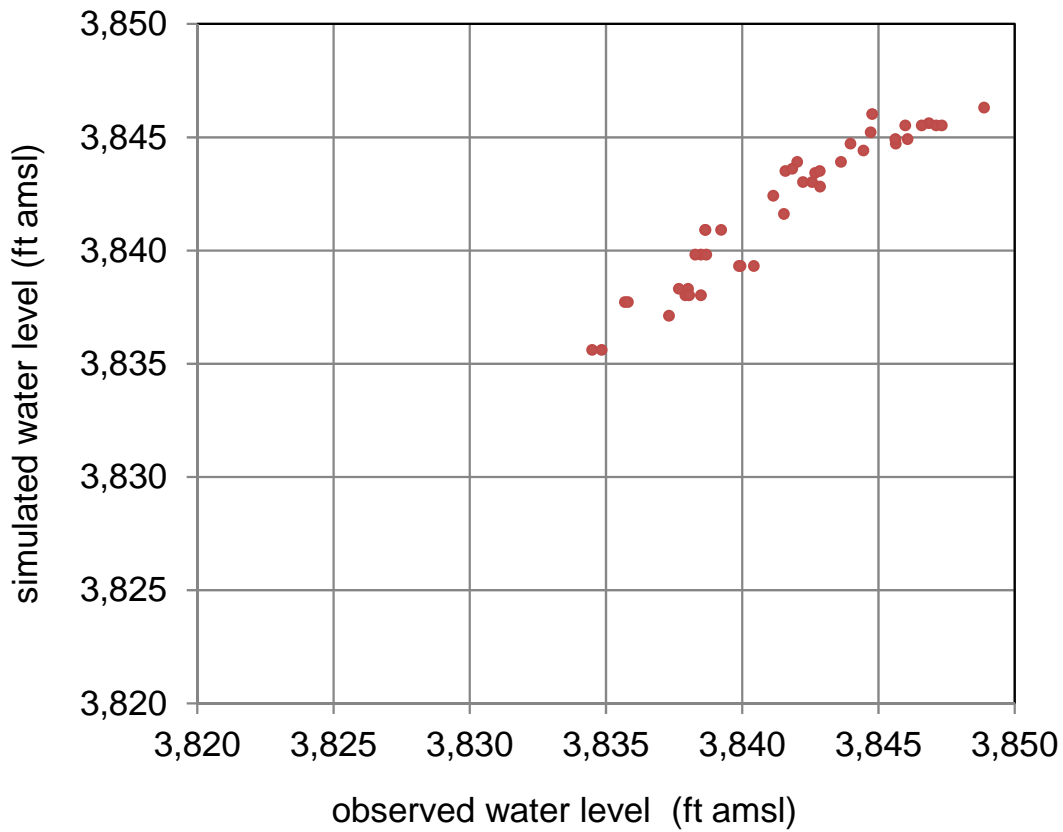


Figure 15. Bar graph showing distribution of model calibrated residual error in heads.

APPENDICES

Appendix A.

**Las Cruces Utilities 2018 Griggs and Walnut Site plume
monitoring point survey data**

Table A1. Groundwater Monitoring Wells

Well Number	Northing	Easting	Ground Surface Elevation (ft)	Sampling Tube Elevation (ft)	Depth: Ground Surface to Sampling Tube (in.)	Number of Sampling Tubes	Features
01	479,017.53	1,483,311.09	4,038.00	4,036.27	-21	7	Inside manhole w/24" dia. manhole
03	479,519.93	1,480,644.34	3,976.68	3,975.81	-10	6	Inside manhole w/26" dia. manhole
08	480,044.39	1,483,353.06	4,020.26	4,019.52	-9	7	Inside manhole w/26" dia. manhole
09	480,413.04	1,485,067.28	4,051.39	4,051.14	-3	7	Inside manhole w/26" dia. manhole
10	479,228.44	1,484,920.87	4,064.84	4,064.51	-4	7	Inside manhole w/26" dia. manhole
11I	477,984.90	1,483,175.33	4,022.92	4,022.74	-2	1	Inside manhole w/12" steel casing
11S	477,984.59	1,483,175.29		4,022.72	-2	1	
11D	477,984.86	1,483,175.08		4,022.67	-3	1	
15I	480,905.12	1,486,668.80	4,081.31	4,081.06	-3	1	Inside manhole w/12" steel casing
15S	480,905.28	1,486,669.21		4,081.03	-3	1	
15D	480,905.52	1,486,668.84		4,081.03	-3	1	
16S	479,474.88	1,484,021.82	4,031.16	4,033.07	23	1	Protected by concrete bollards
16D	479,469.58	1,484,002.31	4030.85	4032.73	23	1	Protected by concrete bollards

Table A1. Groundwater Monitoring Wells

Well Number	Northing	Easting	Ground Surface Elevation (ft)	Sampling Tube Elevation (ft)	Depth: Ground Surface to Sampling Tube (in.)	Features
01	478,753.86	1,483,492.59	4,037.75	4,037.14	-7.3	12" Steel Casing
02	478,838.36	1,483,484.65	4,038.34	4,037.50	-10.1	10" PVC Casing
03	478,918.61	1,483,204.12	4,034.70	4,034.56	-1.7	7" Steel Casing
04	478,680.95	1,483,079.97	4032.11	4,031.59	-6.2	8" Steel Casing
05	478,579.21	1,483,554.43	4,038.26	4,036.24	-24.2	3" Steel Casing
06	478,704.09	1,483,909.93	4,044.85	4,044.47	-4.5	2.5" PVC Casing/Con. Collar
SF1	478,963.50	1,483,448.56	4,038.34	4,037.15	-14.3	6" Steel Casing
SF2	478,837.25	1,483,253.30	4,035.87	4,035.71	-1.9	Missing Lid
SF3	478,740.97	1,482,894.63	4,028.16	4,027.51	-7.8	Plastic Casing
SF4	478,932.59	1,482,728.53	4,026.12	4,025.60	-6.2	
SF5	479,614.56	1,481,960.51	3,996.39	3,995.63	-9.1	7" Cover from Sampling Tube
SF6	479,654.01	1,480,848.85	3979.25	3,978.61	-7.7	
SF9	478,481.44	1,484,637.01	4,032.86	4,032.35	-6.1	12" Steel Casing
SF10	480,156.45	1,484,357.61	4,038.96	4,038.66	-3.6	12 Steel Casing

Table A1. Groundwater Monitoring Wells

Well Number	Northing	Easting	Concrete Floor at Well (ft)	Features
CLC PAZ	480,910.66	1,482,797.07	4,012.60	-
Well 10	480,788.00	1,478,435.00	3,938.42	12-in tall pedestal
Well 18	479,033.01	1,483,114.82	4,037.59	24-in tall pedestal
Well 19	479,464.64	1,486,241.12	4,063.52	15-in tall pedestal
Well 20	477,570.53	1,486,690.77	4,073.34	14-in tall pedestal
Well 21	481,161.95	1,485,245.75	4,075.25	-
Well24	475,131.30	1,486,440.09	4,041.01	-
Well 26	476,624.54	1,484,299.63	4,013.15	12-in tall pedestal
Well 27	478,884.10	1,484,258.63	4,055.62	18-in tall pedestal
Well 28	486,674.38	1,482,030.76	4,061.65	12-in tall pedestal
Well 38	475,113.92	1,488,619.25	4,101.89	17-in tall pedestal
Well 54	484,049.79	1,485,225.99	4,109.4	22-in tall pedestal
Well 57	478,920.91	1,488,486.58	4,129.72	29-in tall pedestal
Well 60	475,323.34	1,480,636.27	3,940.18	26-in tall pedestal
Well 61	476,052.51	1,486,352.59	4,040.12	15-in tall pedestal

Appendix B.

**Hydrographs for Griggs and Walnut Site plume monitoring network wells
and selected City of Las Cruces wells**

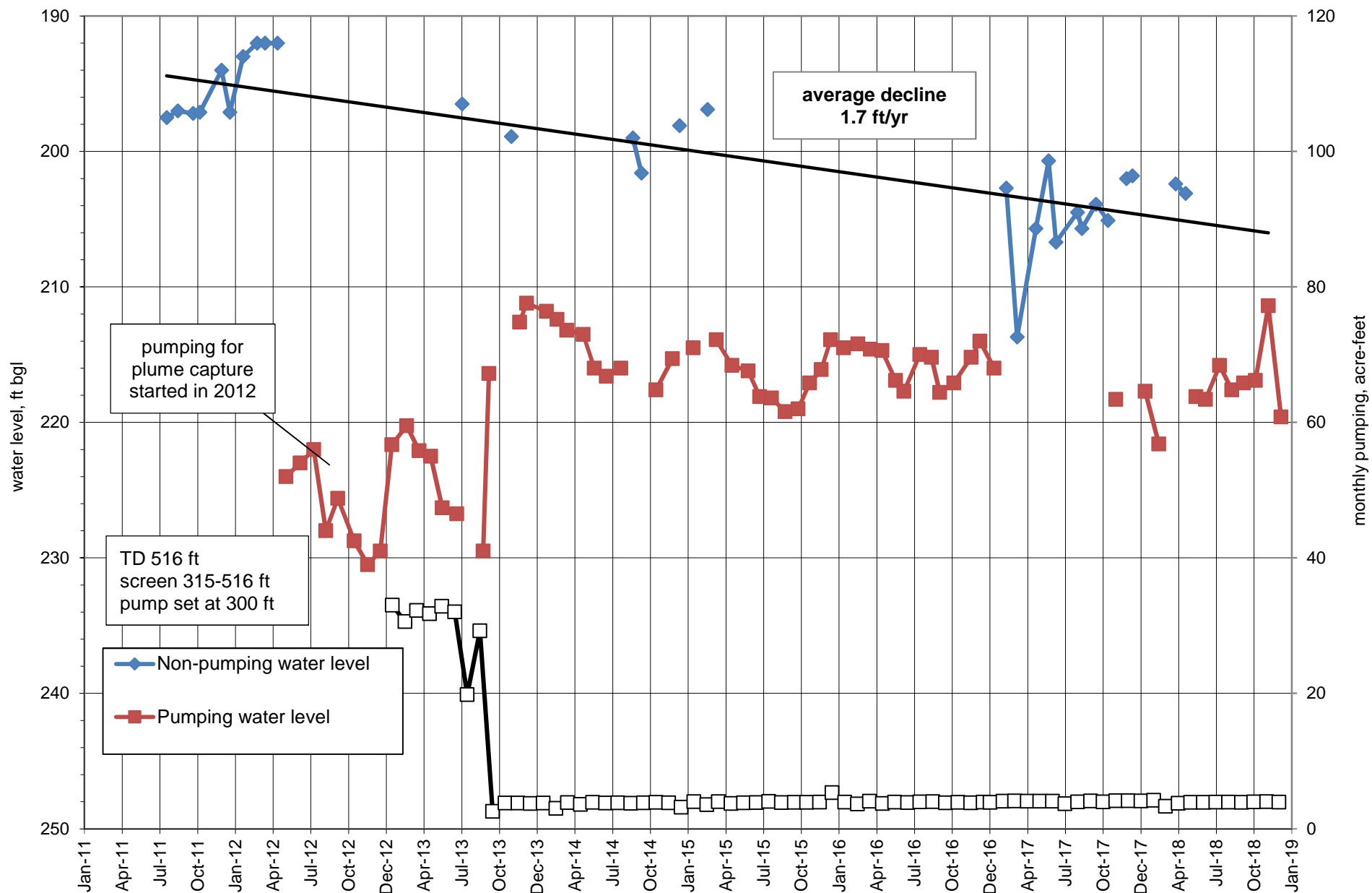


Figure B1. Graph of water-level data and monthly pumping data collected by the City of Las Cruces for CLC 18.

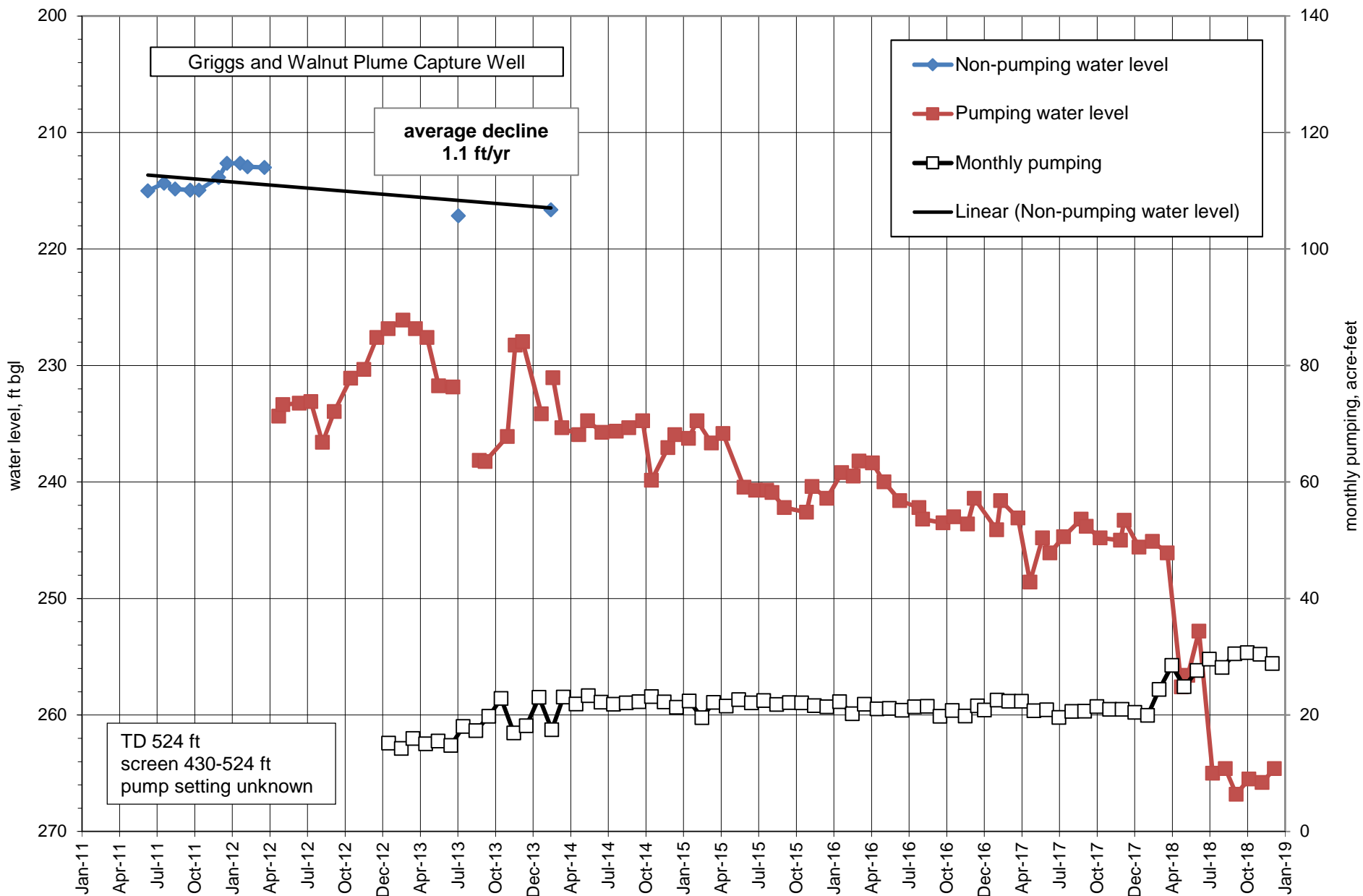


Figure B2. Graph of water-level data and monthly pumping data collected by the City of Las Cruces for CLC 27.

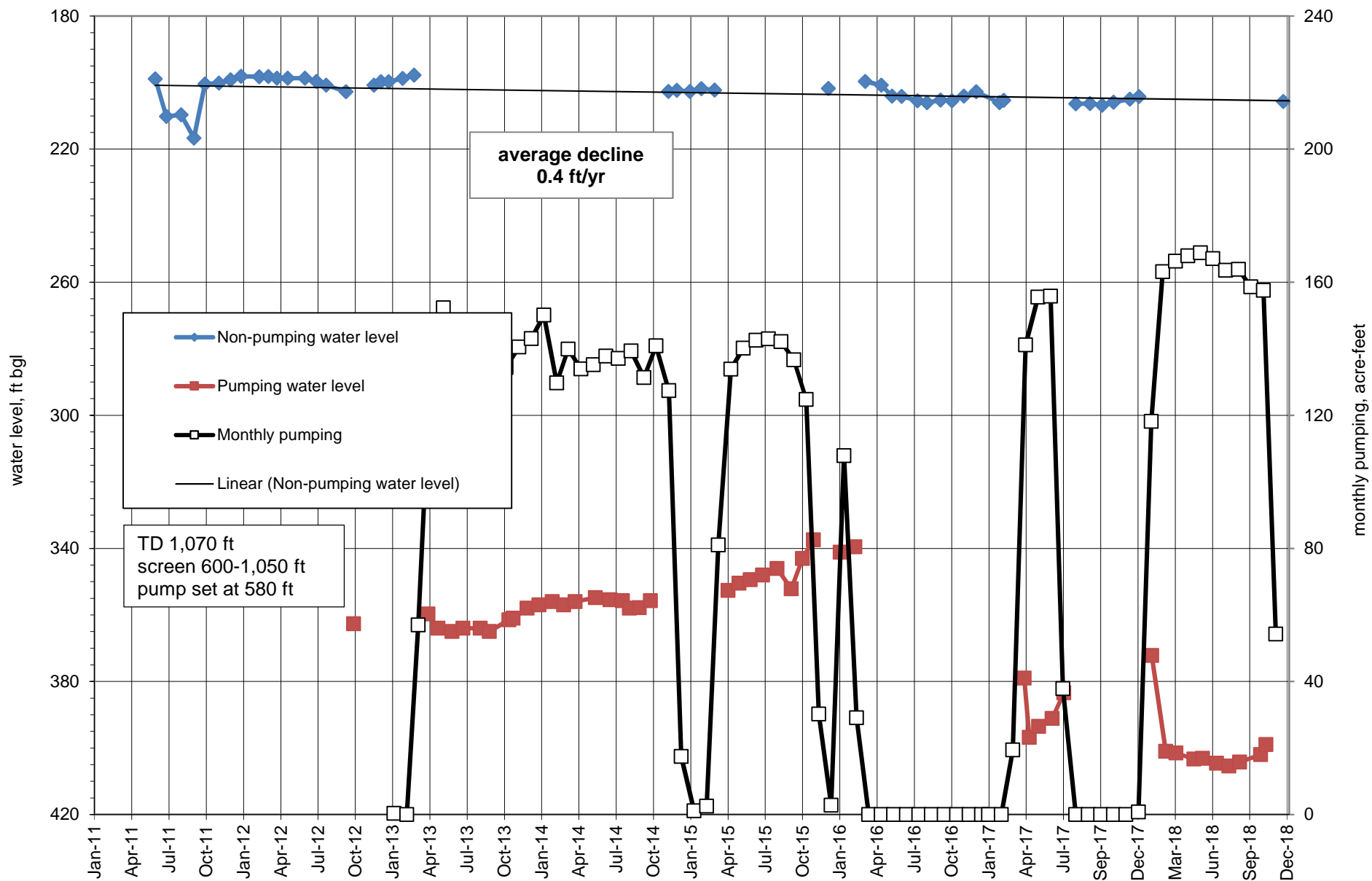


Figure B3. Graph of water-level data and monthly pumping data collected by the City of Las Cruces for CLC 61.

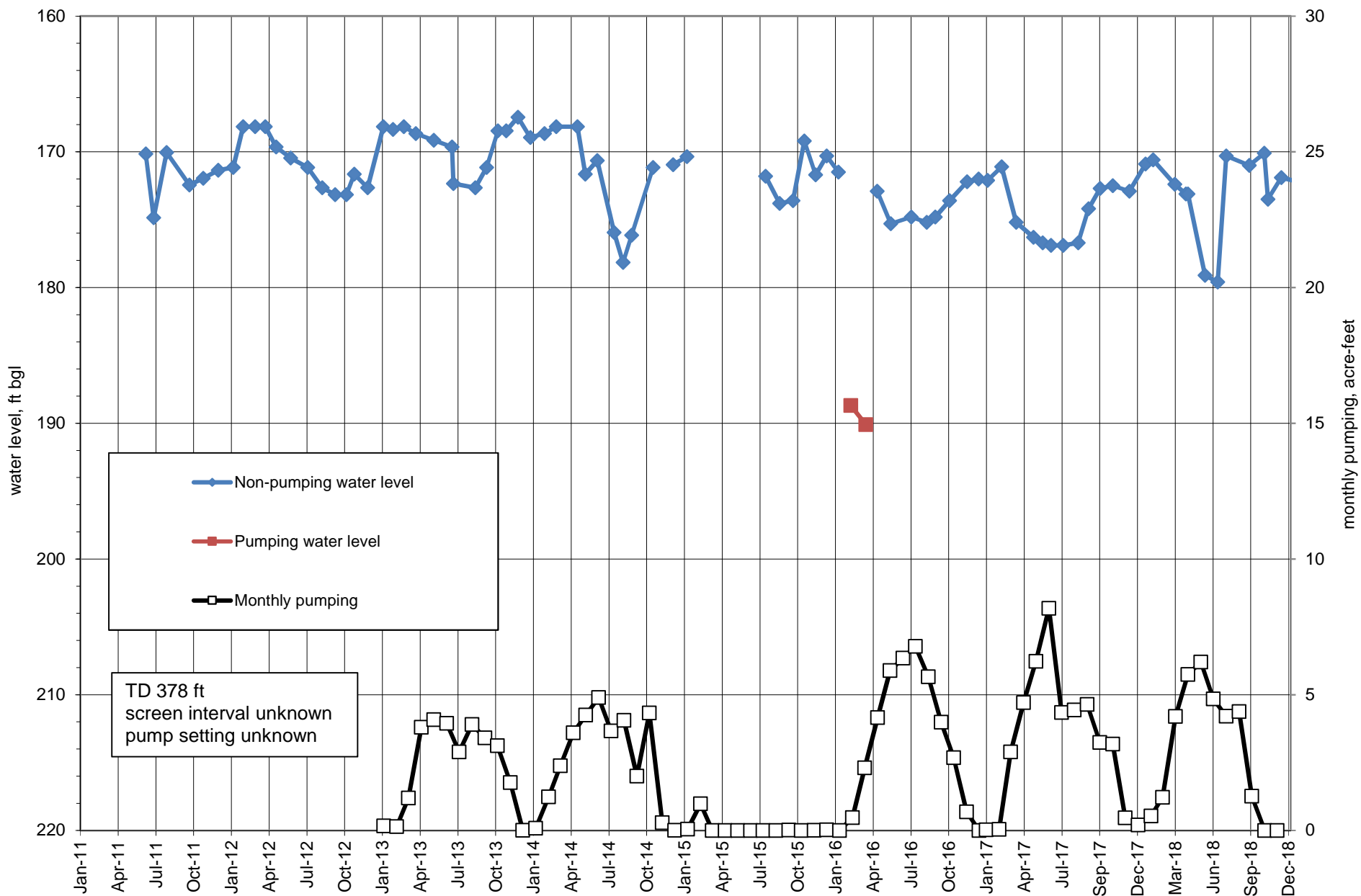


Figure B4. Graph of water-level data and monthly pumping data collected by the City of Las Cruces for Paz Park Well.

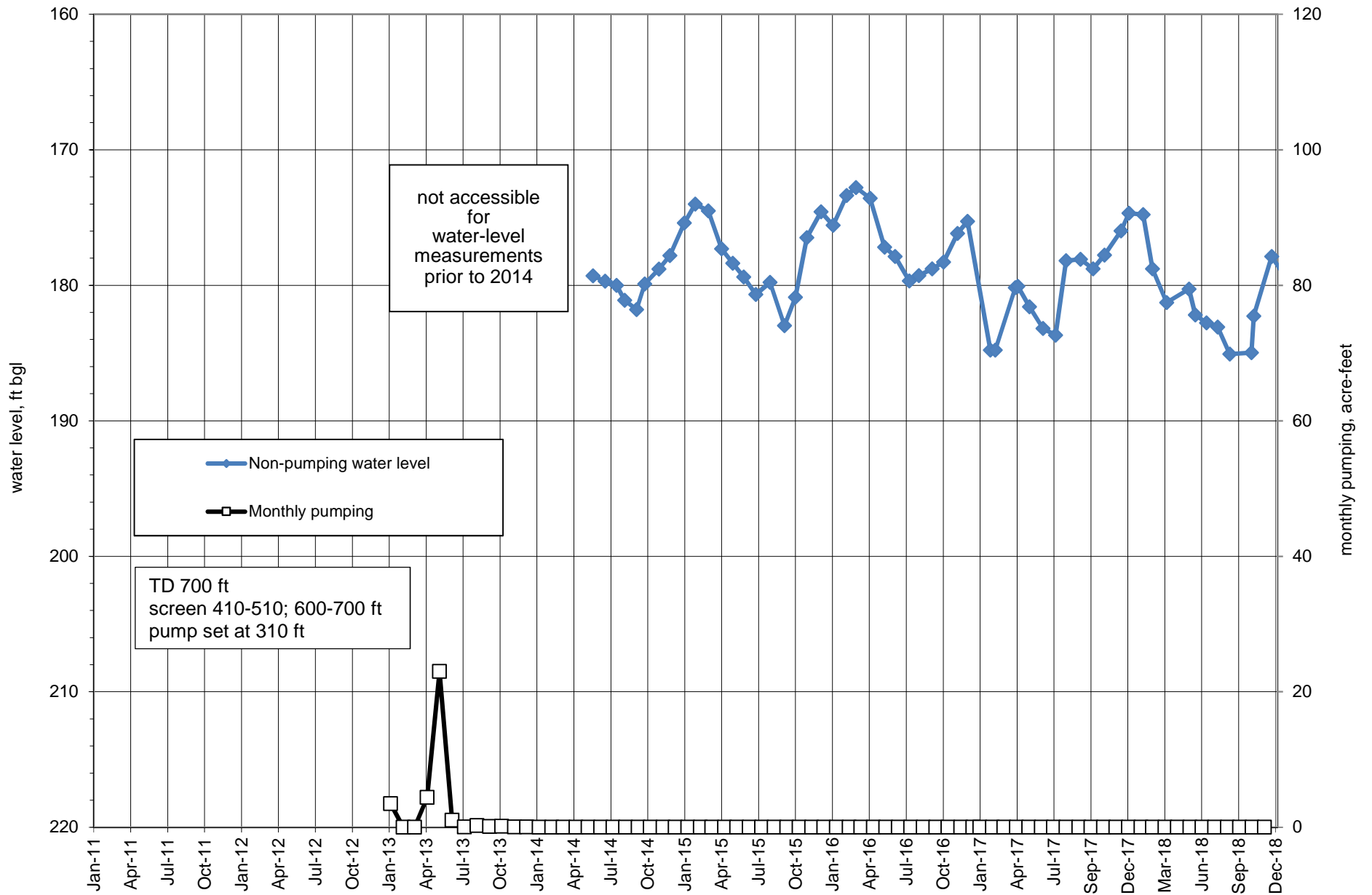


Figure B5. Graph of water-level data and monthly pumping data collected by the City of Las Cruces for CLC 26.

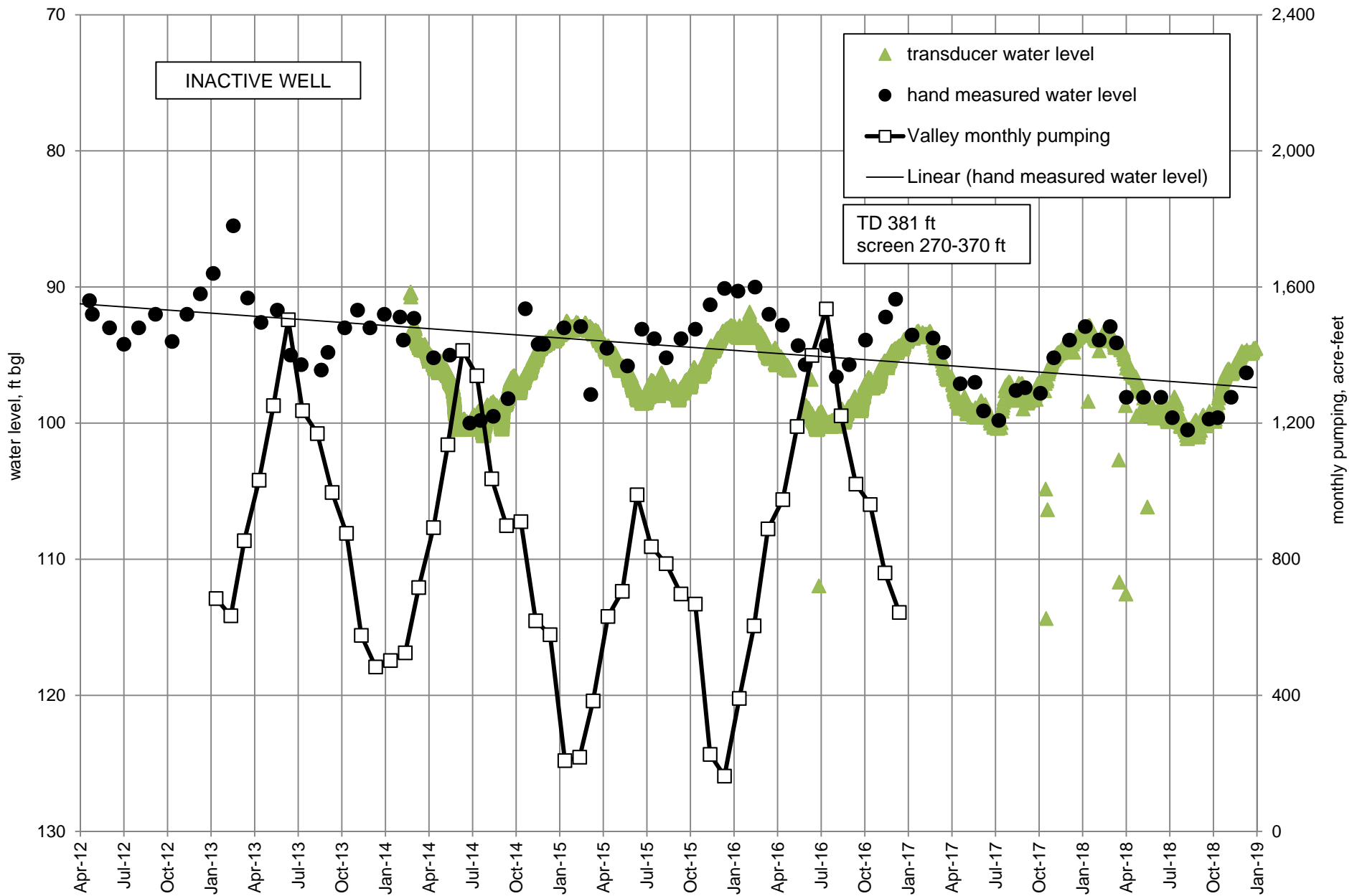


Figure B6. Graph of water-level data collected by the City of Las Cruces for CLC 10, and monthly pumping in the Valley.

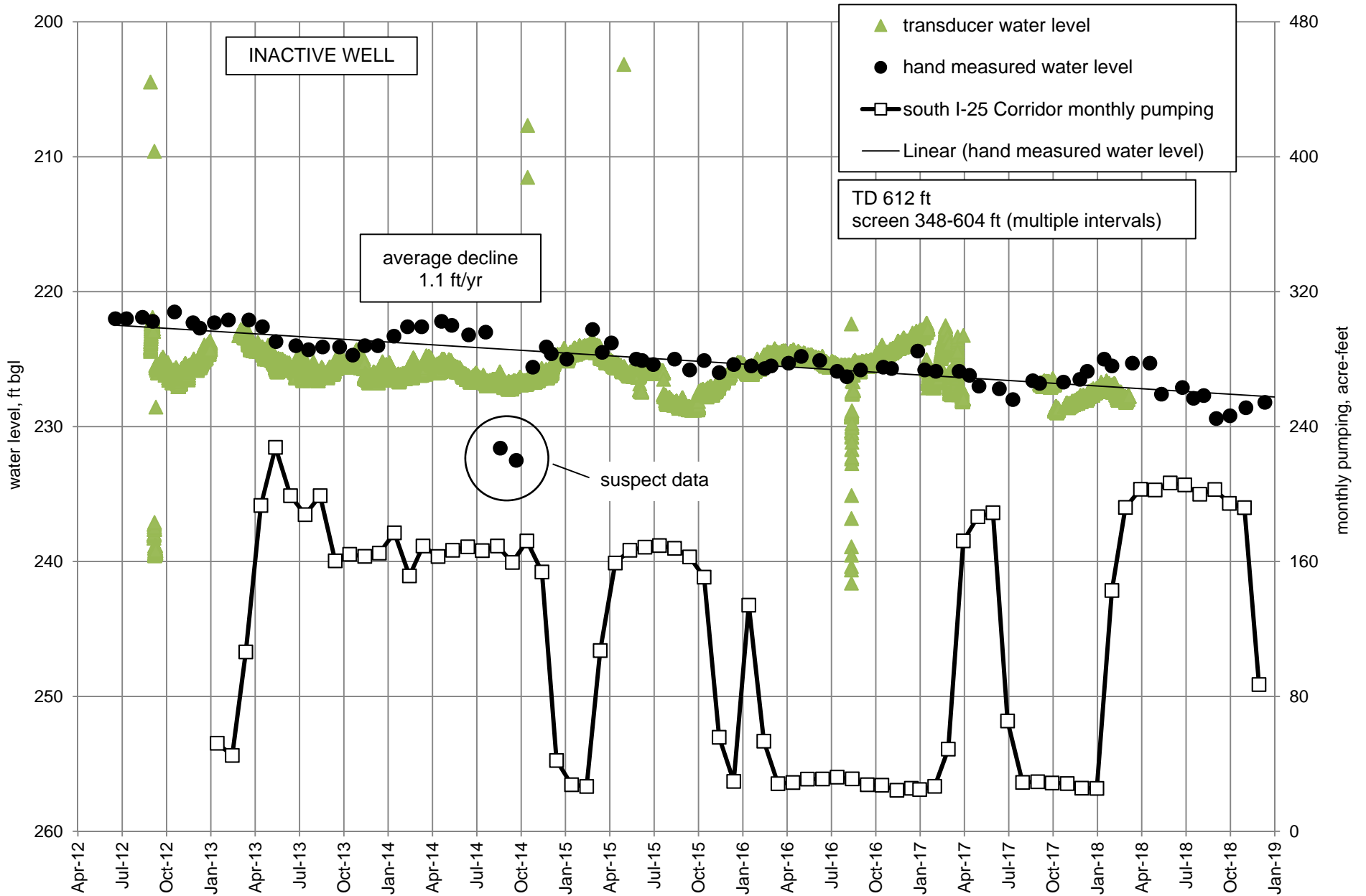


Figure B7. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for CLC 19, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 26, 61, and Paz Park).

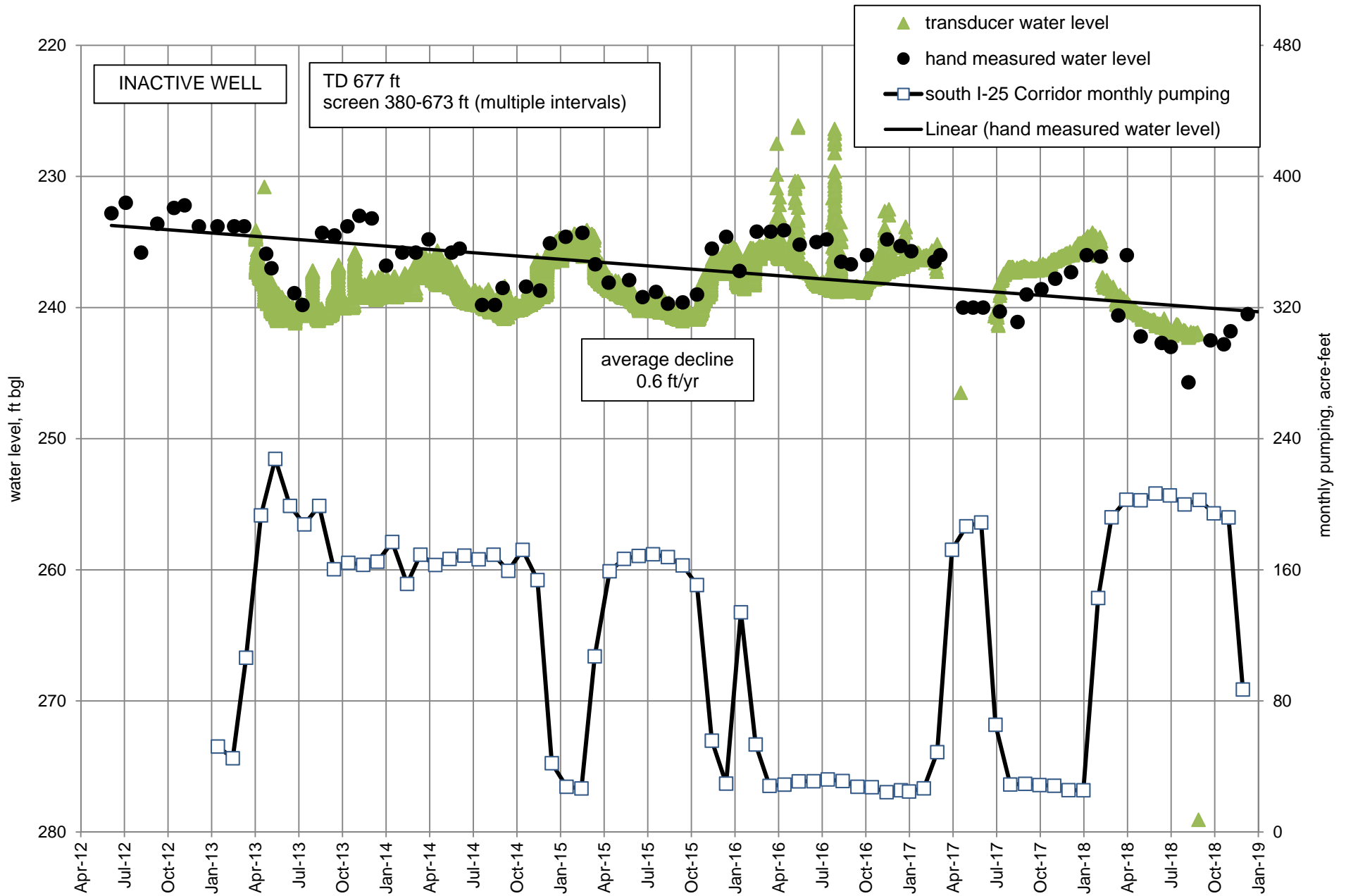


Figure B8. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for CLC 20, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 26, 61, and Paz Park).

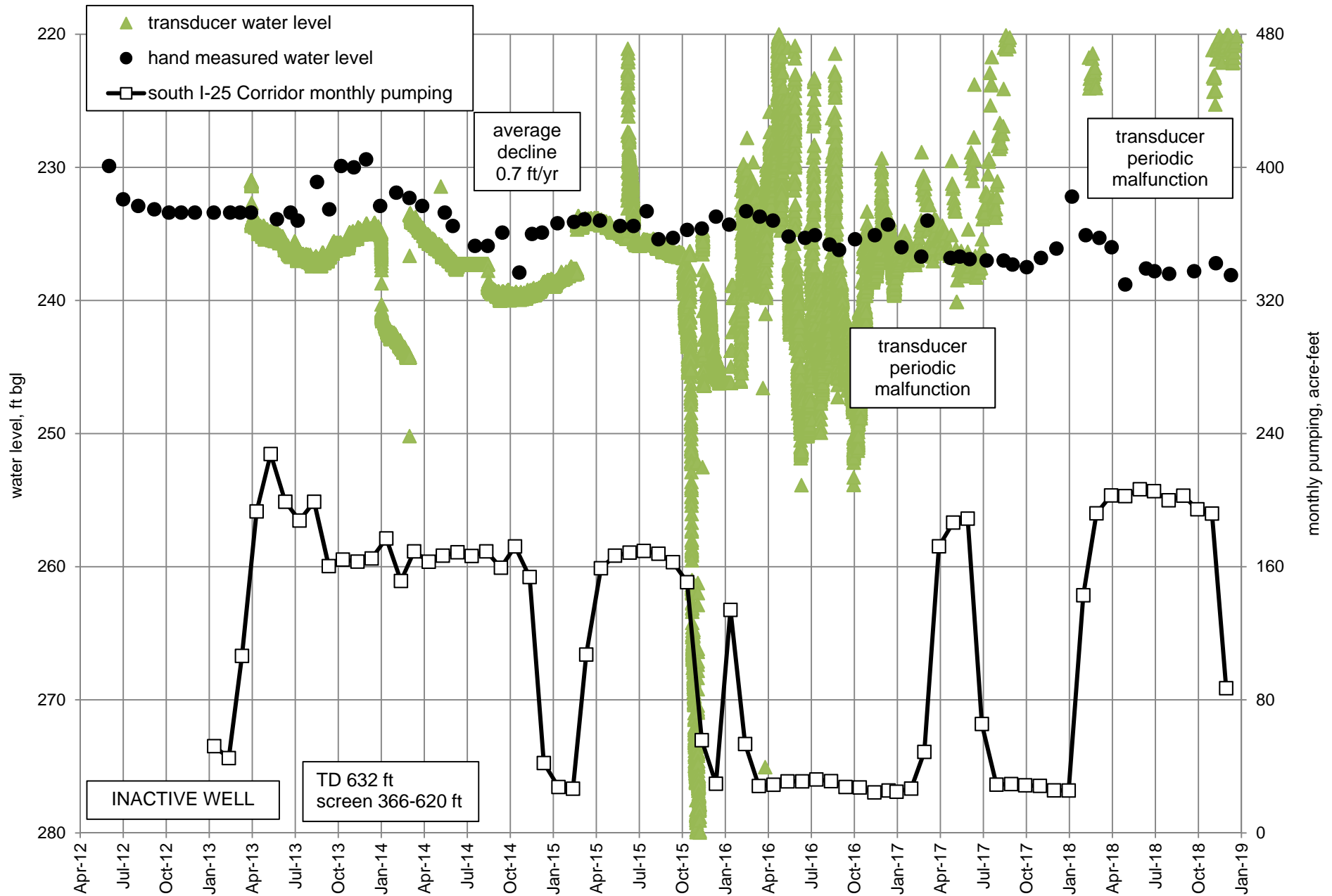


Figure B9. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for CLC 21, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 26, 61, and Paz Park).

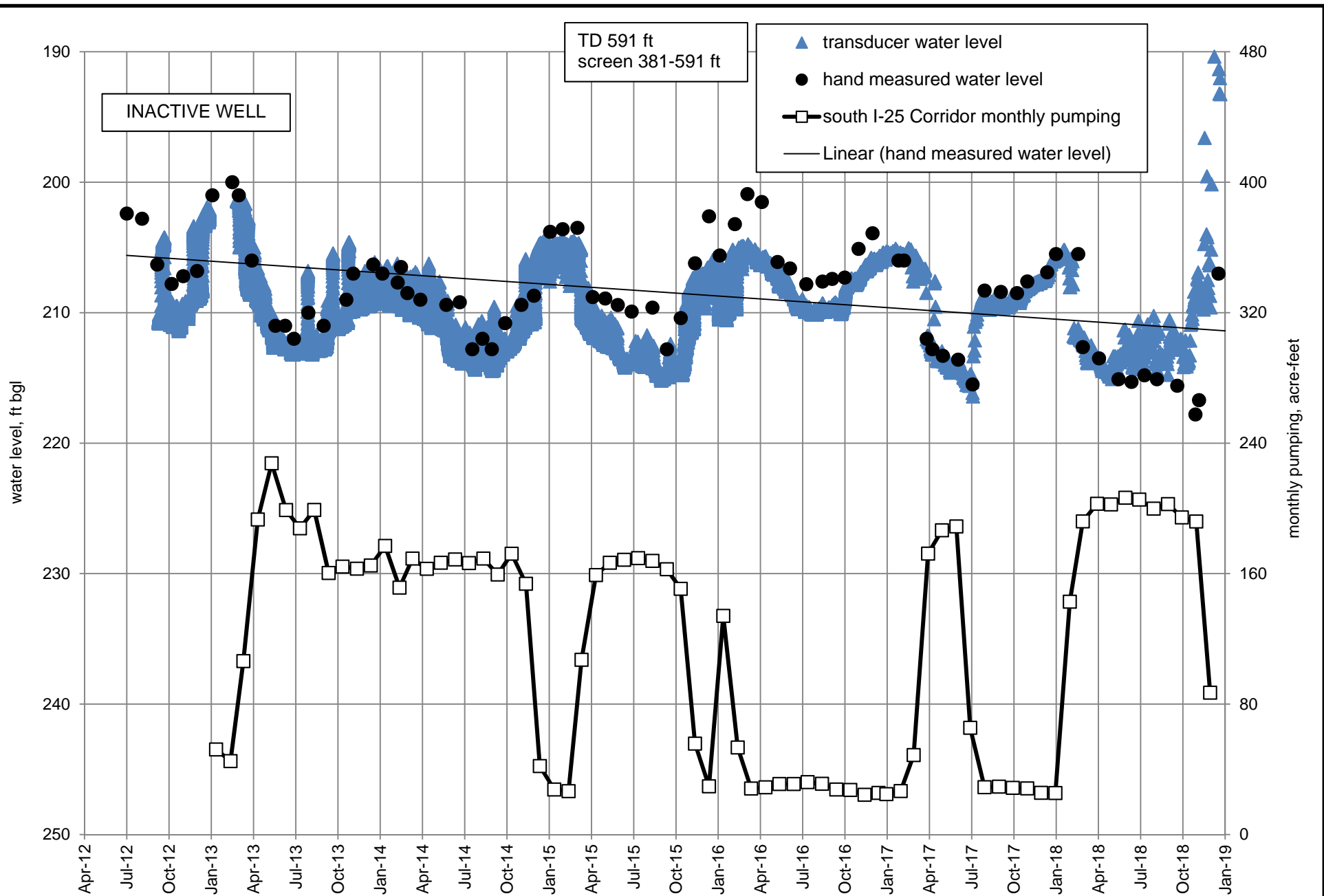


Figure B10. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for CLC 24, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 26, 61, and Paz Park).

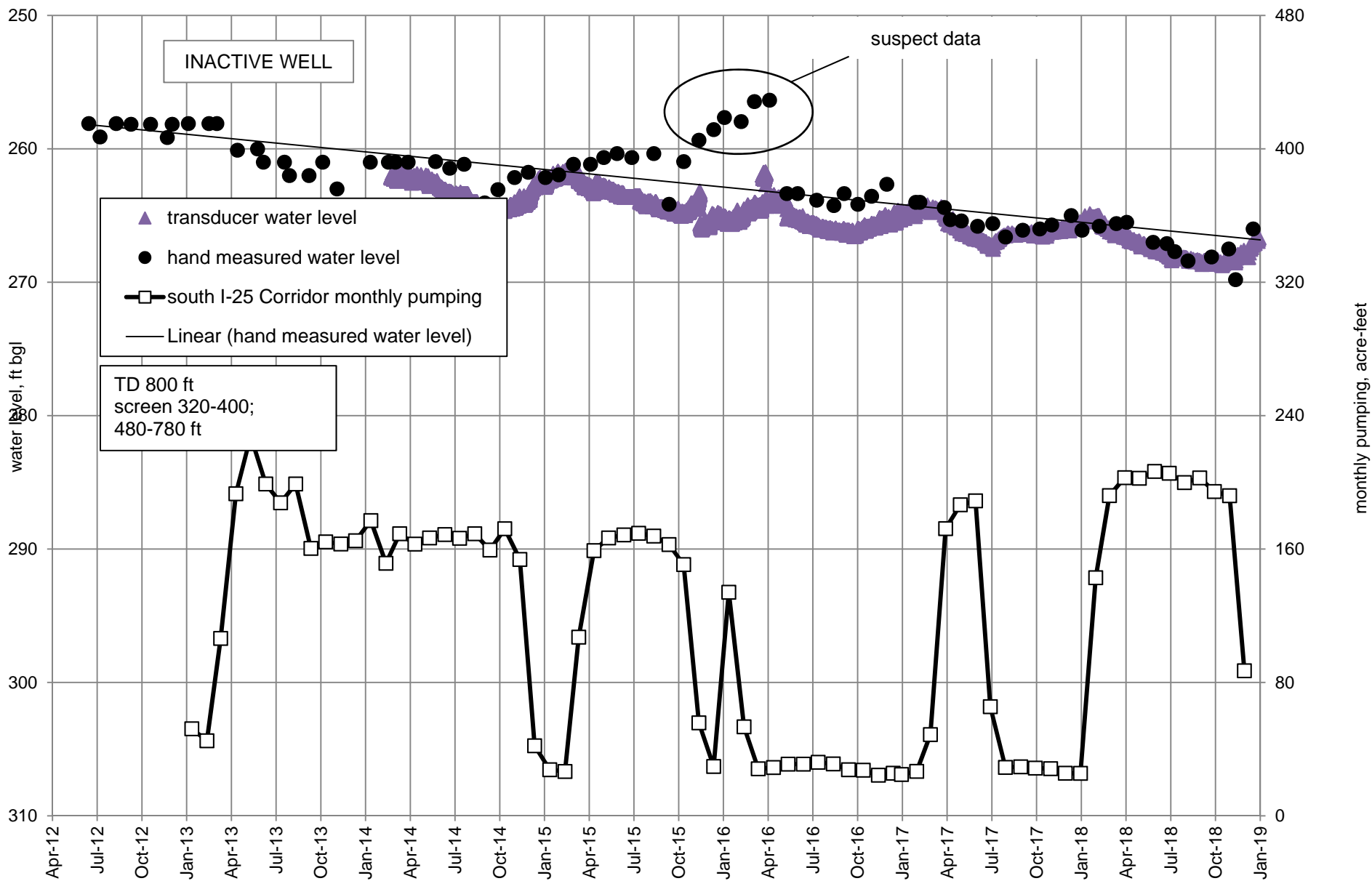


Figure B11. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for CLC 38, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 26, 61, and Paz Park).

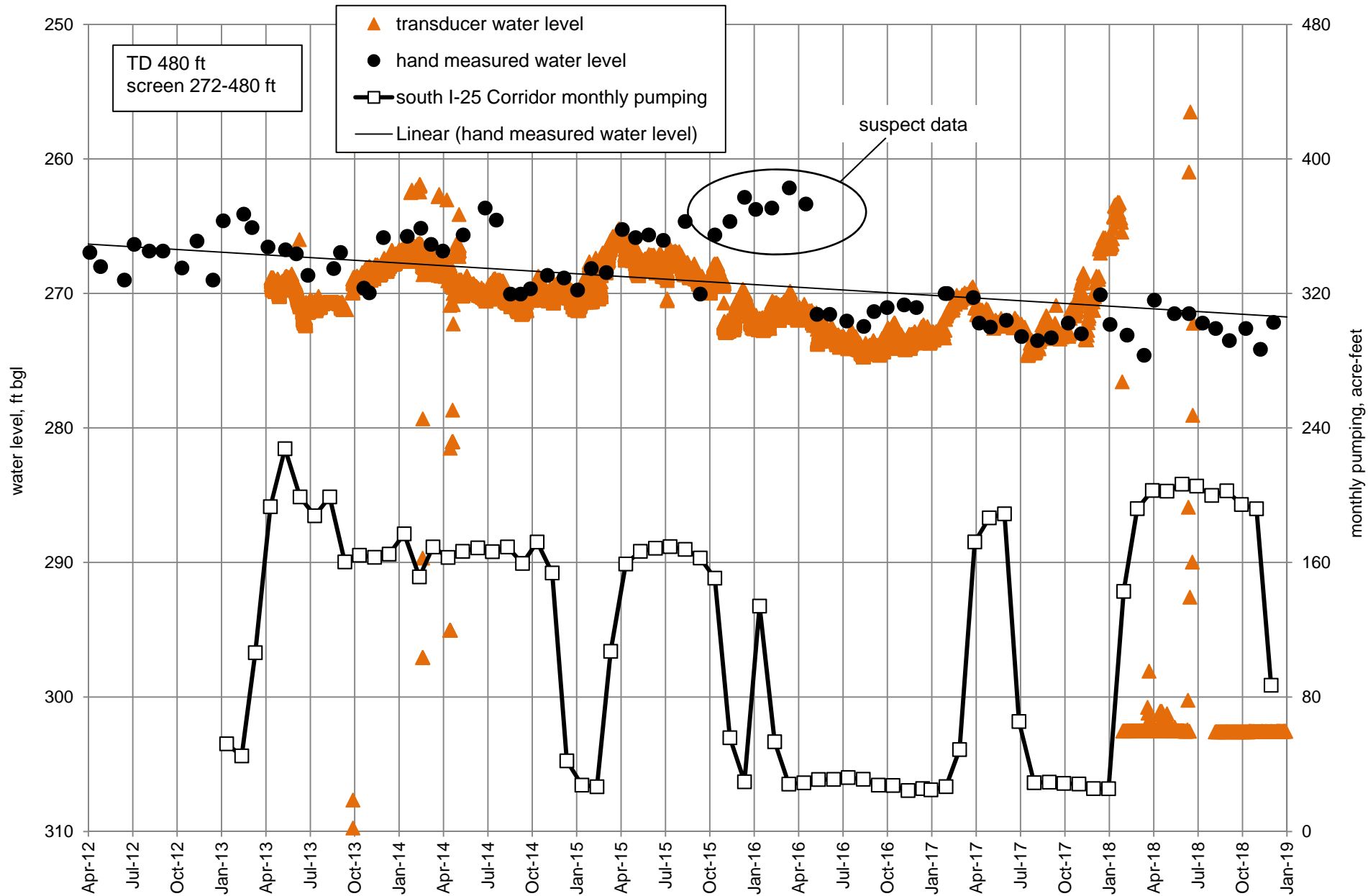


Figure B12. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for CLC 54, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 26, 61, and Paz Park).

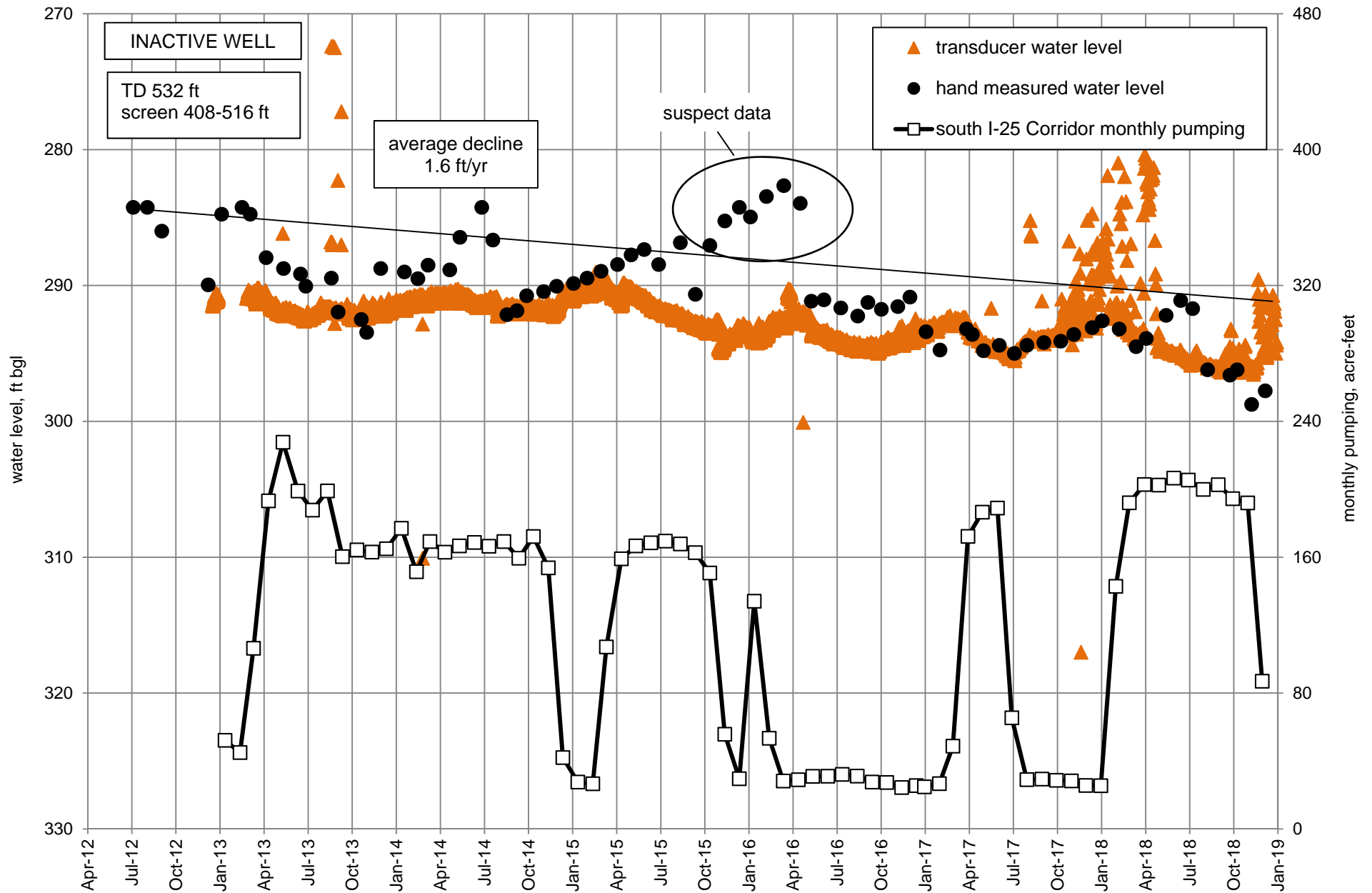


Figure B13. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for CLC 57, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 26, 61, and Paz Park).

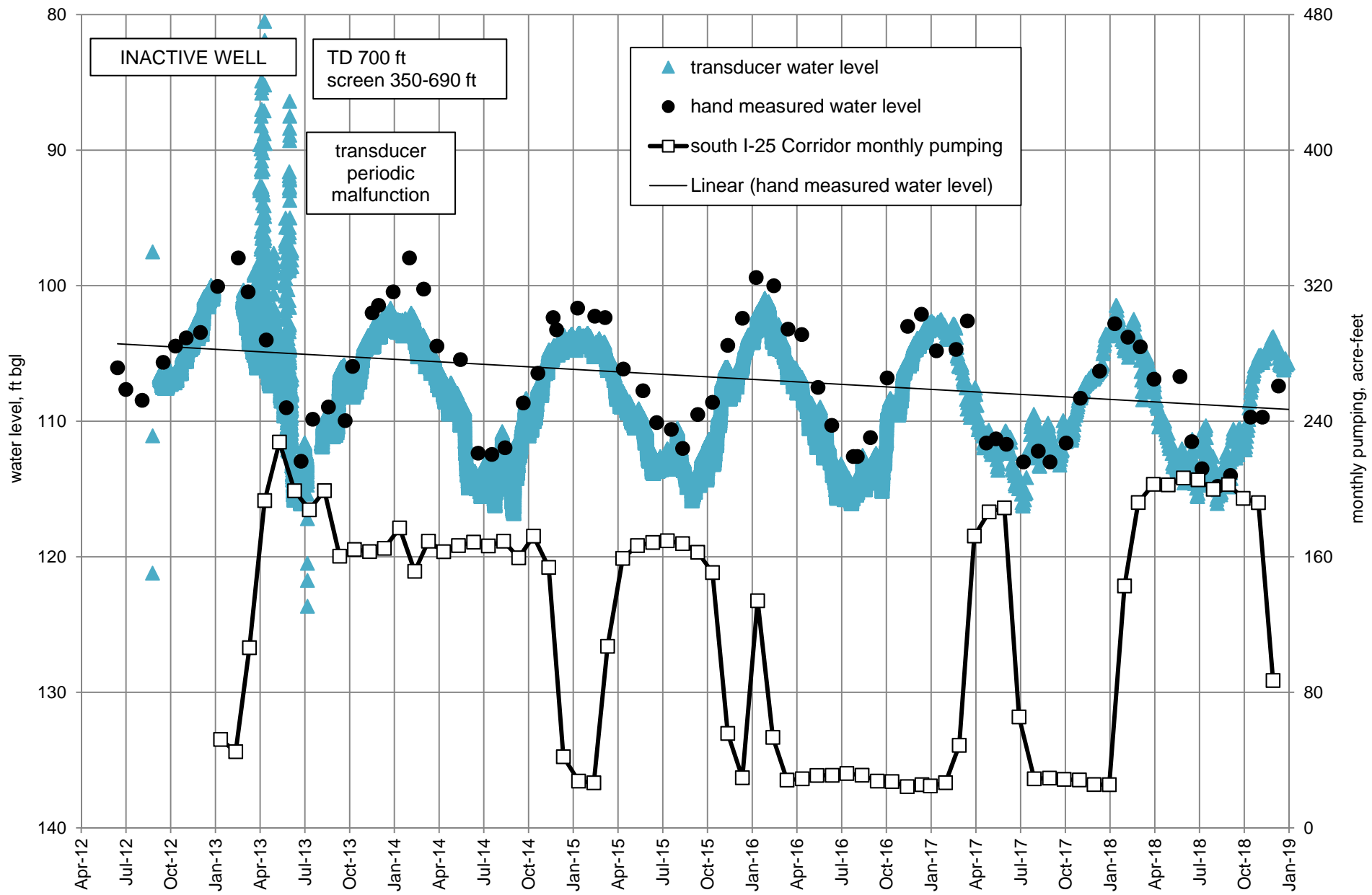


Figure B14. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for CLC 60, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 26, 61, and Paz Park).

* After a rigorous QA/QC analysis and integrity testing, the JSP rejected FLUTe well data for 2018.

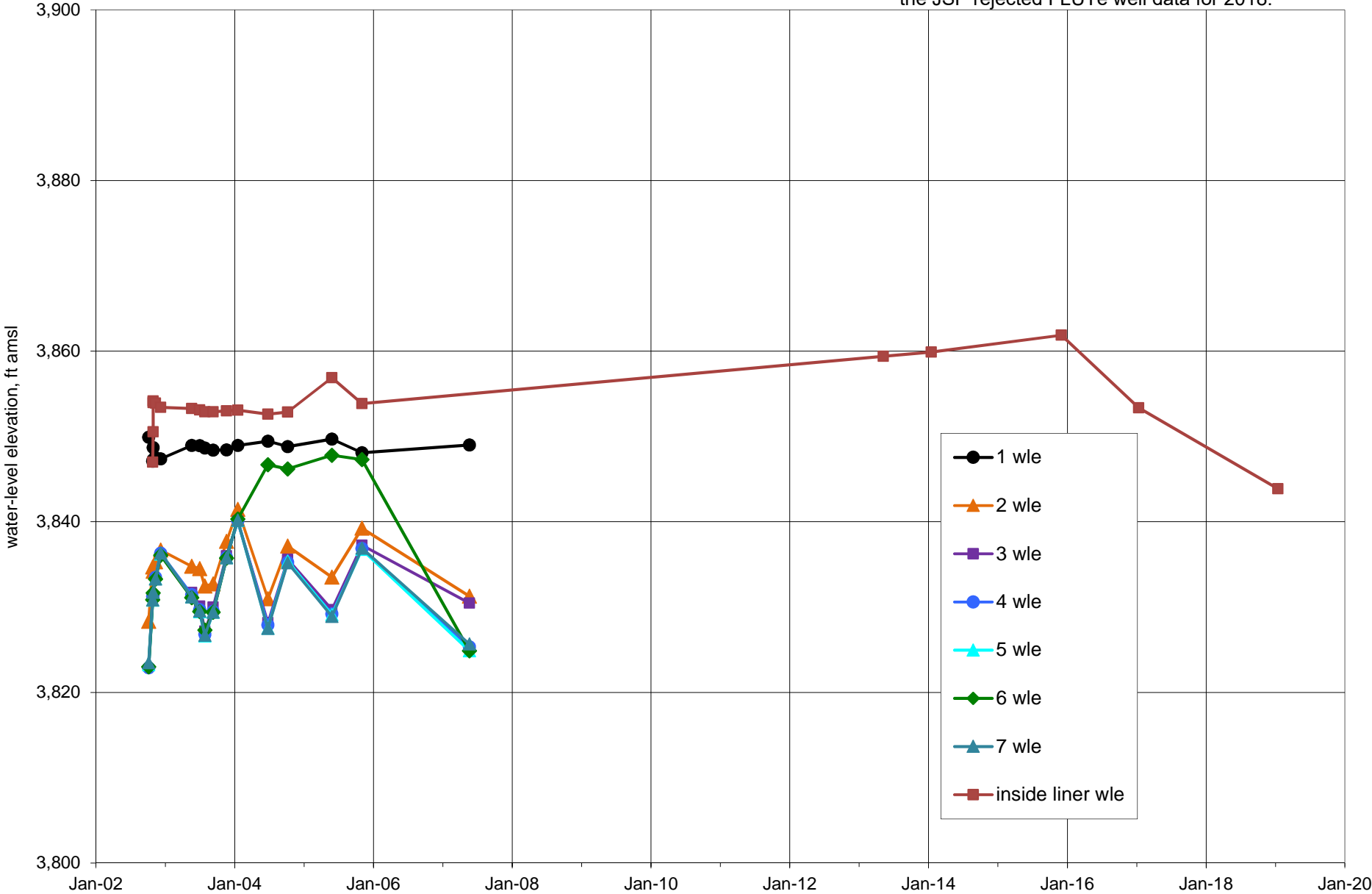


Figure B15. Graph of GWMW-01 (Ports 1 through 7 and inside liner) observed water levels, Griggs and Walnut site.

* After a rigorous QA/QC analysis and integrity testing, the JSP rejected FLUTE well data for 2018.

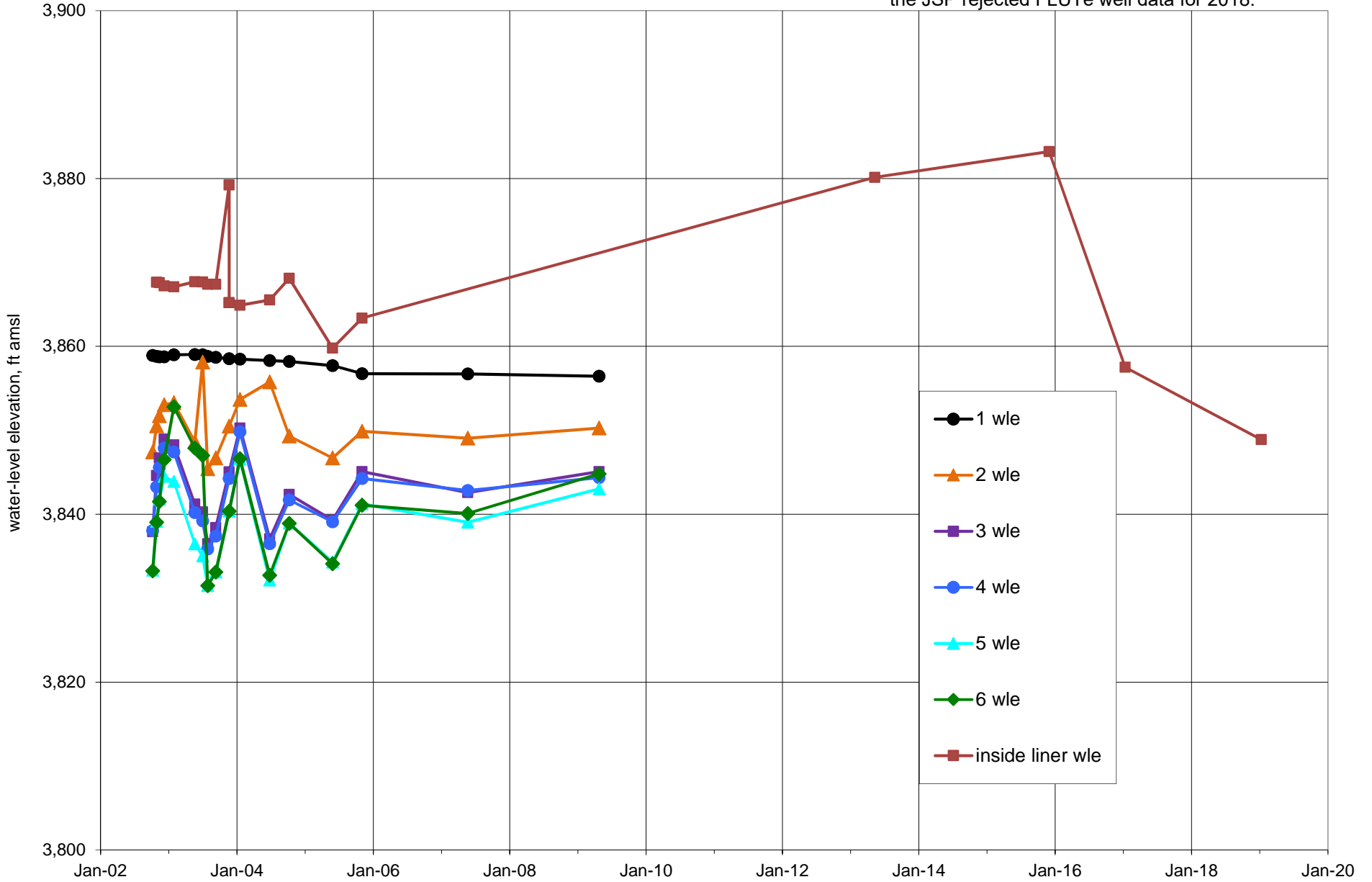


Figure B16. Graph of GWMW-03 (Ports 1 through 6 and inside liner) observed water levels, Griggs and Walnut site.

* After a rigorous QA/QC analysis and integrity testing, the JSP rejected FLUTE well data for 2018.

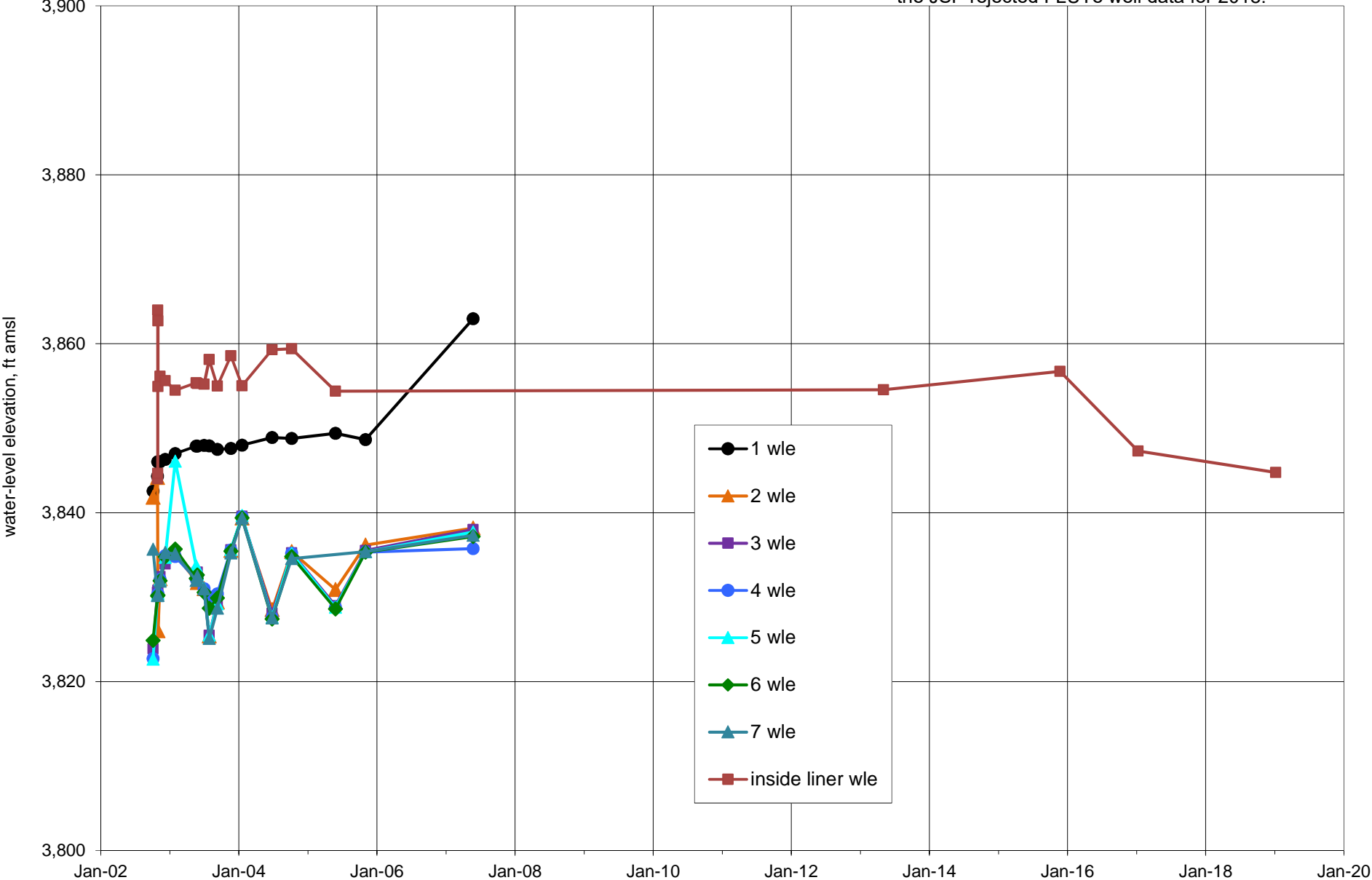


Figure B17. Graph of GWMW-08 (Ports 1 through 7 and inside liner) observed water levels, Griggs and Walnut site.

* After a rigorous QA/QC analysis and integrity testing, the JSP rejected FLUTE well data for 2018.

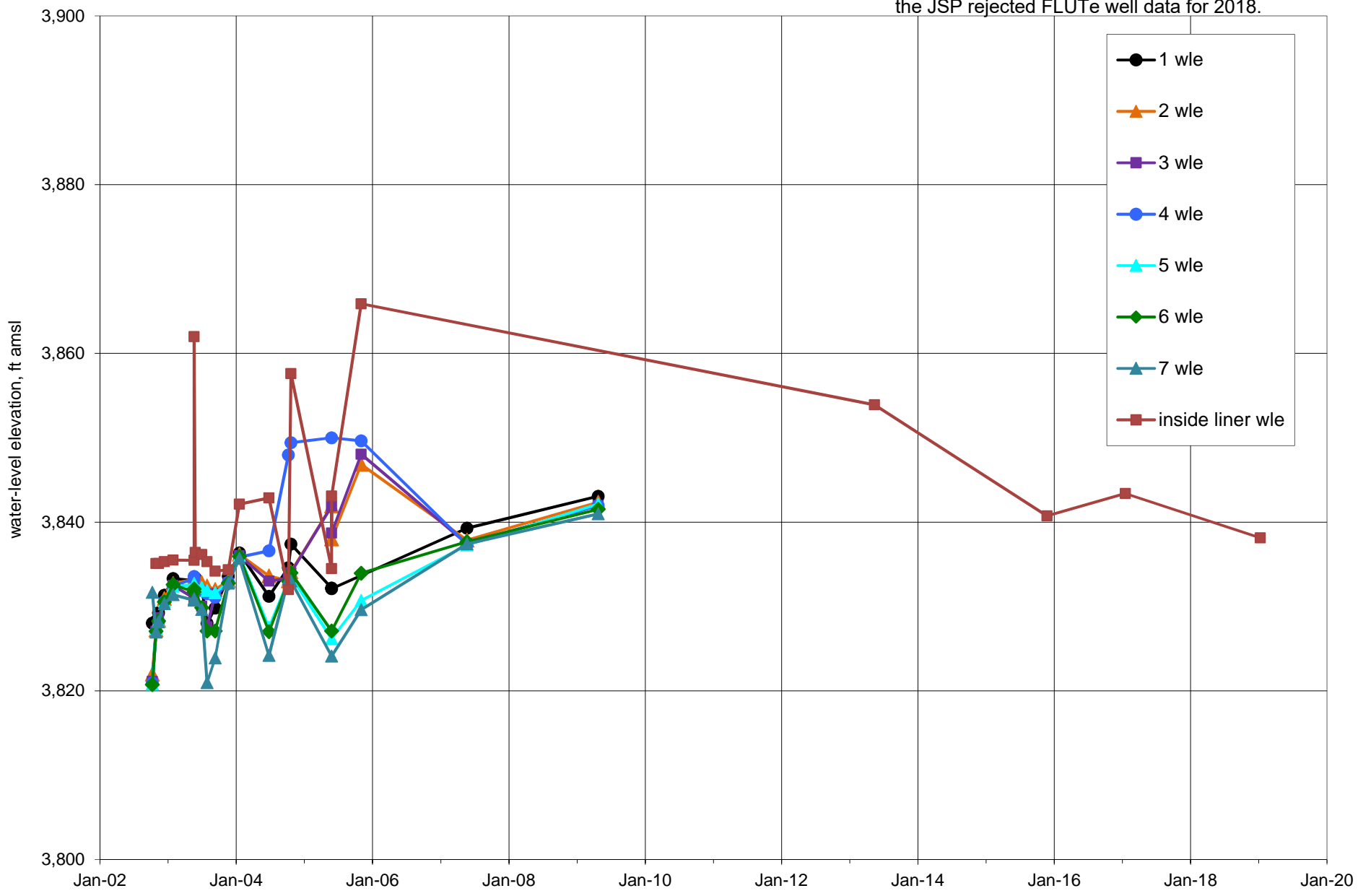


Figure B18. Graph of GWMW-09 (Ports 1 through 7 and inside liner) observed water levels, Griggs and Walnut site.

* After a rigorous QA/QC analysis and integrity testing, the JSP rejected FLUTE well data for 2018.

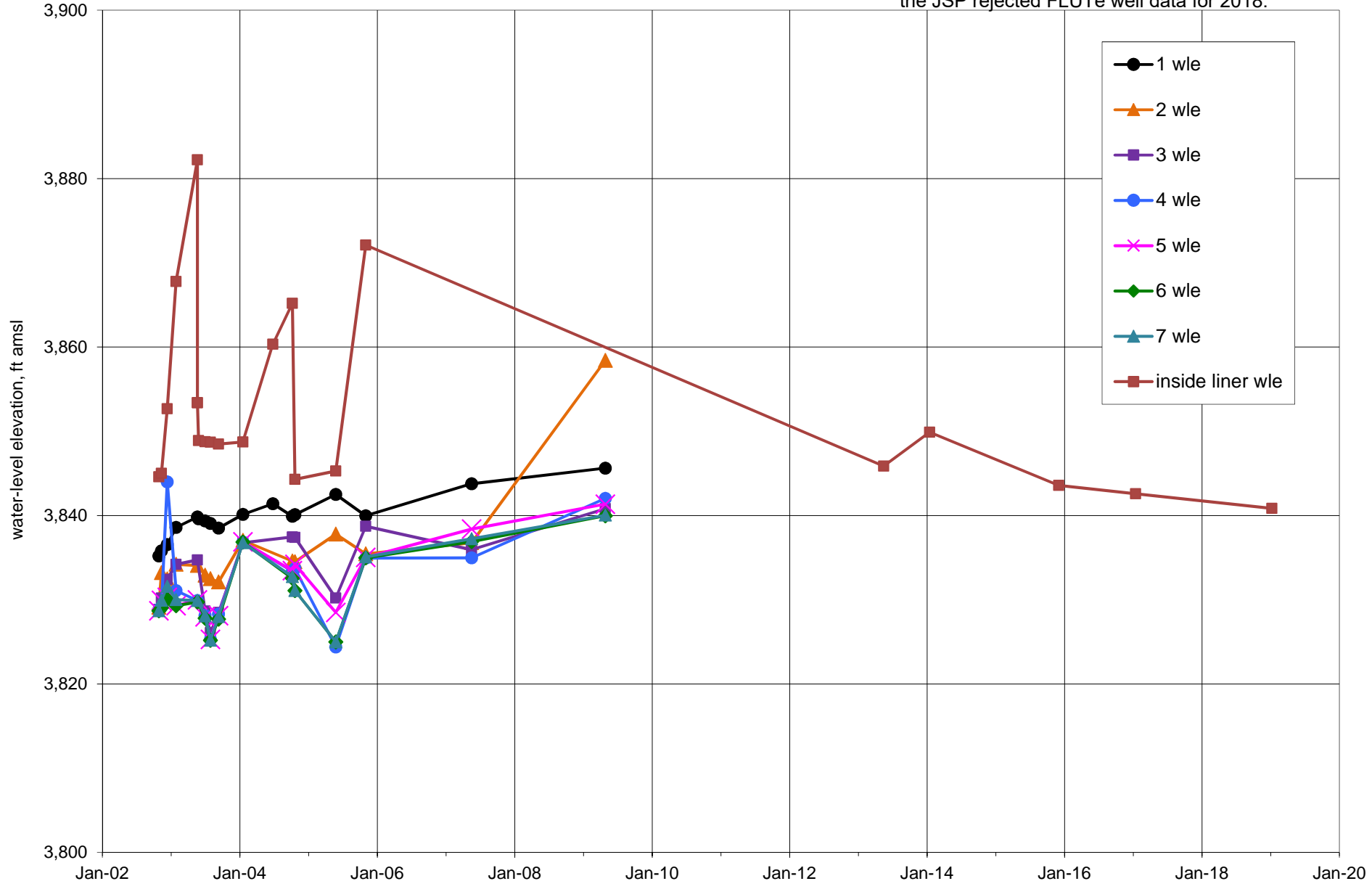


Figure B19. Graph of GWMW-10 (Ports 1 through 7 and inside liner) observed water levels, Griggs and Walnut site.

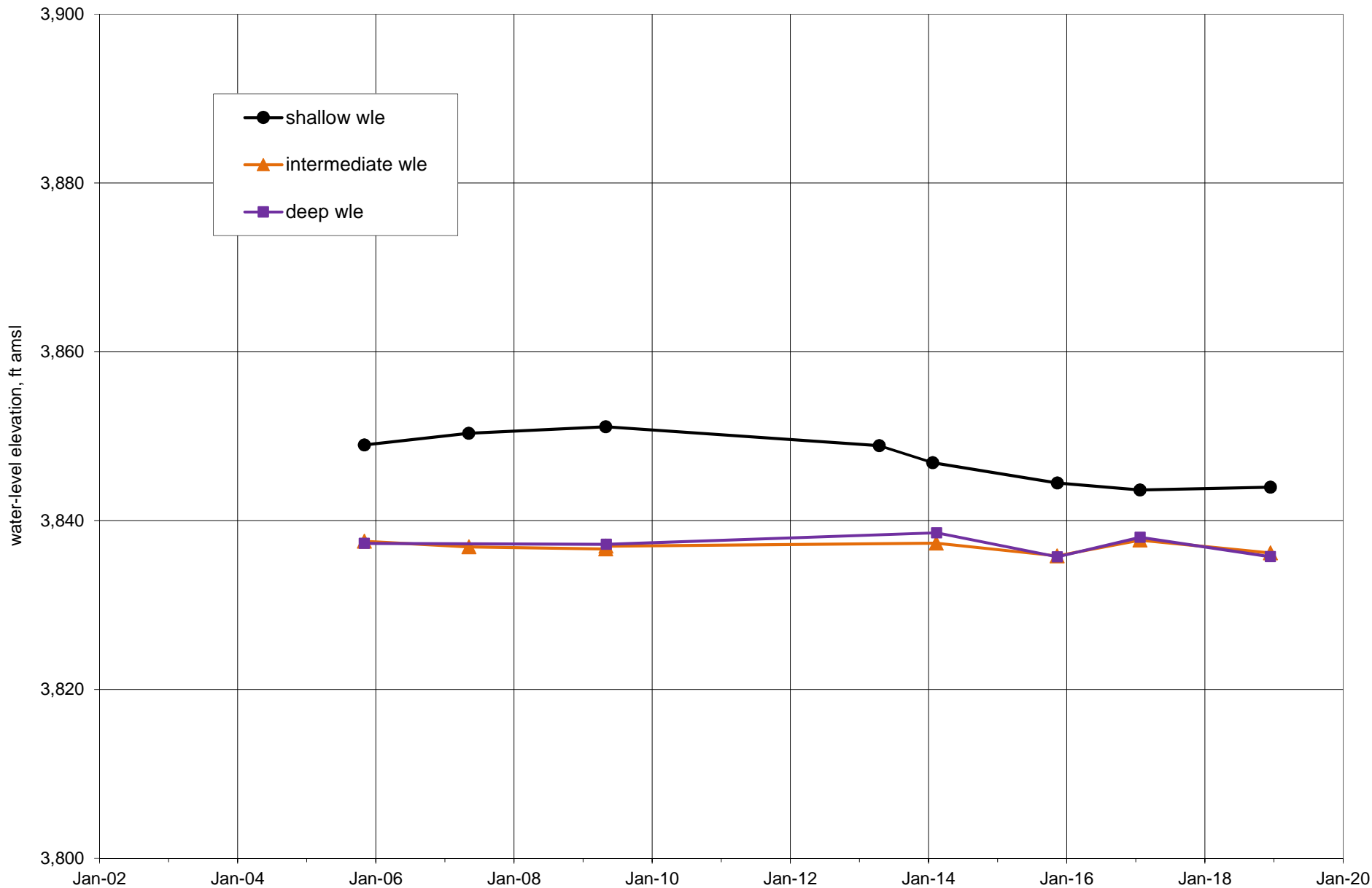


Figure B20. Graph of GWMW-11 (S, I, D) (shallow, intermediate, and deep) observed water levels, Griggs and Walnut site.

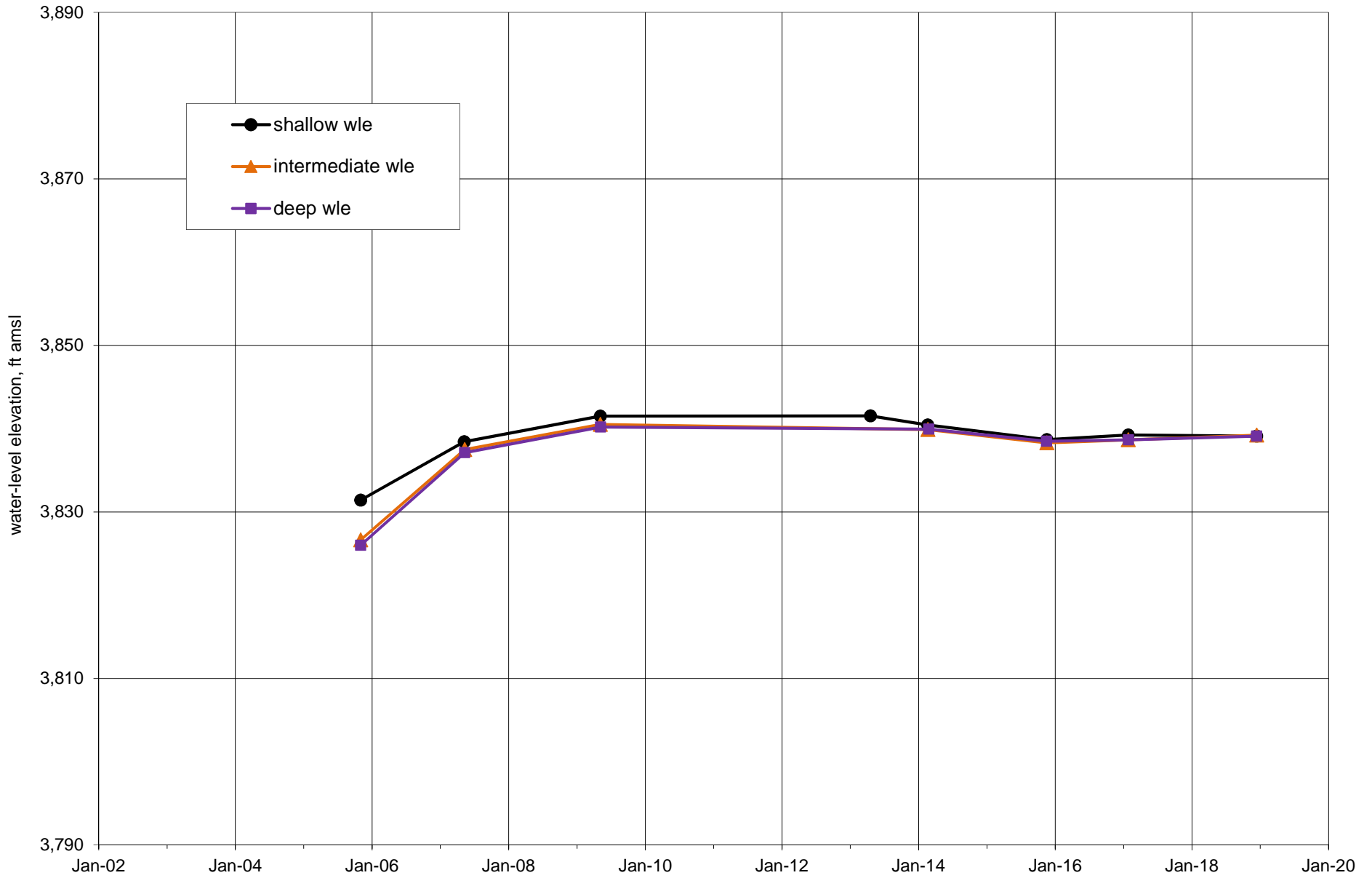


Figure B21. Graph of GWMW-15 (S, I, D) (shallow, intermediate, and deep) observed water levels, Griggs and Walnut site.

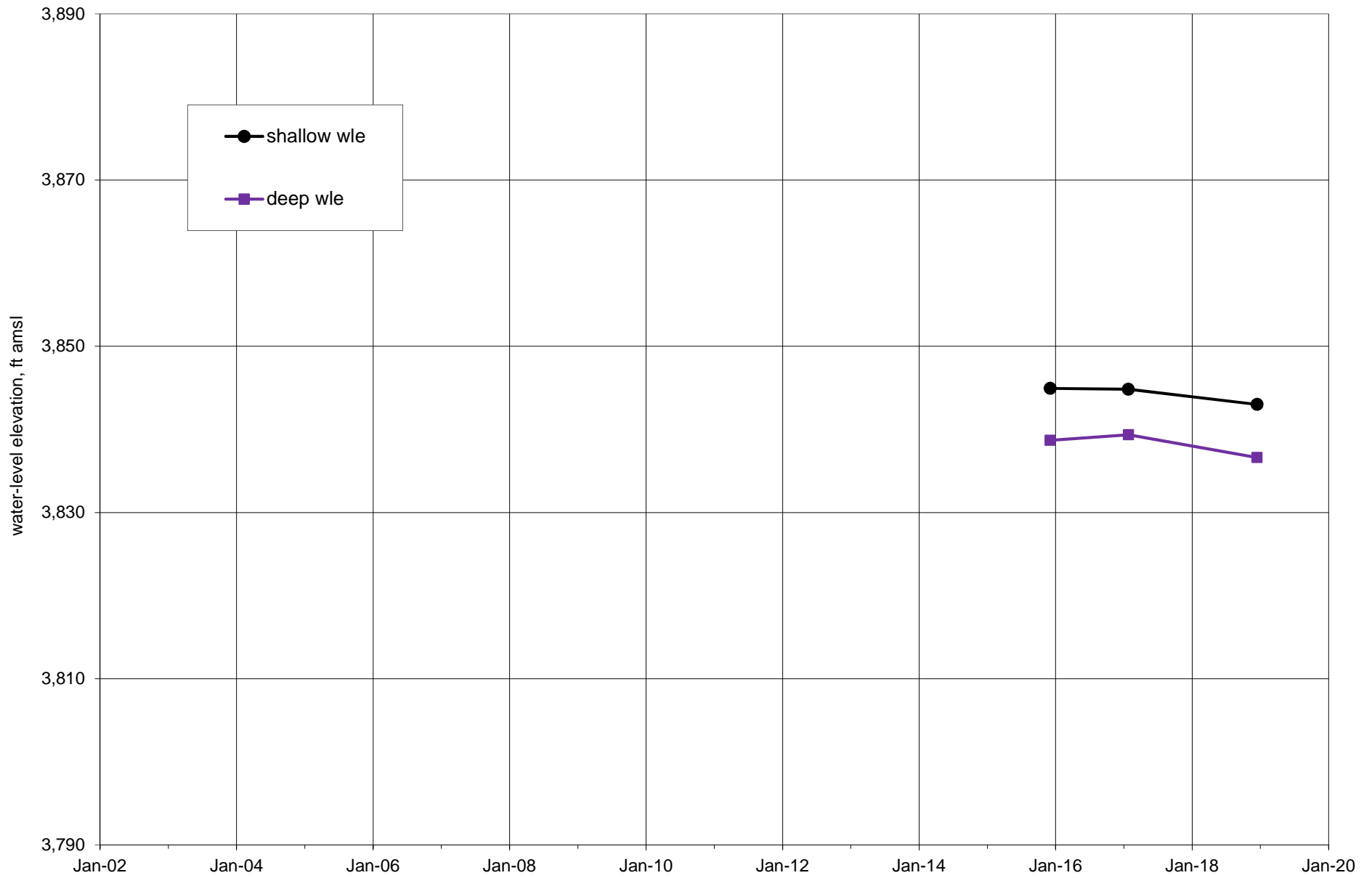


Figure B22. Graph of GWMW-15 (S, I, D) (shallow, intermediate, and deep) observed water levels, Griggs and Walnut site.

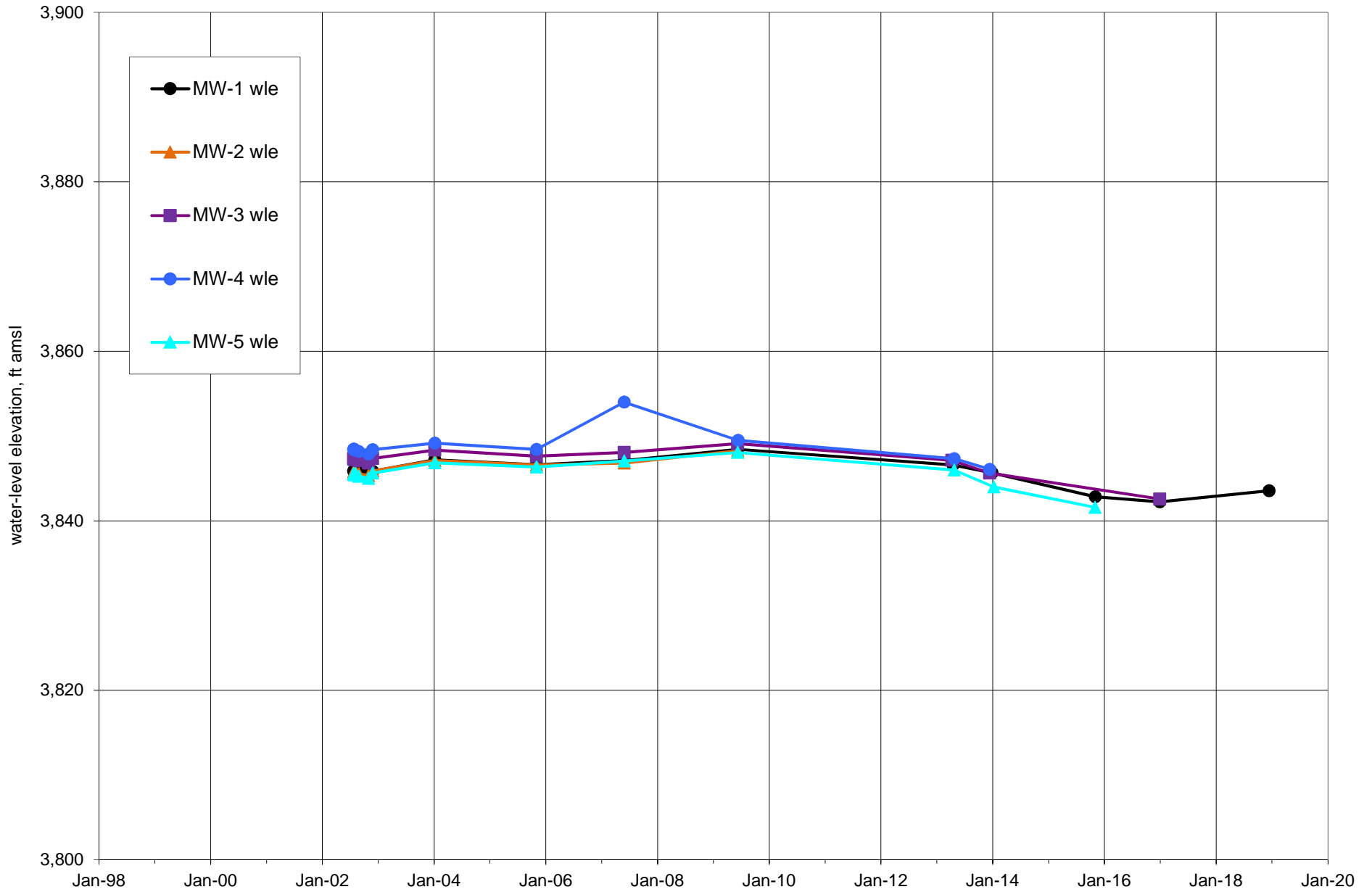


Figure B23. Graph of MW-1 through MW-5 observed water levels, Griggs and Walnut site.

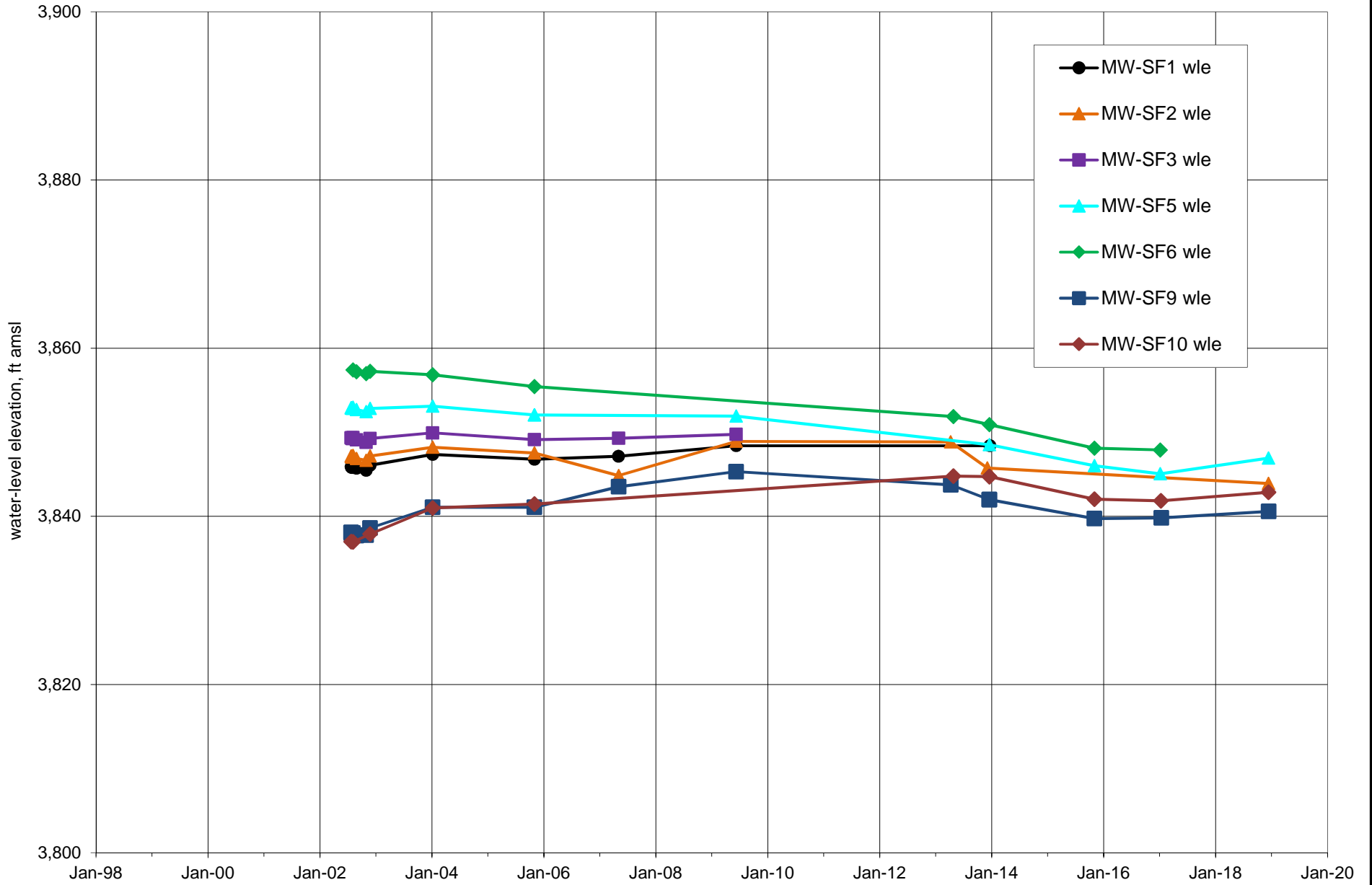


Figure B24. Graph of observed water levels for selected MW-SF series monitor wells, Griggs and Walnut site.

Appendix C.

Summary of Griggs and Walnut Site plume area pumping data

Table C1. Summary of Griggs and Walnut plume area pumping data

year	CLC 10	CLC 18	CLC 19	CLC 20	CLC 21	CLC 24	CLC 26	CLC 27	CLC 54	CLC 57	CLC 61	Paz Park	east pumping (ac-ft/yr)	source
1958	550	882	0	0	0	0	0	0	0	0	0	0	882	JSAI (2006)
1959	550	882	0	0	0	0	0	0	0	0	0	0	882	JSAI (2006)
1960	550	882	0	0	0	0	0	0	0	0	0	0	882	JSAI (2006)
1961	550	882	0	0	0	0	0	0	0	0	0	0	882	JSAI (2006)
1962	550	882	0	0	0	0	0	0	0	0	0	0	882	JSAI (2006)
1963	417	1,240	592	721	695	107	0	0	0	0	0	0	3,354	JSAI (2006)
1964	417	1,240	592	721	695	107	0	0	0	0	0	0	3,354	JSAI (2006)
1965	417	1,240	592	721	695	107	0	0	0	0	0	0	3,354	JSAI (2006)
1966	417	1,240	592	721	695	107	0	0	0	0	0	0	3,354	JSAI (2006)
1967	417	1,240	592	721	695	107	0	0	0	0	0	0	3,354	JSAI (2006)
1968	361	1,073	699	866	946	969	414	177	0	0	0	0	5,144	JSAI (2006)
1969	361	1,073	699	866	946	969	414	177	0	0	0	0	5,144	JSAI (2006)
1970	361	1,073	699	866	946	969	414	177	0	0	0	0	5,144	JSAI (2006)
1971	361	1,073	699	866	946	969	414	177	0	0	0	0	5,144	JSAI (2006)
1972	361	1,073	699	866	946	969	414	177	0	0	0	0	5,144	JSAI (2006)
1973	338	1,006	699	866	946	969	495	177	0	0	0	0	5,158	JSAI (2006)
1974	338	1,006	699	866	946	969	495	177	0	0	0	0	5,158	JSAI (2006)
1975	338	1,006	699	866	946	969	495	177	0	0	0	0	5,158	JSAI (2006)
1976	338	1,006	699	866	946	969	495	177	0	0	0	0	5,158	JSAI (2006)
1977	338	1,006	699	866	946	969	495	177	0	0	0	0	5,158	JSAI (2006)
1978	299	918	699	866	946	969	442	177	0	0	0	0	5,017	JSAI (2006)
1979	299	918	699	866	946	969	442	177	0	0	0	0	5,017	JSAI (2006)
1980	299	918	699	866	946	969	442	177	0	0	0	0	5,017	JSAI (2006)
1981	299	918	699	866	946	969	442	177	0	0	0	0	5,017	JSAI (2006)
1982	299	918	699	866	946	969	442	177	0	0	0	0	5,017	JSAI (2006)
1983	117	1,025	699	866	946	969	427	177	0	0	0	0	5,109	JSAI (2006)
1984	117	1,025	699	866	946	969	427	177	0	0	0	0	5,109	JSAI (2006)
1985	117	1,025	699	866	946	969	427	177	0	0	0	0	5,109	JSAI (2006)
1986	117	1,025	699	866	946	969	427	177	0	0	0	0	5,109	JSAI (2006)
1987	117	1,025	699	866	946	969	427	177	0	0	0	0	5,109	JSAI (2006)
1988	246	977	578	787	1,136	807	468	413	163	74	0	0	5,403	JSAI (2006)
1989	246	977	578	787	1,136	807	468	413	163	74	0	0	5,403	JSAI (2006)
1990	246	977	578	787	1,136	807	468	413	163	74	0	0	5,403	JSAI (2006)
1991	246	977	578	787	1,136	807	468	413	163	74	0	0	5,403	JSAI (2006)
1992	246	977	578	787	1,136	807	468	413	163	74	0	0	5,403	JSAI (2006)
1993	349	1,031	649	791	1,107	807	475	318	315	514	0	0	6,006	LCU metered data
1994	250	779	582	707	980	777	406	371	274	608	0	0	5,484	LCU metered data
1995	150	528	515	623	852	747	337	423	233	702	0	0	4,961	LCU metered data
1996	20	517	542	531	1,000	585	449	467	281	582	0	0	4,953	LCU metered data
1997	33	0	94	673	1,240	414	380	565	344	462	762	39	4,934	LCU metered data
1998	159	0	285	949	826	340	340	766	352	560	671	0	5,090	LCU metered data
1999	129	0	602	340	1,052	628	599	1,269	615	711	243	21	6,058	LCU metered data
2000	174	0	395	1,166	1,296	641	228	916	438	691	561	45	6,333	LCU metered data
2001	0	0	434	755	1,379	837	880	386	559	193	706	60	6,128	LCU metered data
2002	226	58	430	741	655	887	588	224	500	20	241	61	4,344	LCU metered data
2003	179	17	4	1,008	225	929	447	37	10	0	116	56	2,794	LCU metered data
2004	281	1	7	555	196	1,027	487	0	0	0	161	47	2,434	LCU metered data
2005	369	8	39	408	376	1,028	419	0	0	0	289	19	2,567	LCU metered data
2006	0	29	0	676	324	822	145	85	0	0	87	45	2,168	LCU metered data
2007	0	57	0	0	0	0	350	77	0	0	534	94	1,018	LCU metered data
2008	0	110	0	0	0	0	548	0	0	0	456	58	1,114	LCU metered data
2009	0	0	0	0	0	0	113	55	0	0	150	12	318	LCU metered data
2010	0	0	0	0	0	0	242	31	0	0	676	32	949	LCU metered data
2011	0	0	0	0	0	0	540	0	0	0	694	39	1,234	LCU metered data
2012	0	218	0	0	0	0	428	120	0	0	430	14	1,196	LCU metered data
2013	0	255	0	0	0	0	33	204	0	0	1,343	28	1,835	LCU metered data
2014	0	44	0	0	0	0	0	264	0	0	1,520	21	1,828	LCU metered data
2015	0	48	0	0	0	0	0	262	0	0	1,081	1	1,391	LCU metered data
2016	0	47	0	0	0	0	0	252	0	0	137	39	436	LCU metered data
2017	0	47	0	0	0	0	0	250	0	0	492	39	789	LCU metered data
2018	0	47	0	0	0	0	0	324	0	0	1,673	24	2,044	LCU metered data

JSAI - John Shomaker & Associates, Inc.
 LCU - Las Cruces Utilities
 ac-ft/yr - acre-feet per year

Appendix D.

Time-series graphs of Griggs and Walnut Site PCE concentration

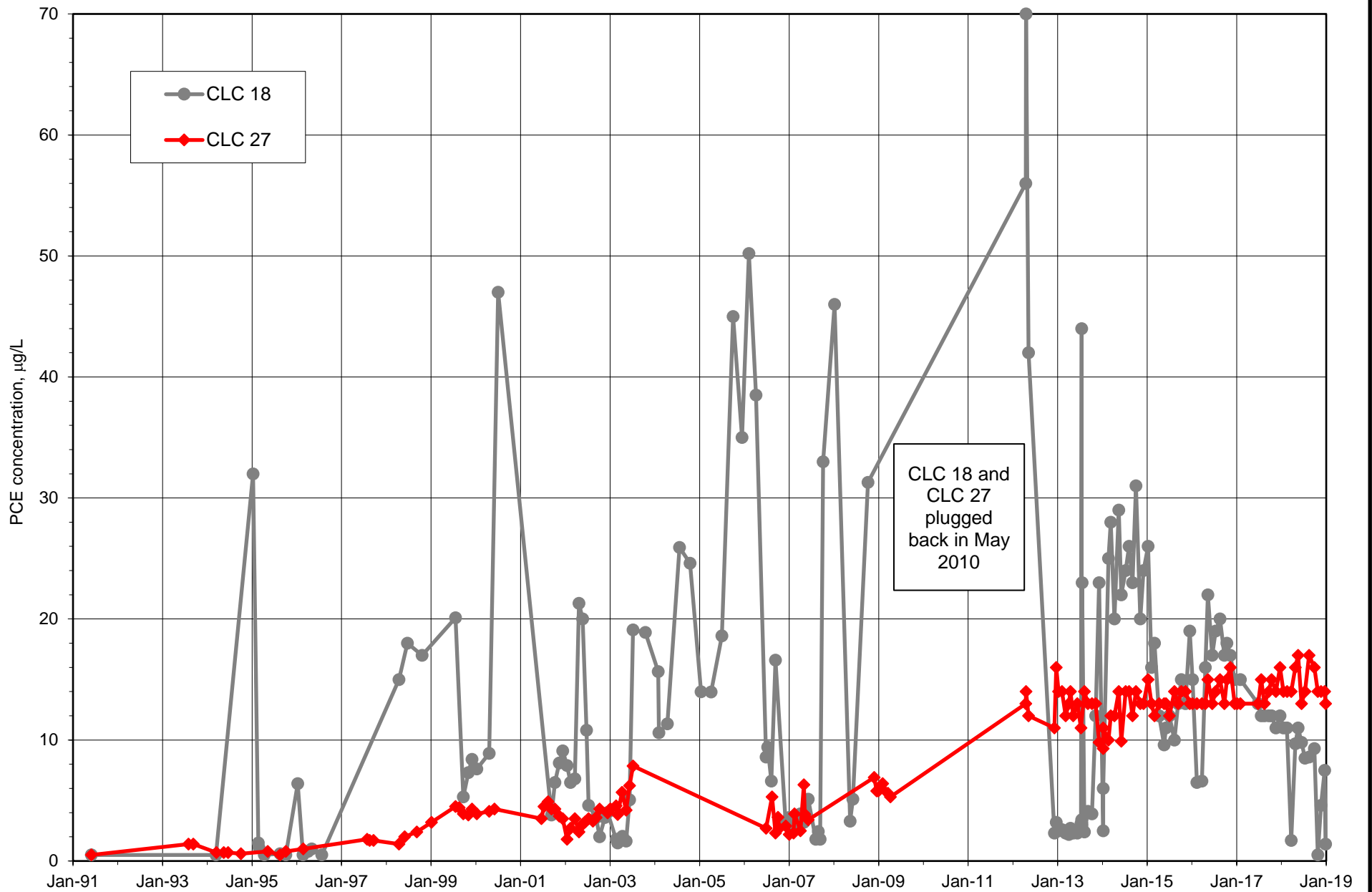


Figure D1. Graph showing PCE concentrations versus time for CLC 18 and CLC 27, Griggs and Walnut site.

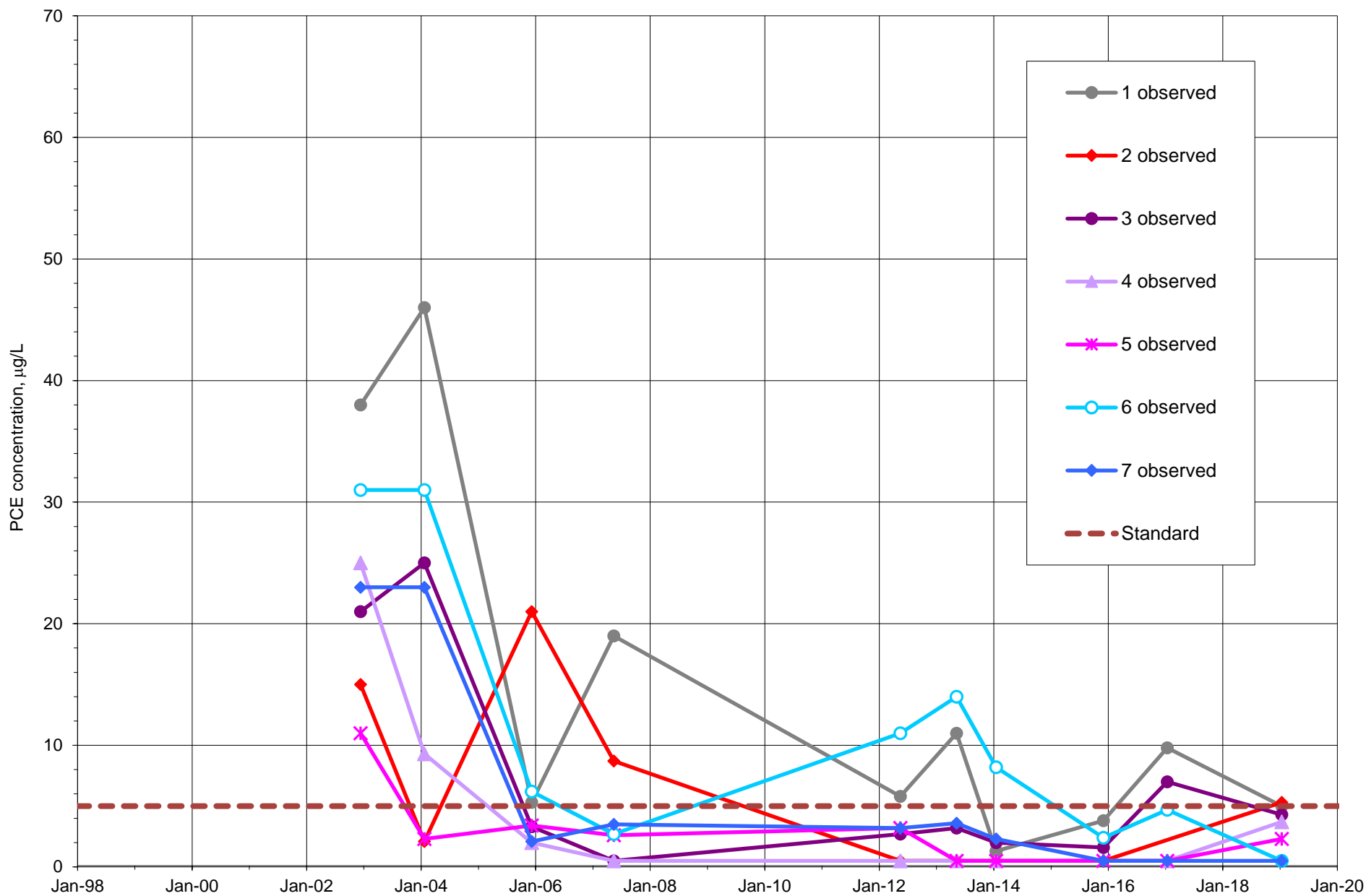


Figure D2. Graph of GWMW-01 (Ports 1 through 7) observed PCE concentrations, Griggs and Walnut site.

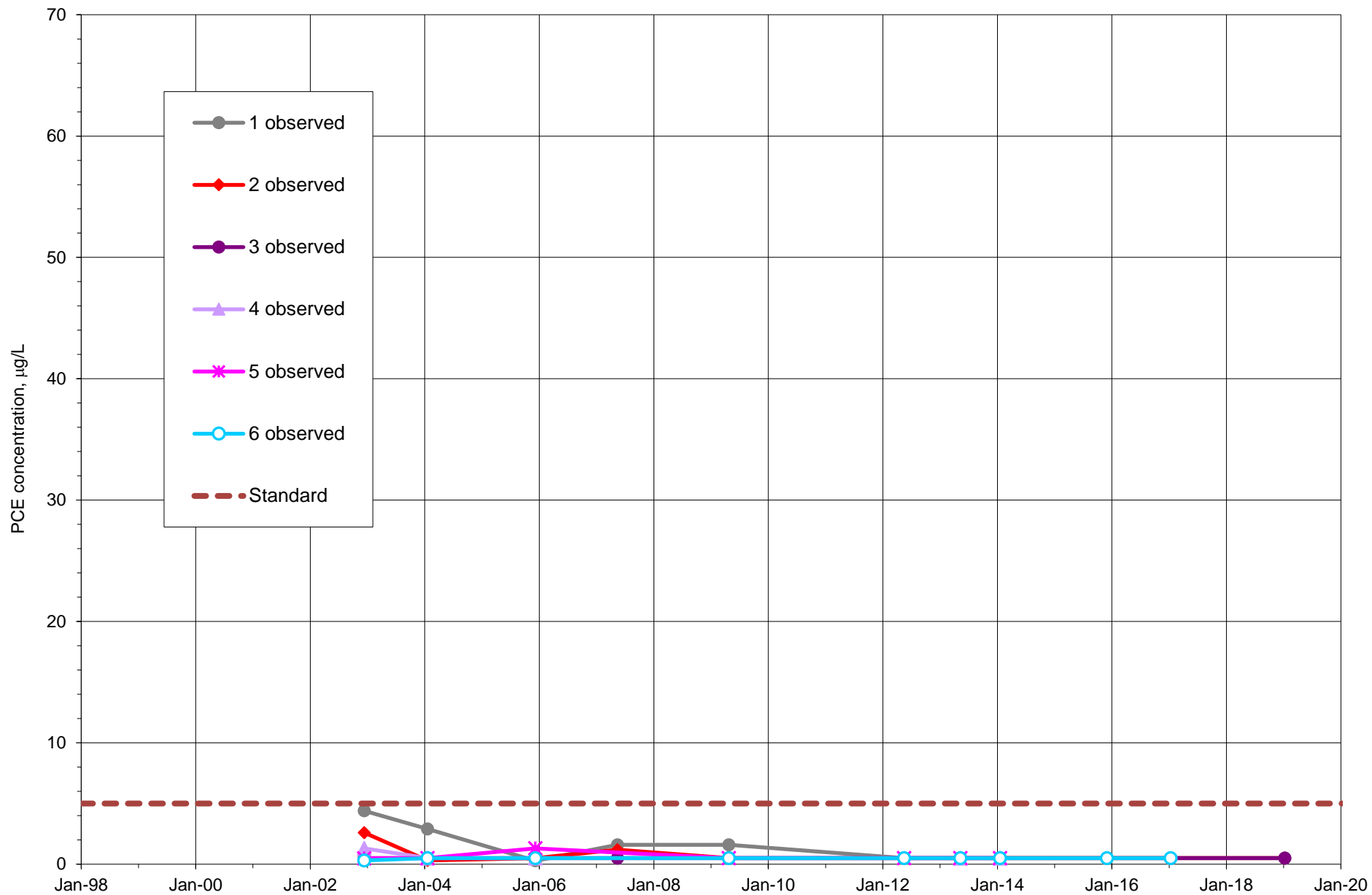


Figure D3. Graph of GWMW-03 (Ports 1 through 6) observed PCE concentrations, Griggs and Walnut site.

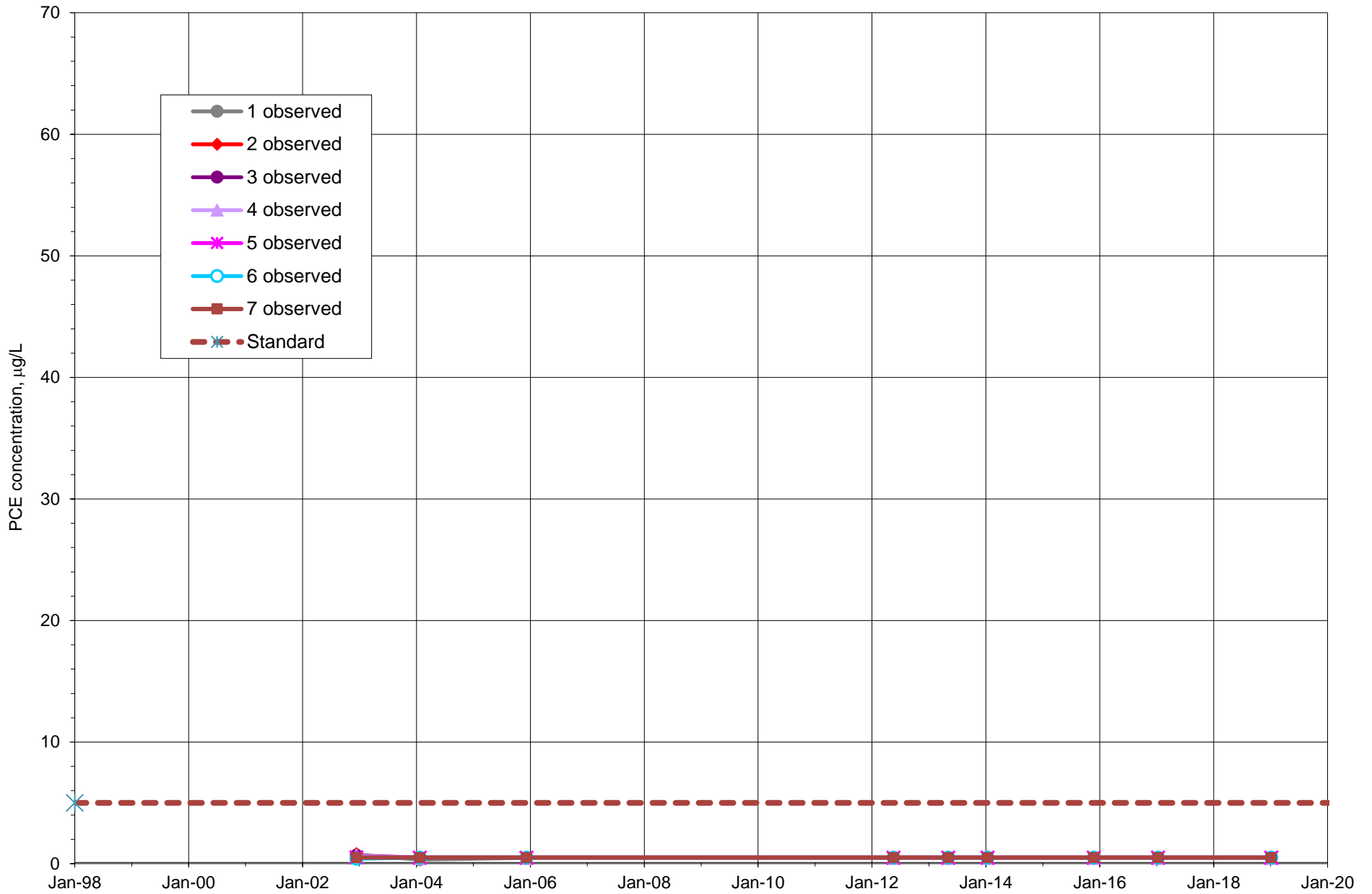


Figure D4. Graph of GWMW-08 (Ports 1 through 7) observed PCE concentrations, Griggs and Walnut site.

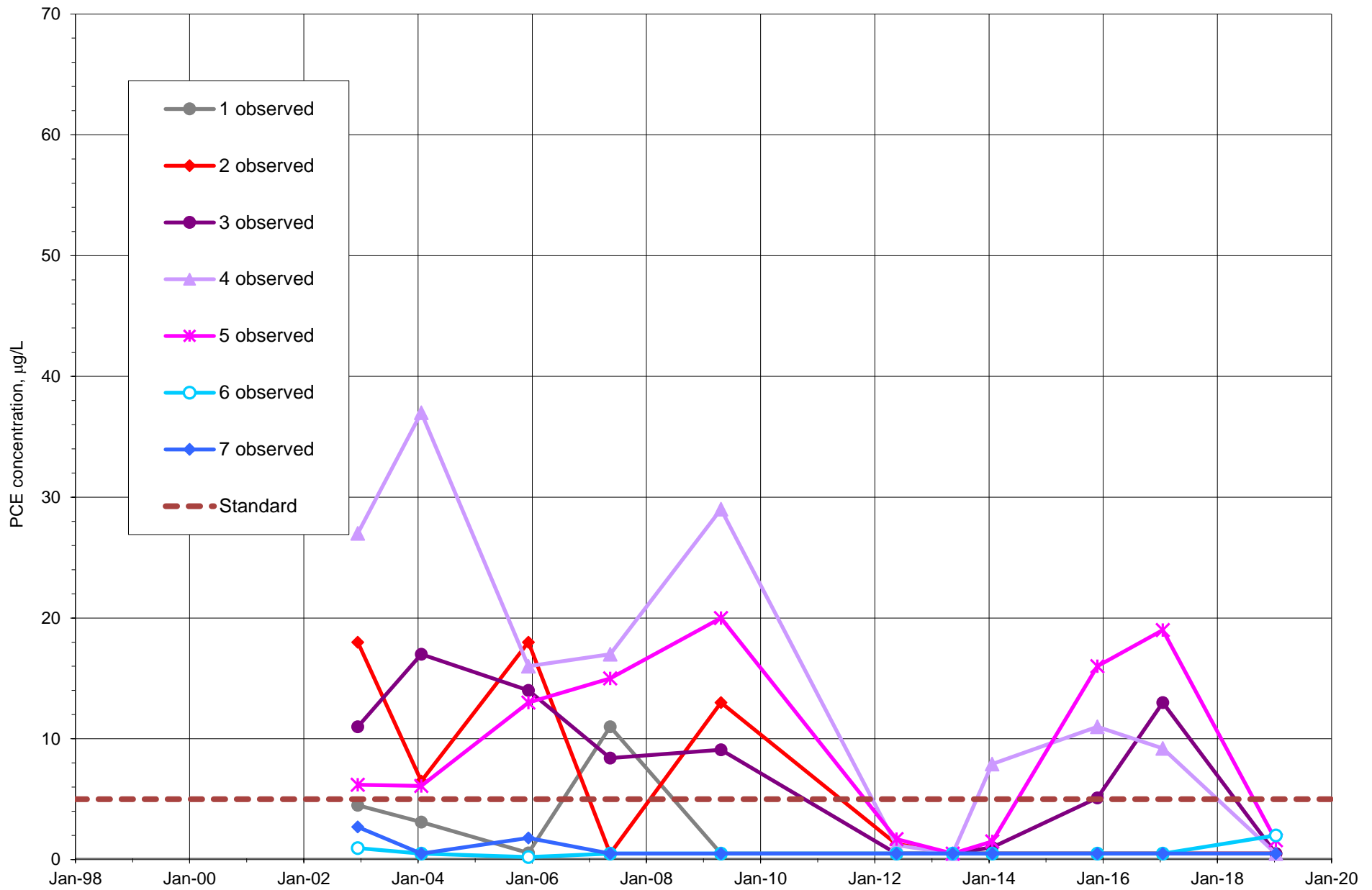


Figure D5. Graph of GWMW-09 (Ports 1 through 7) observed PCE concentrations, Griggs and Walnut site.

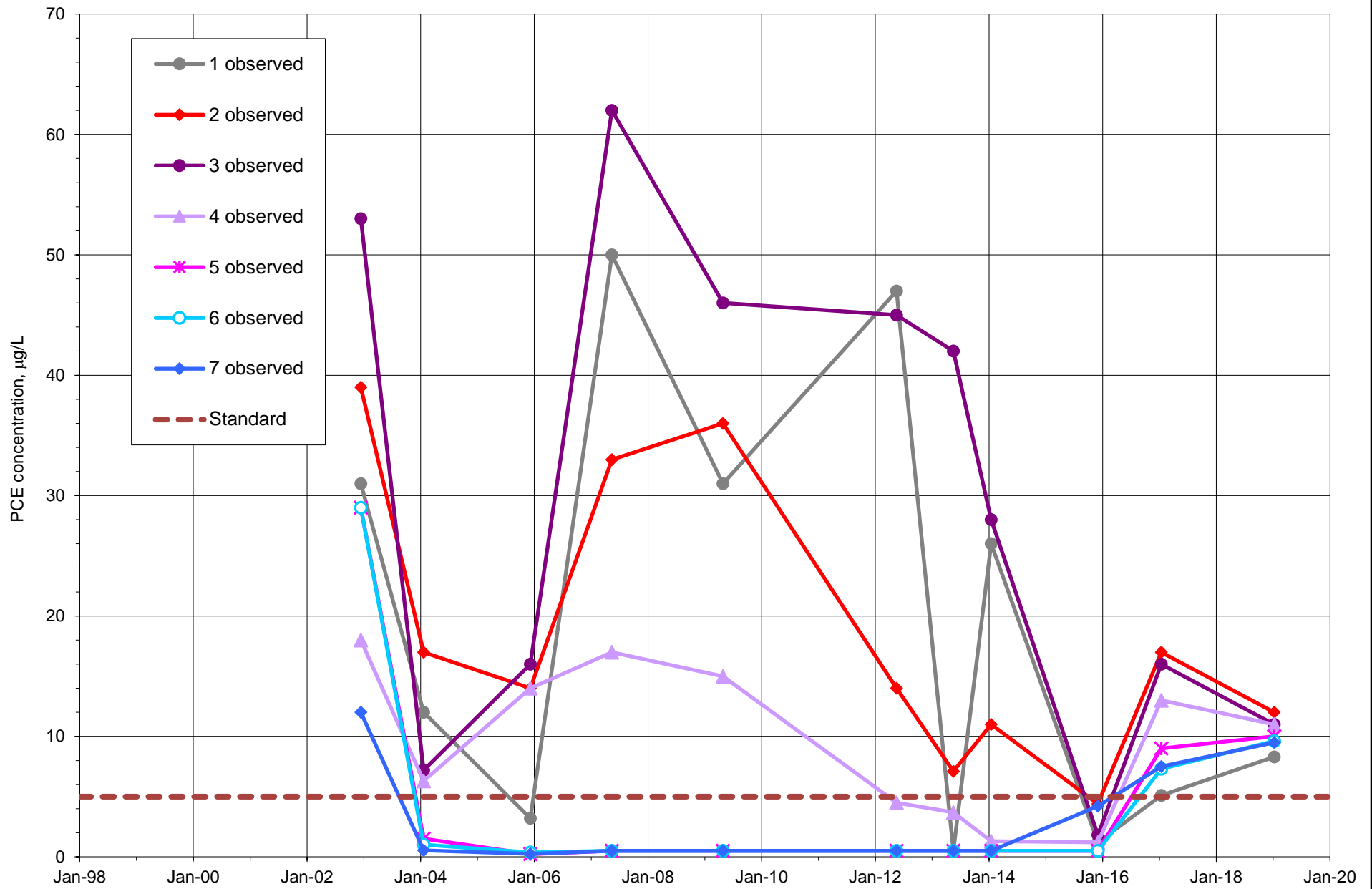


Figure D6. Graph of GWMW-10 (Ports 1 through 7) observed PCE concentrations, Griggs and Walnut site.

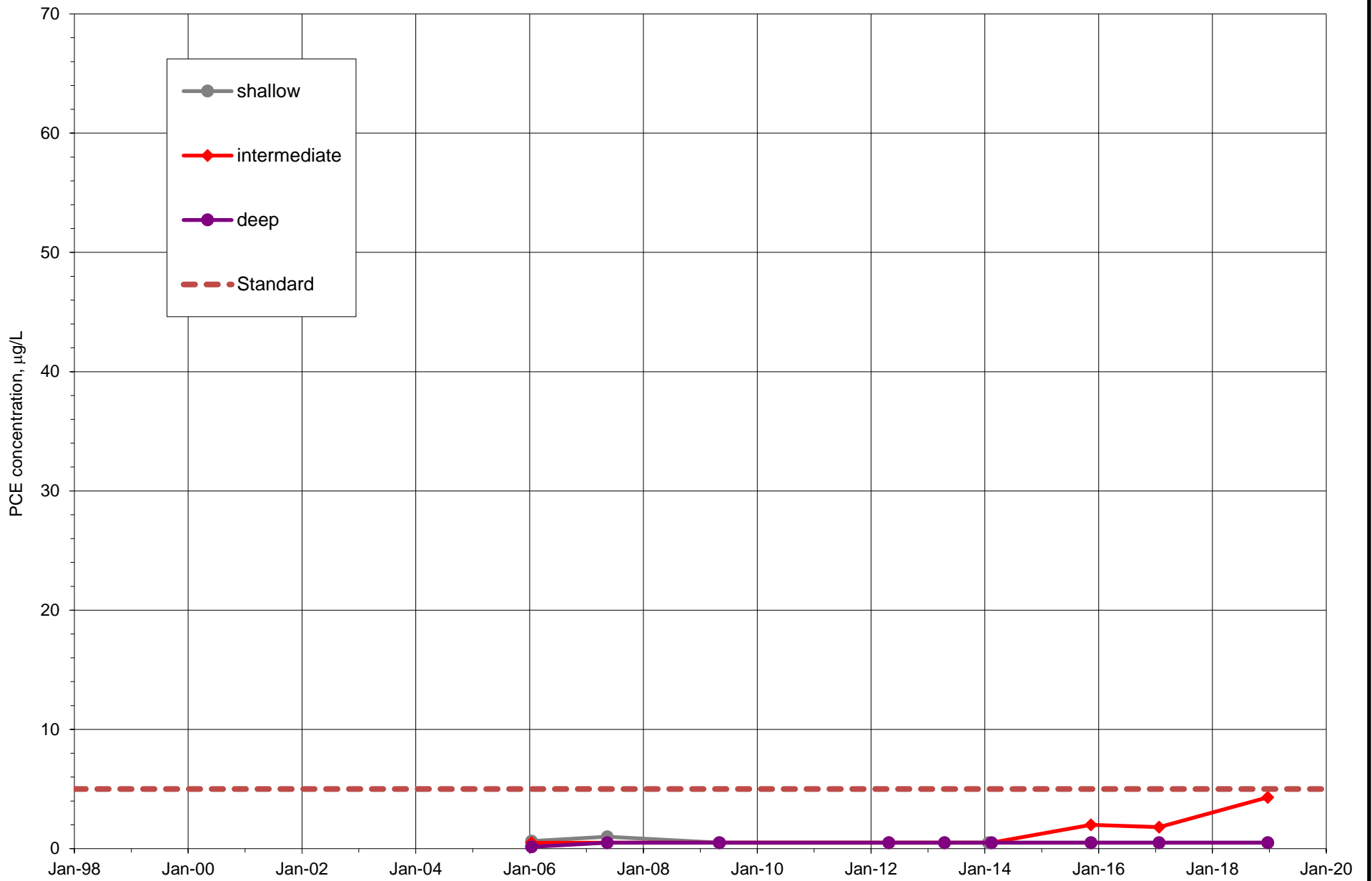


Figure D7. Graph of GWMW-11(S,I,D) (shallow, intermediate, and deep) observed PCE concentrations, Griggs and Walnut site.

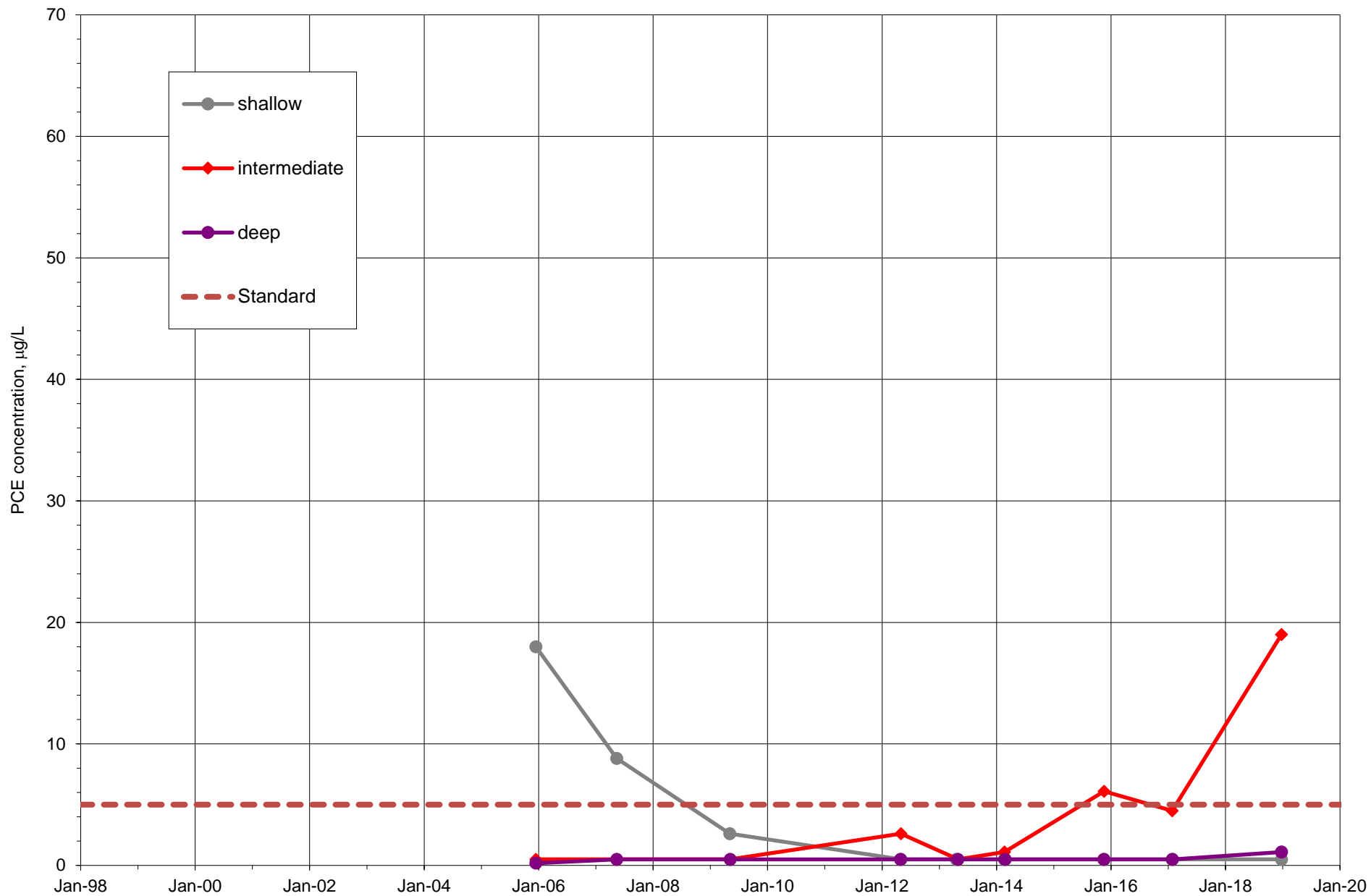


Figure D8. Graph of GWMW-15(S,I,D) (shallow, intermediate, and deep) observed PCE concentrations, Griggs and Walnut site.

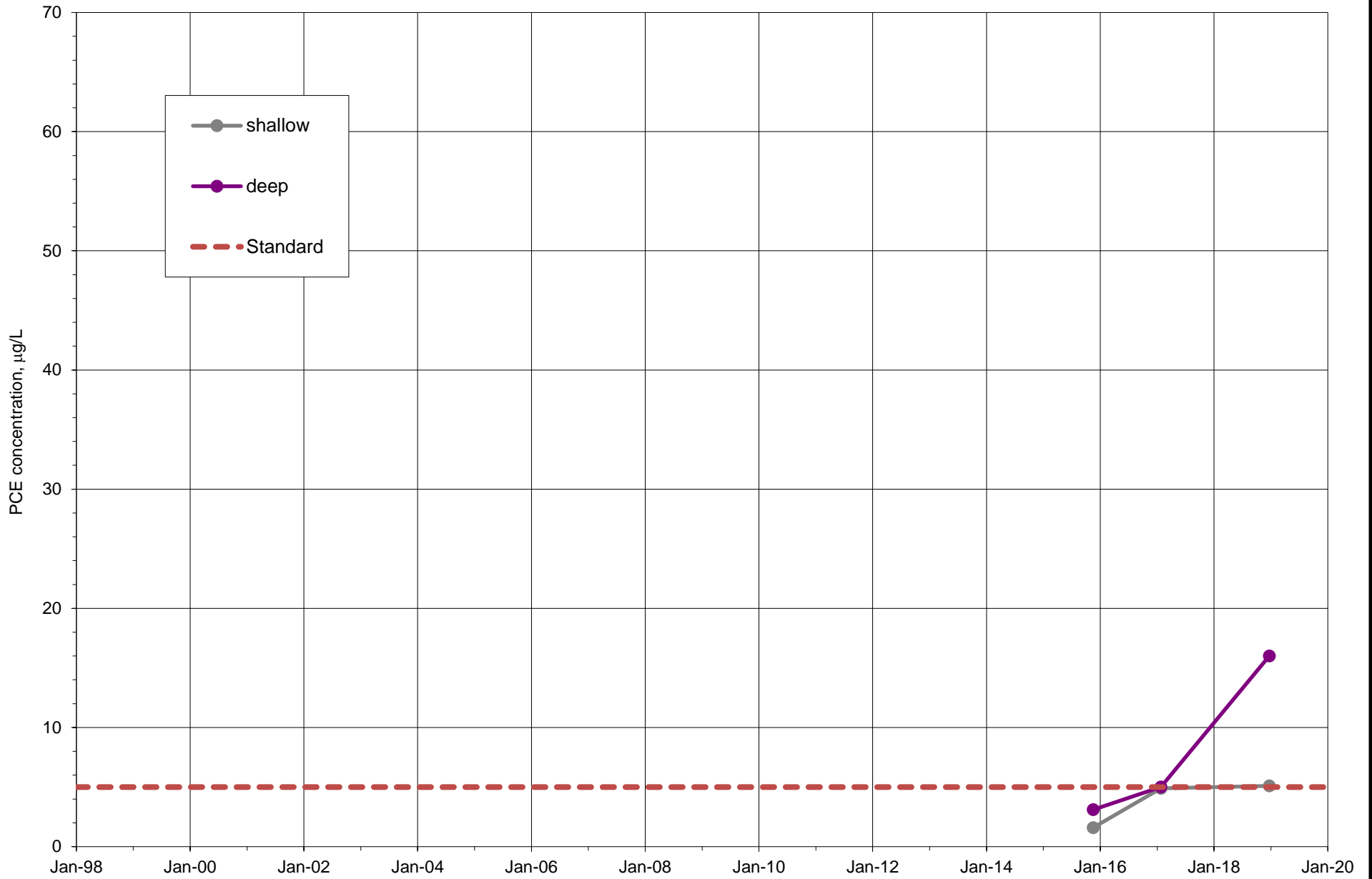


Figure D9. Graph of GWMW-16(S,D) (shallow and deep) observed PCE concentrations, Griggs and Walnut site.

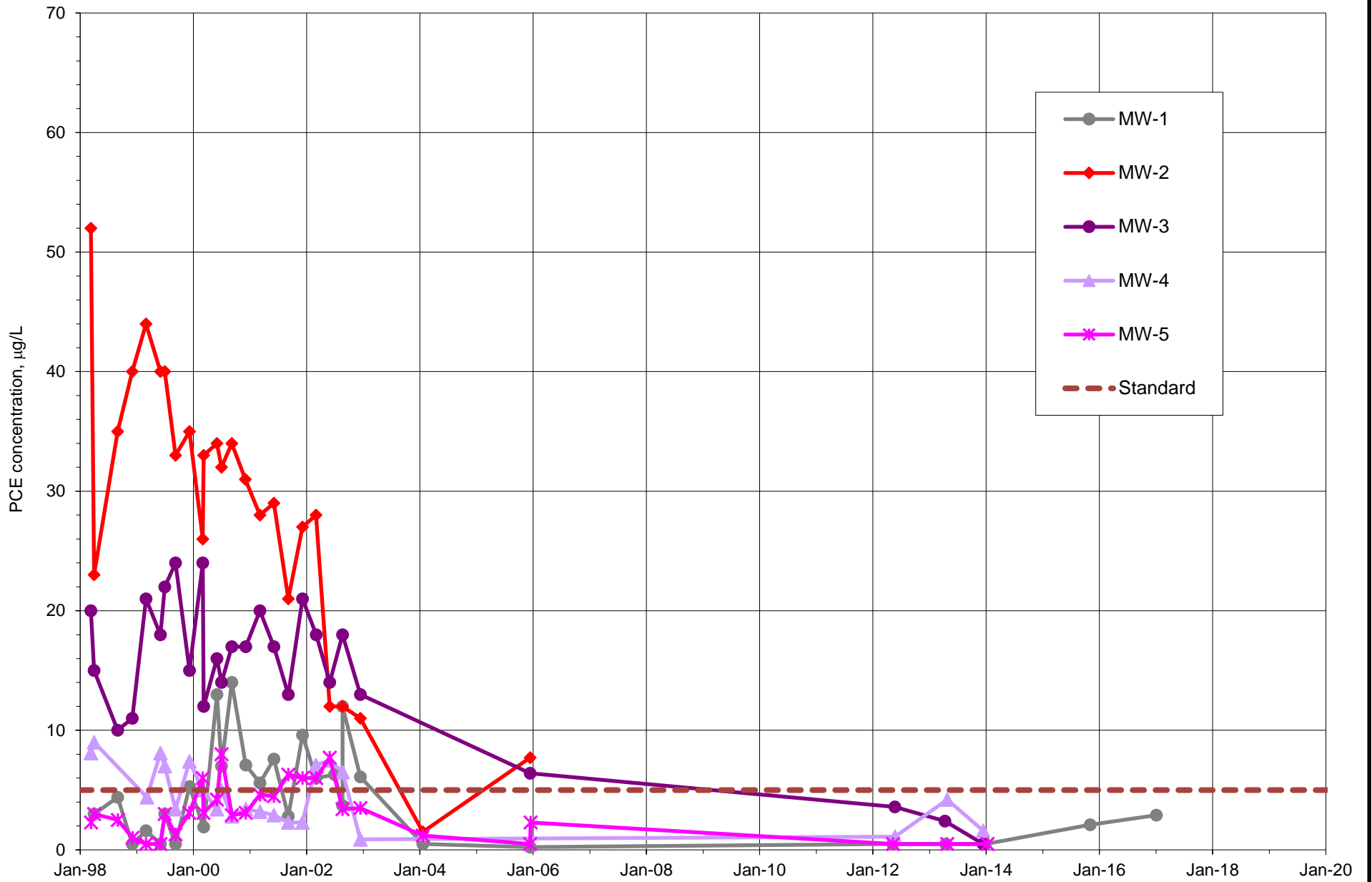


Figure D10. Graph of MW-1 through MW-5 observed PCE concentrations, Griggs and Walnut site.

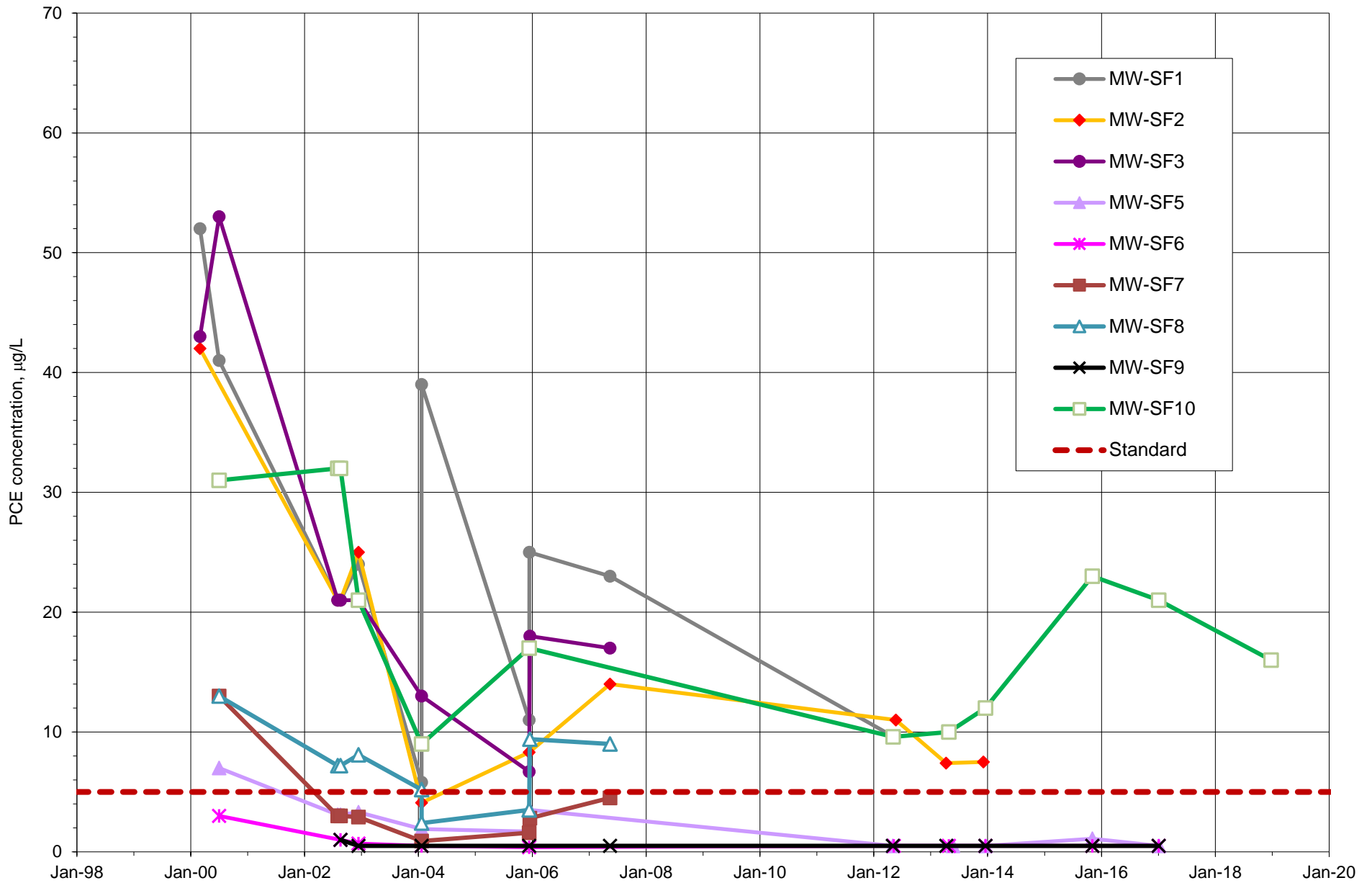
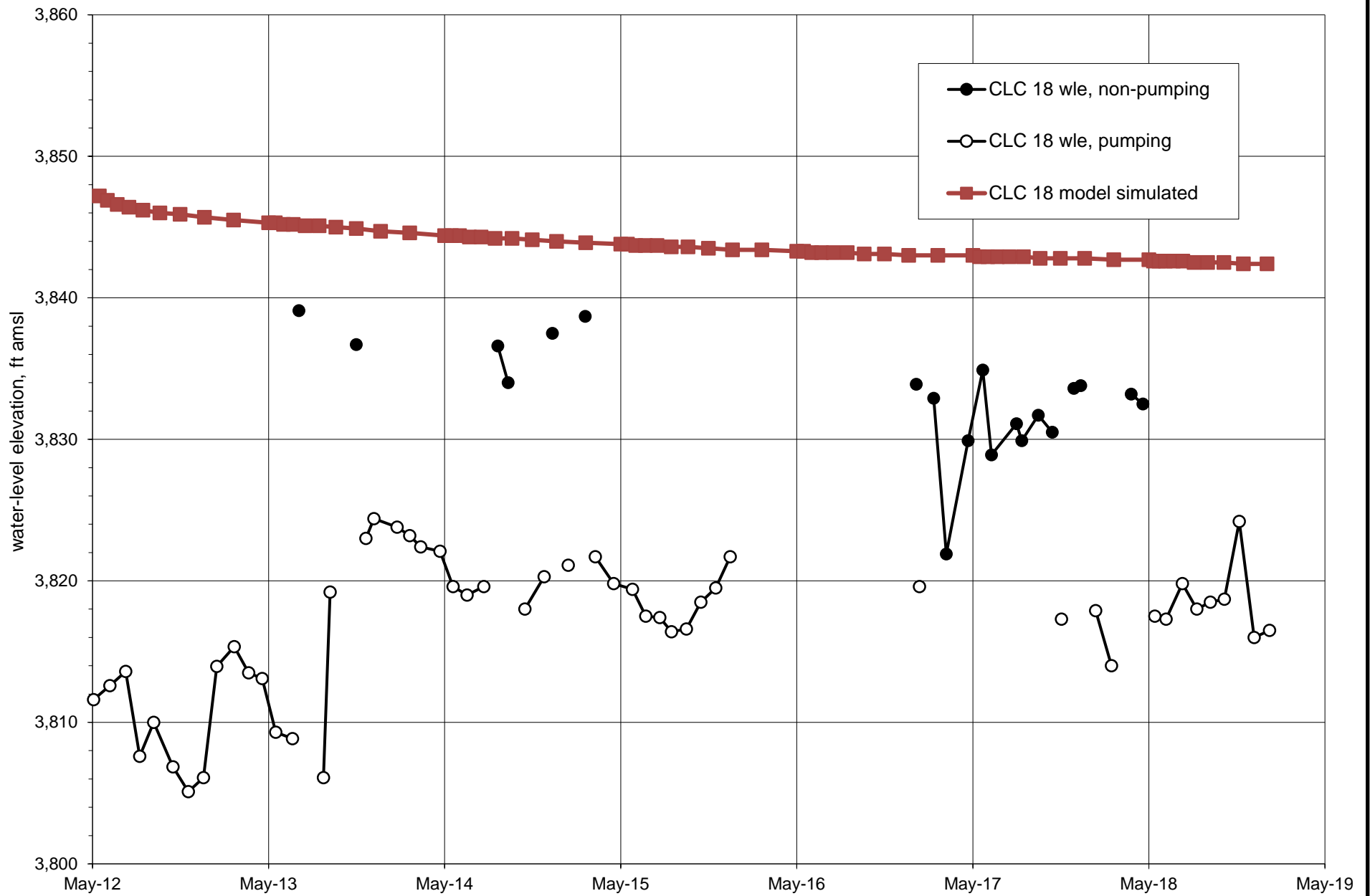


Figure D11. Graph of observed PCE concentrations for selected MW-SF-series monitor wells, Griggs and Walnut site.

Appendix E.

Griggs and Walnut Site time-series model-calibration graphs



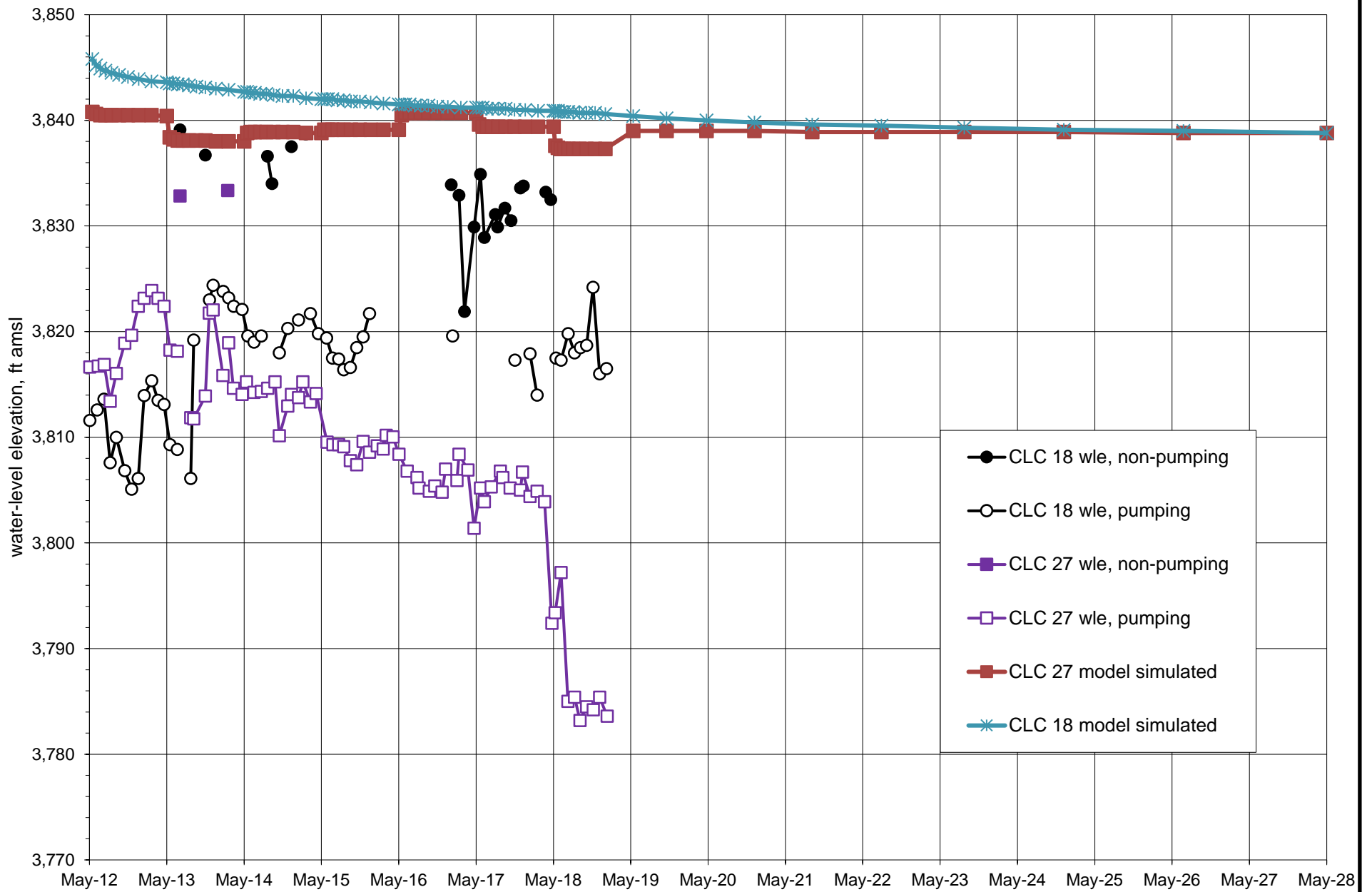


Figure E3. Graph of CLC 18 and CLC 27 observed and model-simulated water levels, Griggs and Walnut site.

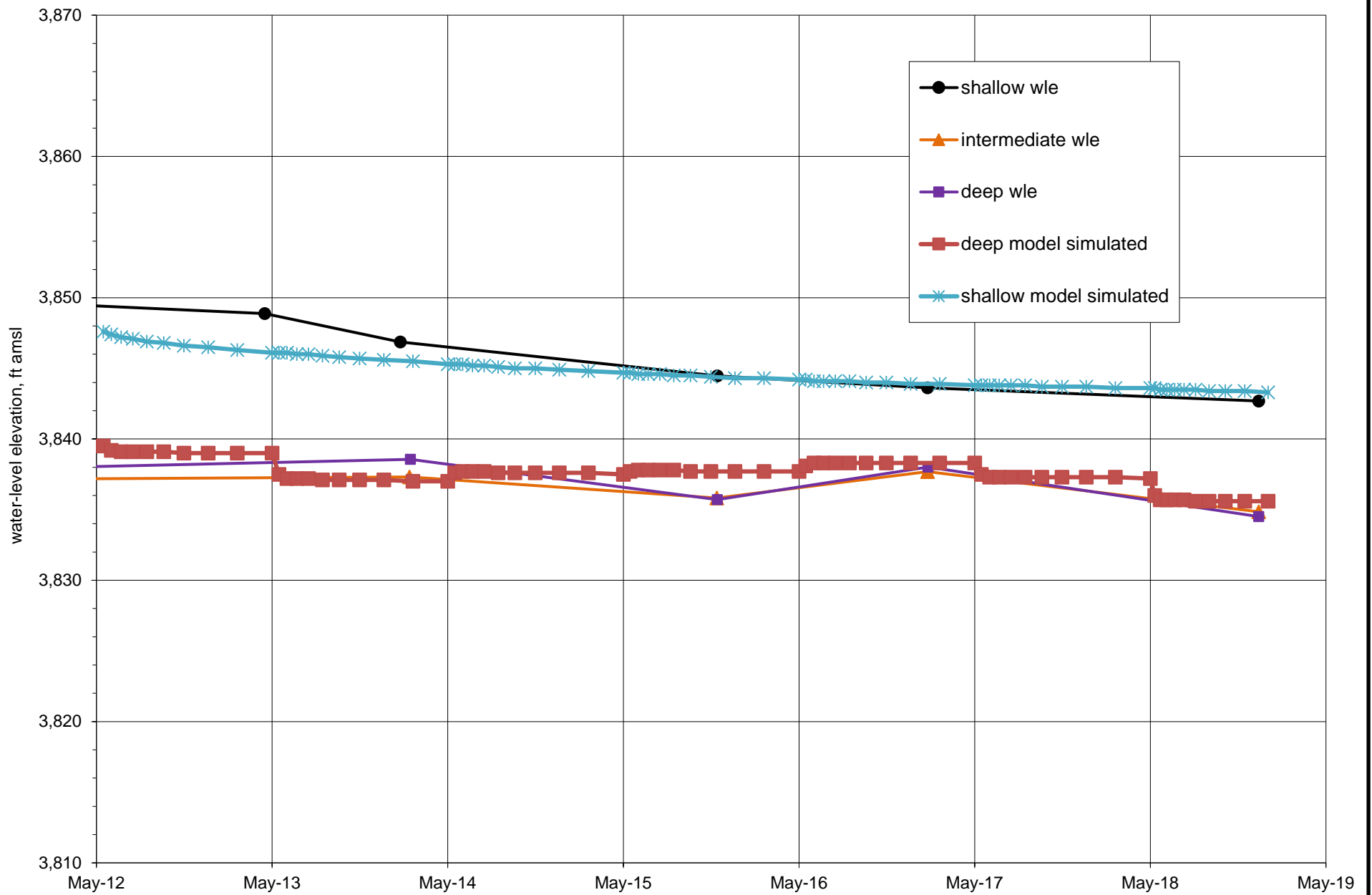


Figure E4. Graph of GWMW-11(S,I,D) (shallow, intermediate, and deep) observed and model-simulated water levels, Griggs and Walnut site.

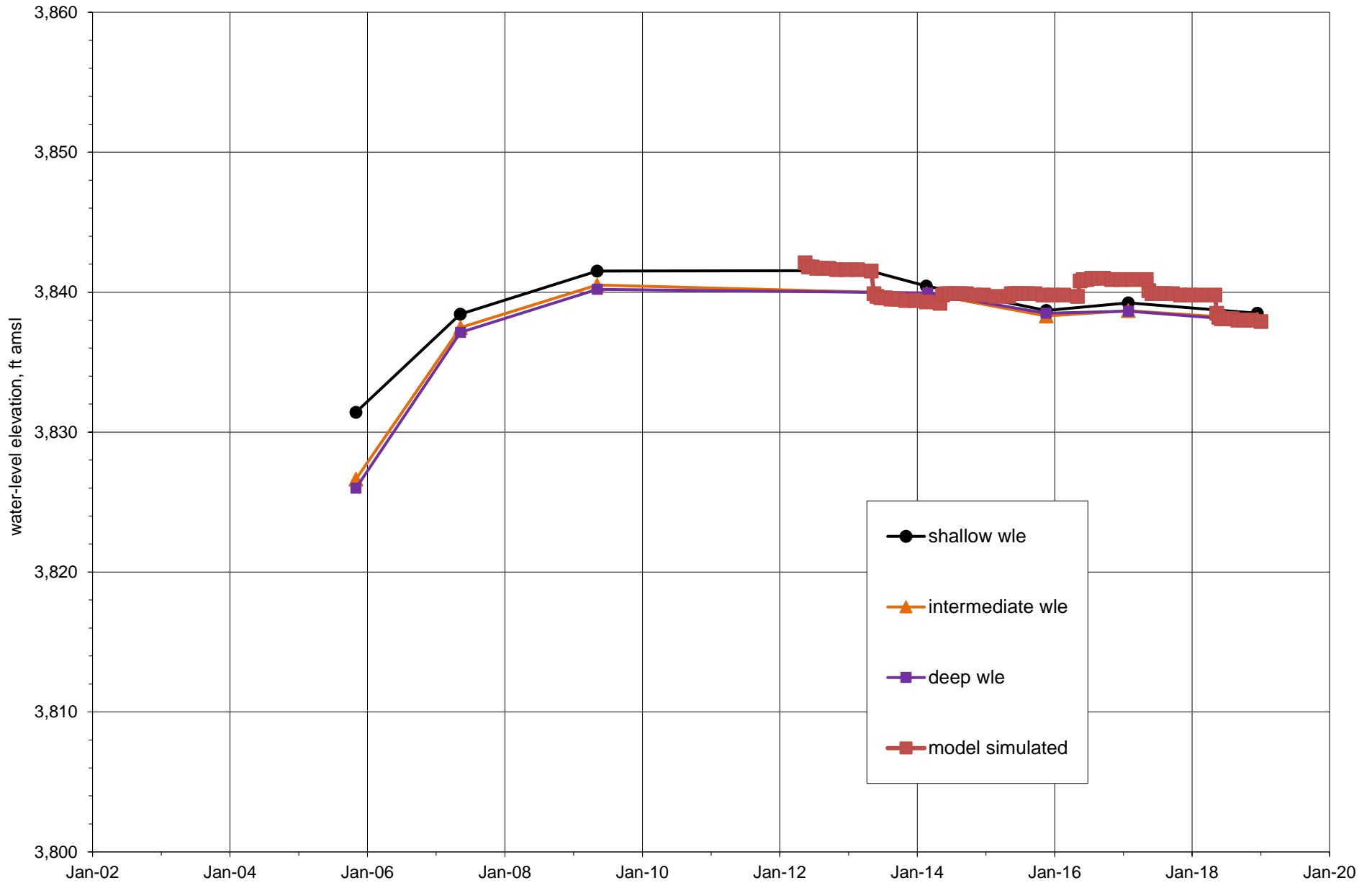


Figure E5. Graph of GWMW-15(S,I,D) (shallow, intermediate, and deep) observed and model-simulated water levels, Griggs and Walnut site.

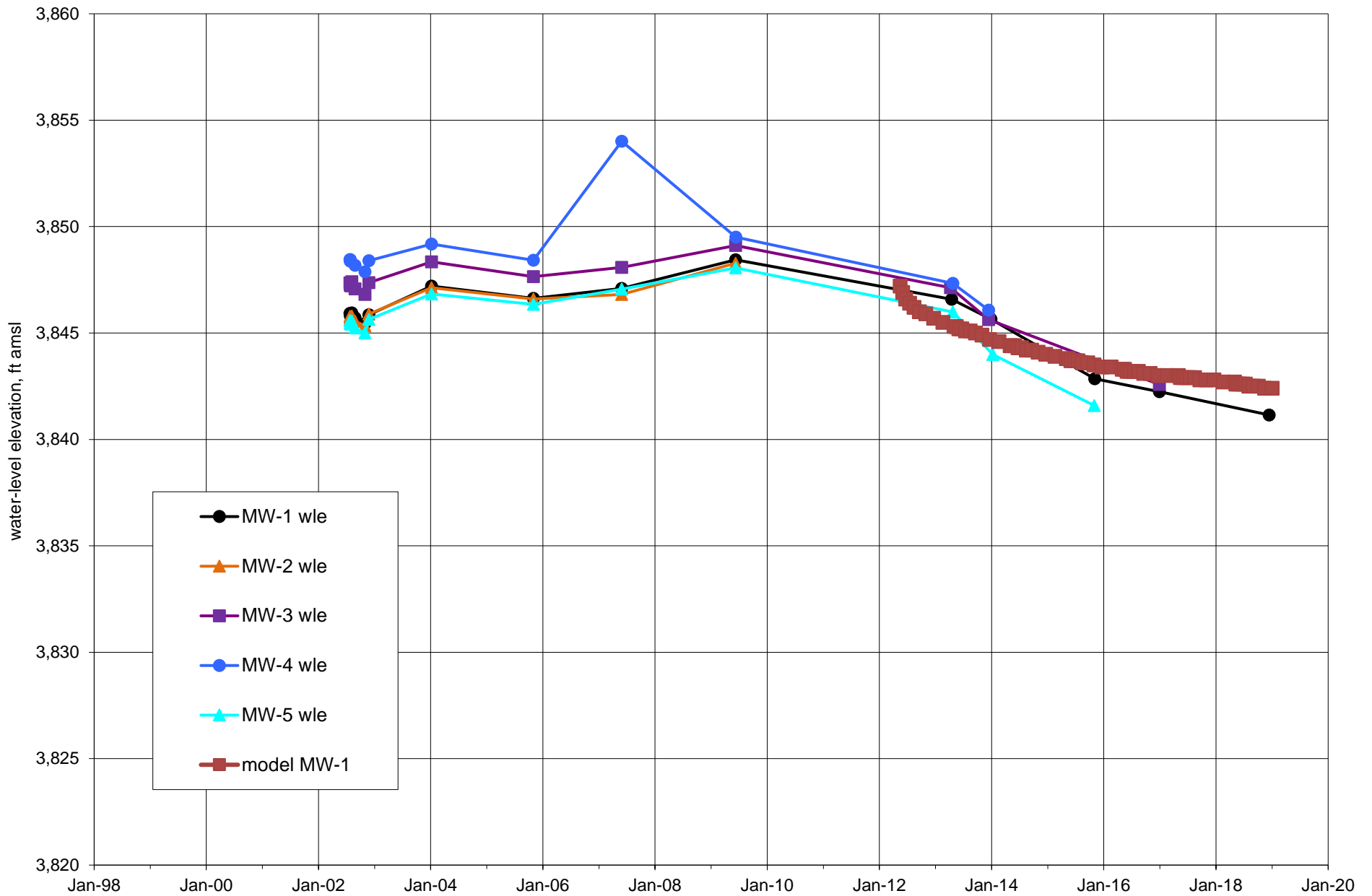


Figure E6. Graph of MW-1 through MW-5 observed and model simulated water levels, Griggs and Walnut site.

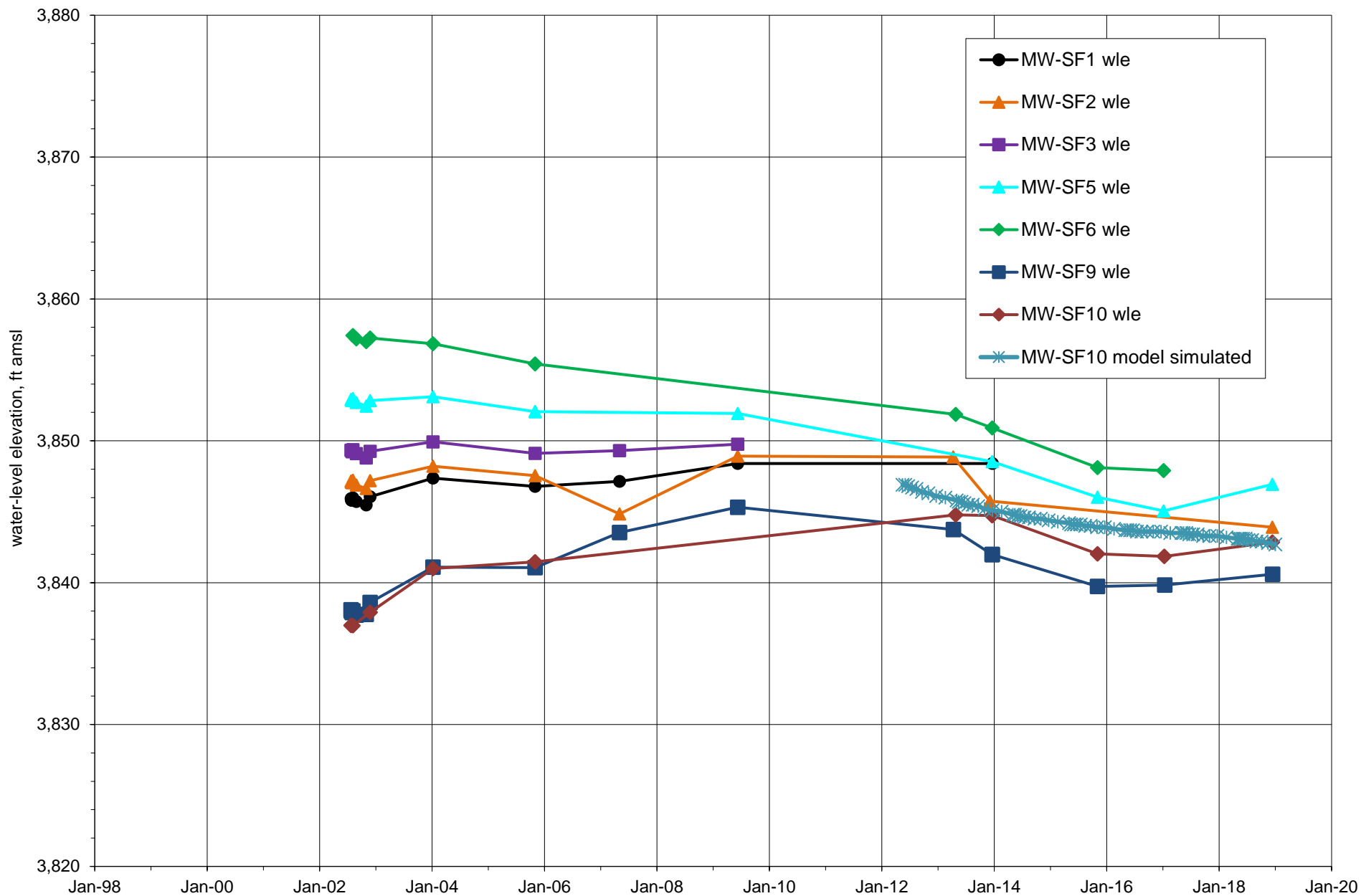


Figure E7. Graph of MW-SF1 through MW-SF10 observed and model-simulated water levels, Griggs and Walnut site.

Appendix B

**Groundwater Remediation
Optimization Report**



JOHN SHOMAKER & ASSOCIATES, INC.

OPTIMIZATION ASSESSMENT REPORT

2017 THROUGH 2018 GRIGGS AND WALNUT GROUNDWATER PLUME SUPERFUND SITE LAS CRUCES, NEW MEXICO

June 2019

prepared for



**OPTIMIZATION ASSESSMENT REPORT
2017 THROUGH 2018
GRIGGS AND WALNUT GROUNDWATER PLUME
SUPERFUND SITE
LAS CRUCES, NEW MEXICO**

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City of Las Cruces
New Mexico

and

Doña Ana County
New Mexico



June 2019



**OPTIMIZATION ASSESSMENT REPORT 2017 THROUGH 2018
GRIGGS AND WALNUT GROUNDWATER PLUME SUPERFUND SITE,
LAS CRUCES, NEW MEXICO**

EXECUTIVE SUMMARY

The purpose of the annual performance evaluation of Griggs and Walnut Site groundwater extraction wells is to assess whether operation of the extraction and treatment system is making adequate progress toward achieving the Remedial Action Objectives and Remedial Goals, and to ensure the JSP is removing the mass of contaminants in the aquifer in an effective manner, each year, as part of the Operation and Maintenance reporting requirements specified in the Statement of Work (EPA, 2017).

The last several years of Griggs and Walnut capture pumping and data collection have provided evidence that the plume is decreasing in mass and remedial progress is being made. The capture efficiency issue with extraction well CLC 18 has been investigated and resolved, and extraction wells CLC 18 and CLC 27 pumping rates and schedules are currently optimized.

As a result of optimization, CLC 18 has been operated consistently since 2014 (Fig. 2) without constraints. Additional hydraulic analysis indicates CLC 18 is more efficient at capturing the UHZ PCE plume than a hypothetical capture well completed to the top of the clay layer.

Results from the performance analysis presented in Table 1, show that CLC 27 is capable of pumping rates up to 400 gpm for the duration of the cleanup period, if needed. Therefore, CLC 27 is able to accommodate increased pumping rate if needed for containment and capture of the LHZ PCE plume. No additional extraction wells are needed for containment and capture of the LHZ PCE plume.

Pumping at an average annual rate of 220 gpm with a PCE concentration of 15 µg/L would result in a PCE mass removal rate of 6.6 kg/year. Extraction wells CLC 18 and CLC 27 combined have a mass removal rate of 7.0 kg/yr under the current optimization pumping program.

The updated groundwater modeling predicts the extraction system capturing sufficient PCE to reach the remediation goals within the 14-year time period, provided that pumping is reduced from CLC 61, and pumping from CLC 27 is incrementally increased every year to a maximum rate of 400 gpm or a lesser rate that optimizes PCE mass removal. With increasing PCE concentrations with increased pumping, CLC 27 is well suited for plume containment, capture, and cleanup with the remaining time period.

Based on the assessment of 2017-18 data, JSAI recommends continued pumping from CLC 18 at the current rate and schedule, and increasing pumping from CLC 27 from 220 to 240 gpm.

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ABBREVIATIONS

ac-ft/yr	acre-feet per year
DBS&A	Daniel B. Stephens & Associates, Inc.
EPA	Environmental Protection Agency
ft bgl	feet below ground level
gpm	gallons per minute
gpm/ft	gallons per minute per foot
JSAI	John Shomaker & Associates, Inc.
JSP	Joint Superfund Project
LCU	Las Cruces Utilities
LHZ	Lower Hydrogeologic Zone
kg	kilograms
ME	mean error
PCE	tetrachloroethene
Q/s	specific capacity
ROD	Record of Decision
SOW	Statement of Work
TMR	telescope mesh refinement
UHZ	Upper Hydrogeologic Zone
µg/L	micrograms per liter

**OPTIMIZATION ASSESSMENT REPORT 2017 THROUGH 2018,
GRIGGS AND WALNUT GROUNDWATER PLUME SUPERFUND SITE,
LAS CRUCES, NEW MEXICO**

1.0 INTRODUCTION

John Shomaker & Associates, Inc. (JSAI) was subcontracted by Daniel B. Stephens & Associates, Inc. (DBS&A) to assist with the assessment of the Griggs and Walnut tetrachloroethene (PCE) plume (“the Site”), and efficiency of the associated pump and treat system. This analysis was conducted for the Griggs and Walnut Joint Superfund Project (JSP), which consists of Doña Ana County and City of Las Cruces (CLC). The primary project goals were to evaluate remedial progress and plume extraction well optimization. The Griggs and Walnut Site area is presented in Figure 1.

1.1 Background

The EPA Record of Decision (ROD) for the Griggs and Walnut Superfund Site was issued in 2007, and was based on implementation of a pump and treat system that would remediate the PCE plume in a 14-year time period. The EPA approved the remedial design in 2010. The Griggs and Walnut pump and treat system began operation during September 2012, and it has been operated near continuously for the last 7 years. As defined in the EPA 2017 issued Statement of Work (SOW), the remediation goals are to be measured 14 years from the Effective Date of the SOW (January 4, 2018 to June 7, 2031).

The SOW requires an annual evaluation of the groundwater monitoring program and an annual optimization assessment of the extraction wells. This annual optimization assessment of the extraction wells is part of the Pre-Achievement Operation and Maintenance requirements defined in the SOW (EPA, 2017). The annual optimization assessment of the extraction wells is to be performed until the Remedial Action Objectives and Remedial Goals are attained. Past annual performance evaluation reports by JSAI are summarized in this report.

1.2 Purpose

The purpose of the annual performance evaluation of Site groundwater extraction wells is to assess whether operation of the extraction and treatment system is making adequate progress toward achieving the Remedial Action Objectives and Remedial Goals, and to ensure the JSP is removing the mass of contaminants in the aquifer in an effective manner each year as part of the Operation and Maintenance reporting requirements specified in the SOW (EPA, 2017).

2.0 EXTRACTION WELL PERFORMANCE

Extraction wells CLC 18 and CLC 27 are former municipal wells converted into remedial extraction wells. As part of the remedial design, CLC 18 and CLC 27 were modified in 2010 by partial plugback of the lower screen sections so pumping would focus on removal of the plume mass observed in the upper screen sections (JSAI, 2011).

Time-series graphs of PCE concentration and pumping from CLC 18 and CLC 27 are presented as Figures 2 and 3, respectively. CLC 18 was actively pumped and blended with municipal supply until 1998 (Fig. 2), and CLC 27 was actively pumped for municipal supply until 2003 (Fig. 3). Between the timing of the RI/FS and remedial design, CLC 18 and CLC 27 were used for plume containment until the remediation system was in place. Plume extraction by pumping CLC 18 and CLC 27 has specifically been a component of Remedial Action occurring from 2012 to current (Figs. 2 and 3). CLC 18 captures the Upper Hydrogeologic Zone (UHZ) PCE plume (Fig. 4), and CLC 27 captures the Lower Hydrogeologic Zone (LHZ) PCE plume and the UHZ PCE plume where the clay layer separating the UHZ from the LHZ is absent (Fig. 5).

2.1 CLC 18

At system start-up during the 4th quarter of 2012, CLC 18 yielded lower-than-expected PCE concentrations. PCE concentrations in water produced from CLC 18 decreased from 70 micrograms per liter ($\mu\text{g/L}$) to 2.3 $\mu\text{g/L}$ between April and December 2012 (Fig. 2).

In 2013, JSAI reviewed the daily meter readings and the PCE concentration trends and performed diagnostic pumping tests on CLC 18. It was determined that PCE concentrations from CLC 18 are influenced by well hydraulics, the CLC 18 pumping rate and pumping schedule. Through testing it was identified that the higher PCE groundwater at CLC 18 originated from the UHZ, which recharges the LHZ by downward flow through the gravel pack when CLC 18 is not pumping. Under active-pumping conditions CLC 18 captures high PCE groundwater that drained from the UHZ to the LHZ adjacent to the well.

In the vicinity of CLC 18, the PCE plume in the UHZ has a much higher specific conductance than the LHZ. Use of the more frequently collected specific conductance measurements as a surrogate for PCE allowed the optimization of CLC 18 pumping schedule to maximize the capture of the PCE plume from the UHZ. The correlations between PCE and specific conductance for 2014 and 2017-2018 are shown graphically as Figure 6. It was also determined through testing that the LHZ at CLC 18 did not contain PCE concentrations greater than 5 $\mu\text{g/L}$, consistent with trends observed at nearby monitoring well GMMW-01.

2.1.1 Operational Constraints

In 2014, JSAI recommended refinement of the pumping from CLC 18 by implementing daily pumping cycles followed by recovery. This cyclic pumping was determined to be more effective for capture of the PCE plume in the UHZ. Between 2013 and 2018, CLC 18 operated by pumping at a rate of 170 gallons per minute (gpm) for 4 hrs/day, which averages about 28 gpm. During March 2018, the submersible pump was replaced, and operating rate was reduced to 90 gpm with an 8-hr/day pumping cycle. Specific conductance measurements were used to determine the pumping cycle that would capture groundwater resembling the UHZ (higher specific conductance resembles capture from the UHZ and lower specific conductance resembles capture from the LHZ). Figure 7 is a graph of specific conductance measured during the 4-hr pumping cycle at 170 gpm and 8-hr pumping cycle at 90 gpm. Reduced operating pumping rate did not change average extraction rate because duration was increased. As a result of optimization, CLC 18 has been operated at an average rate of about 30 gpm (48 ac-ft/yr) since 2014 (Fig. 2). The purpose of the reduced operating rate and increased pumping duration is to provide flexibility with pumping duration.

2.1.2 Performance Analysis

Even with the optimized pumping schedule to maximize mass removal, the PCE concentrations from CLC 18 have decreased since the system has been in operation as the plume has been remediated (Fig. 2; Table 1). PCE concentrations have dropped from 70 $\mu\text{g/L}$ to less than 10 $\mu\text{g/L}$ (Fig. 2; Table 1). Correlation between specific conductance and PCE concentrations indicate the shift to lower PCE concentrations. As compared to 2014, 2017-2018 data indicate lower PCE concentrations for the corresponding specific conductance (Fig. 6). The 2018 dataset indicates the PCE concentration is about 10 to 15 $\mu\text{g/L}$ at the beginning of each 8-hr pumping cycle, and decreases to about 1 $\mu\text{g/L}$ by the end of the pumping cycle. In addition to declining PCE concentrations, water levels appear to be declining about 1.7 ft/yr at CLC 18 (Fig. 8). However, the decline in non-pumping water levels has not significantly affected pumping water levels (Fig. 8) and specific capacity. Specific capacity of CLC 18 has averaged about 12 gpm/ft.

Additional hydraulic analysis indicates CLC 18 is more efficient at capturing the UHZ PCE plume than a hypothetical capture well completed to the top of the clay layer. Due to the limited saturated thickness and declining water level, a hypothetical capture well completed to the top of the clay layer ($Q/s = 1.8$ gpm/ft) would not have enough water column to operate a pump after 1 year of pumping 30 gpm. CLC 18 is located in a low spot of the clay layer (JSAI, 2019), and will be able to capture the UHZ PCE plume until it is dewatered or below the EPA Drinking Water Standard of 5 $\mu\text{g/L}$.

Table 1. Summary of PCE concentrations observed in extraction wells CLC 18 and CLC 27

year	extraction well CLC 18		extraction well CLC 27	
	average PCE concentration (µg/L)	range in detection PCE concentrations (µg/L)	average PCE concentration (µg/L)	range in detection PCE concentrations (µg/L)
2001 to 2006	13.2	1.5 to 50.0	3.9	1.8 to 7.9
2007 to 2011	9.6	1.8 to 46.0	4.7	2.2 to 6.9
2012	34.7	2.3 to 70.0	7.6	2.2 to 16.0
2013	7.9	2.2 to 44.0	12.5	9.8 to 14.0
2014	21.6	2.5 to 31.0	12.2	9.3 to 14.0
2015	14.6	9.6 to 26.0	13.3	12.0 to 15.0
2016	15.8	6.5 to 22.0	13.8	13.0 to 16.0
2017	12.4	11.0 to 15.0	14.0	13.0 to 16.0
2018	7.3	1.7 to 11.0	14.6	13.0 to 17.0

PCE - tetrachloroethene
µg/L - micrograms per liter

2.2 CLC 27

At system startup during the 4th quarter of 2012, CLC 27 PCE concentrations were consistent with the average concentration observed within the plume. PCE concentrations in water extracted from CLC 27 remained fairly constant at about 12 µg/L during the first 2 years of system operation, and the PCE concentration has continued to slowly increase as the pumping rate was increased (Fig. 3; Table 1).

CLC 27 appears to be adequately capturing the PCE plume in the LHZ, as indicated by the cone of depression (JSAI, 2019) and increasing PCE concentrations (Fig. 3) as the plume mass is drawn into the CLC 27 capture area.

2.2.1 Operational Constraints

From 2013 to 2017, the pumping rate from CLC 27 averaged 153 gpm (246 ac-ft/yr; Fig. 3). JSAI (2016) previously recommended increasing the pumping rate from CLC 27 to 200 gpm; however, it was determined that a new pump would be required to increase the pumping to a rate greater than 160 gpm. During March 2018, a replacement pump was installed, and the pumping rate was increased to 200 gpm, then 220 gpm (324 ac-ft/yr; Fig 3).

2.2.2 Performance Analysis

Pumping tests were performed on CLC 27 in 2010 after partial plugback and conversion to a remedial extraction well. The specific capacity was 7.6 gallons per minute per foot of drawdown (gpm/ft) when pumping at a rate of 169 gpm (JSAI, 2011).

From 2012 through 2018, CLC 27 pumping water levels declined at a rate of 2.2 ft/yr while pumping at an average rate of 152 gpm. After March 2018, the pumping rate was increased to 200 gpm and the pumping water level dropped from 245 to 265 feet below ground level (ft bgl). In 2018, a transducer was installed to track pumping and non-pumping water levels to assist with performance analysis. A hydrograph of CLC 27 2017 and 2018 water levels is presented as Figure 9.

Considering an estimated current non-pumping water level of 227 ft bgl, the specific capacity in 2017 was 8.6 gpm/ft of drawdown at 157 gpm. When the pumping rate was increased to 200 gpm during 2018, the specific capacity dropped to 5.7 gpm/ft of drawdown. It is suspected that the CLC 27 2018 pumping water levels and specific capacity may have been influenced by regional pumping at CLC 61.

The performance of CLC 27 can be assessed by projecting pumping levels for the anticipated duration of the cleanup (14 years) for a range of given pumping rates. The maximum pumping level for operation is 400 ft bgl when considering a maximum pump setting depth of 425 ft bgl, and 25 ft of head needed for maintaining pump operation. A summary of calculated maximum pumping levels for a range of pumping rates is presented in Table 2.

Results from the performance analysis presented in Table 2 show that CLC 27 is capable of pumping rates up to 400 gpm for the duration of the cleanup period. Therefore, CLC 27 is able to accommodate an increase in pumping rate if needed for containment and capture of the LHZ PCE plume. No additional extraction wells are needed for containment and capture of the LHZ PCE plume at this time based on available data and groundwater modeling.

Table 2. Calculated extraction CLC 27 pumping water level for given pumping rate

pumping rate (gpm)	non-pumping water level¹ (ft bgl)	specific capacity² (gpm/ft)	short-term drawdown³ (ft)	long-term drawdown⁴ 14 years (ft)	regional water-level⁵ decline (ft)	calculated pumping water level (ft bgl)
200	230	5.7	35.1	25.0	14.0	304
225	230	5.5	40.9	28.2	14.0	313
250	230	5.3	47.2	31.3	14.0	322
275	230	5.1	53.9	34.4	14.0	332
300	230	4.9	61.2	37.5	14.0	343
325	230	4.7	69.1	40.7	14.0	354
350	230	4.5	77.8	43.8	14.0	366
375	230	4.3	87.2	46.9	14.0	378
400	230	4.1	97.6	50.1	14.0	392

¹ estimated non-pumping water level for 2018

² specific capacity for each pumping rate based on 2018 data and performance testing by JSAI (2011)

³ short-term drawdown is calculated from specific capacity

⁴ long-term drawdown is calculated from transmissivity

⁵ regional water level declines based on reduced pumping from CLC 61 and LCU regional water-level data

gpm - gallons per minute

ft bgl - feet below ground level

gpm/ft - gallons per minute per foot of drawdown

3.0 PCE MASS REMOVAL RATES

One objective of performance evaluation is to optimize the remediation system to maximize contaminant removal per unit of groundwater pumped and to minimize remediation time. The PCE mass in the groundwater plume previously was estimated to range from 110 to 160 kilograms (kg) relative to years 2005 to 2007 (EPA, 2006).

3.1 CLC 18 PCE Mass Removal Rate

During 2017 and 2018, CLC 18 was pumping at an average rate of 30 gpm. PCE mass removal from CLC 18 was calculated based on two methods: (1) use of direct PCE measurements only, and (2) based on a correlation between specific conductance and PCE to estimate PCE concentrations when only specific conductance data are available. Mass-removal estimates based on PCE measurements only (Method 1) is more direct and is not subject to error based on variability in the specific conductance-PCE correlation; however, use of the specific-conductance PCE correlation (Method 2) has the benefit of better quantifying short-term PCE concentration variability due to more frequent specific-conductance data measurement. Mass removal calculations using Method 1 are presented in DBS&A (2019).

Using the 2017-2018 correlation between PCE and measured specific conductance (Fig. 6), during 2017 and 2018 CLC 18 had an average PCE mass removal rate of 0.04 kg/month (Fig. 10; Table 3). The consistency of the mass removal rate is due to the optimized pumping cycles maximizing contaminant removal per unit of groundwater pumped. Installation of a smaller replacement pump during March 2018 changed the pump capacity and pumping duration. This change appears to have slightly increased the PCE mass removal rate from 0.037 kg/month to 0.047 kg/month (Table 3). A total of 0.98 kg PCE was removed during 2017 and 2018 pumping at CLC 18 (Table 4). Average annual PCE mass removal rate was about 0.5 kg for 2018. These calculated mass-removal rates for CLC 18 are consistent with calculations based on PCE-data only, which indicate a mass removal of 0.4 kg (DBS&A, 2019).

Table 3. Summary of calculated monthly PCE mass removal rate from extraction wells CLC 18 and CLC 27 for 2017 through 2018

month	extraction well CLC 18		extraction well CLC 27	
	PCE removed (kg)	average rate (gpm)	PCE removed (kg)	average rate (gpm)
Jan-17	0.036	28	0.351	137
Feb-17	0.033	30	0.227	167
Mar-17	0.039	30	0.330	166
Apr-17	0.040	32	0.452	161
May-17	0.040	30	0.376	152
Jun-17	0.037	30	0.328	155
Jul-17	0.028	27	0.466	145
Aug-17	0.034	29	0.298	153
Sep-17	0.037	30	0.403	154
Oct-17	0.041	30	0.260	158
Nov-17	0.039	30	0.424	156
Dec-17	0.038	29	0.480	153
Jan-18	0.039	30	0.196	152
Feb-18	0.035	31	0.330	148
Mar-18	0.040	25	0.588	181
Apr-18	0.050	28	0.567	212
May-18	0.052	29	0.425	185
Jun-18	0.044	29	0.445	206
Jul-18	0.045	29	0.470	220
Aug-18	0.046	29	0.616	209
Sep-18	0.045	29	0.836	227
Oct-18	0.048	29	0.504	228
Nov-18	0.047	30	0.450	226
Dec-18	0.047	29	0.576	214

PCE - tetrachloroethene

kg - kilograms

gpm - gallons per minute

Table 4. Summary of annual PCE mass removal rates from extraction wells CLC 18 and CLC 27 for years 2017 and 2018

PCE removed (kg)		
	CLC 18	CLC 27
2017 total	0.441	4.395
2018 total	0.536	6.002

PCE - tetrachloroethene

kg - kilograms

3.2 CLC 27 PCE Mass Removal Rate

During 2017 and 2018, CLC 27 was pumped near continuously. Using PCE concentration values shown on Figure 3 and metered pumping, the mass of PCE removed by CLC 27 for each month was calculated. During 2017, CLC 27 had an average PCE mass removal rate of 0.37 kg/month (Fig. 11; Table 3). The consistency of the mass removal rate is due to the continuous pumping and consistent PCE concentrations maximizing contaminant removal per unit of groundwater pumped. Installation of a larger replacement pump during March 2018 changed the pumping capacity and PCE mass removal rate. This change appears to have significantly increased the average monthly PCE mass removal rate from 0.37 kg/month to 0.55 kg/month (Table 3). A total of 10.4 kg PCE was removed during 2017 and 2018 pumping (Table 4). The PCE mass removal was about 6.0 kg for 2018.

Pumping at an average annual rate of 220 gpm with a PCE concentration of 15 µg/L would result in a PCE mass removal rate of 6.6 kg/yr. Extraction wells CLC 18 and CLC 27 combined have a mass removal rate of 7.0 kg/yr under the current optimization pumping program.

4.0 TMR NUMERICAL MODEL

Details regarding the telescope mesh refinement (TMR) model, model update, and calibration are available in the companion JSAI (2019) report. The TMR model was calibrated to the available groundwater-level data considering the annual pumping rates from CLC 18, CLC 27, and CLC 61. Figure 12 is a bar graph showing the annual pumping rates by well. Model simulations included the historical transient period (system operations from 2012 through 2018), and future period (remainder of the 14-year cleanup period specified in the EPA Record of Decision (ROD) and SOW (EPA, 2017)). Particle tracking was simulated for the historical and future periods. Model-simulated results are presented in Figures 13 through 18.

4.1 Plume Containment Analysis

Model simulations indicate that the northern and western extents of both the upper and lower plume are well contained through the use of the existing capture system. The southern and eastern extents of the upper plume are also contained as CLC 27 captures what lays outside of the CLC 18 zone of influence (Figs. 14 through 16).

Model simulations indicate that the eastern extent of the lower plume may be less contained as modeled groundwater velocities in this area are low, averaging approximately 0.12 ft/day, which reduces the capture system's effectiveness and leaves the area susceptible to being influenced by additional pumping sources. It should be noted that eastern extent of the lower plume at GWMW-15 is located across a channel of high conductivity (see Fig. 13). If the channel extends farther east than currently simulated, the eastern extents of the lower plume may be more effectively captured by CLC 27 or possibly further influenced by pumping outside of plume area if it were to take place.

Modeling simulations indicate that pumping of CLC 61 may have an effect on the capture system's efficiency at the eastern and southern extents of the upper and lower plume. Figures 17 and 18 show modeled plume travel for 2019 through 2028 with and without 2018 CLC 61 pumping at an average rate of 1,130 gpm. For this sensitivity analysis, CLC 18 and CLC 27 pumping remained at the early 2018 average rates of 30 and 200 gpm, respectively. Comparison of modeled potentiometric contours on Figures 17 and 18 indicate the potential for less capture at CLC 27 when CLC 61 is pumping. Therefore, these simulations indicate that continued pumping of CLC 61, if it were to occur, would run the risk of the upper and lower plumes moving farther south into an area of low data density which may necessitate the need for additional monitoring. However, recent cessation of pumping CLC 61 (March 2019) is expected to minimize the potential for vertical PCE plume movement. Model simulations (not shown) indicate the cessation of pumping CLC 61 will cause the water level in the area of GWMW-10 to rebound to where the plume will be hydraulically pushed upward and more readily captured at CLC 27.

4.2 Plume Capture Analysis

The modeled capture zone of CLC 27 is approximately 3,000 ft from north to south and 2,400 ft from east to west in 2019. By 2028 the capture zone increases by 40 percent to approximately 4,000 ft from north to south and 3,400 ft from east to west. For CLC 18 the 2019 modeled capture zone is approximately 1,700 ft from north to south and 1,800 ft from east to west. By 2028 the capture zone for CLC 18 increases by 70 percent to approximately 2,300 ft from north to south and 2,900 ft from east to west.

The upper plume in 2018 measures approximately 1,600 ft from north to south and 2,200 ft from east to west and is completely within the capture zone created by CLC 18 and CLC 27. The lower plume measures approximately 1,100 ft from north to south and 4,100 ft from east to west with the eastern extent outside of CLC 27 immediate capture zone.

4.3 Optimization Analysis

Optimization includes removing the mass of contaminants in the aquifer in an effective and efficient manner. CLC 18 is optimized with the current pumping schedule, and monitoring data suggest the UHZ PCE plume is rapidly decreasing in size (JSAI, 2019). No changes to extraction CLC 18 pumping cycle or rate are recommended.

Increasing the pumping rate of CLC 27 will increase the size of the capture zone as well as the PCE removal rate. The 2018 PCE removal rate increased by approximately 6 percent when the pumping rate increased from 160 to 200 gpm. It is possible that increased pumping from CLC 27 could increase the capture of clean groundwater. Therefore, JSAI recommends incremental annual increases to extraction CLC 27 pumping rate so the effects from the previous increase can be evaluated with the monitoring data.

CLC 61 pumping poses a risk of pulling the LHZ PCE plume farther south if it were to continue pumping at 1,000 gpm (1,600 ac-ft/yr). Reduced pumping from CLC 61 will improve containment and capture by extraction CLC 27 under the current rate of 200 gpm. Reduced pumping from CLC 61 and slight increase in pumping from extraction CLC 27 (to 240 gpm) should help optimize capture of the eastern part of the plume.

5.0 EFFECTIVENESS OF EXTRACTION WELLS

The updated groundwater modeling predicts the extraction system is capturing sufficient PCE to reach the remediation goals within the 14-year time period, provided that pumping is reduced from CLC 61, and pumping from extraction CLC 27 is incrementally increased every year to a maximum rate of 400 gpm or a lesser rate that optimizes PCE mass removal.

5.1 Remedial Objectives

The remedial objective is to remove the mass of PCE in the aquifer in an effective and efficient manner. Estimated current mass of PCE plume is approximately 29 kg, and the current

removal rate is about 7 kg per year. Modeling simulations indicate that there is potential to increase the mass removal by increasing the pumping rate from CLC 27 and decrease the effects of pumping from CLC 61. Monitoring data provide evidence that the concentrations across the Site are decreasing as the system continues to operate (JSAI, 2019).

5.2 Remedial Goals

The remedial goal is to achieve cleanup of PCE contaminants in the groundwater within the 14-year time period measured from the effective date of the Order (January 4, 2018). There are approximately an additional 13 years to achieve the remedial goals.

The majority of the plume mass is where the UHZ and LHZ are hydraulically connected and the PCE plume is captured by extraction CLC 27. CLC 18 will be able to capture the remaining plume on top of the clay layer in UHZ that does not flow east into the extraction CLC 27 capture zone. Cleanup time under the current system operation is difficult to estimate due to the variability with estimating PCE plume mass. However, based on current estimates, approximately 10 percent of the plume was removed during 2018 system operation.

The updated Site Conceptual Model (JSAI, 2019) coupled with a significant decrease in local pumping has changed the system requirements to achieve remedial goals. With increasing PCE concentrations with increased pumping, extraction CLC 27 is well suited for plume containment, capture, and cleanup within the remaining time period.

6.0 SUMMARY OF FINDINGS

As a result of optimization, CLC 18 has been operated consistently since 2014 (Fig. 2) without constraints. Additional hydraulic analysis indicates CLC 18 is more efficient at capturing the UHZ PCE plume than a hypothetical capture well completed to top of the clay layer.

Results from the performance analysis presented in Table 1 show that CLC 27 is capable of pumping rates up to 400 gpm for the duration of the cleanup period, if needed. Therefore, CLC 27 is able to accommodate increased pumping rate if needed for containment and capture of the LHZ PCE plume. No additional extraction wells are needed for containment and capture of the LHZ PCE at this time.

Pumping at an average annual rate of 220 gpm with a PCE concentration of 15 µg/L would result in a PCE mass removal rate of 6.6 kg/yr. Extraction wells CLC 18 and CLC 27 combined have a mass removal rate of 7.0 kg/yr under the current optimization pumping program.

The updated groundwater modeling predicts the extraction system is capturing sufficient PCE to reach the remediation goals within the 14-year time period, provided that pumping is reduced from CLC 61, and pumping from extraction CLC 27 is incrementally increased every year up to a rate that optimize PCE mass removal. With increasing PCE concentrations with increased pumping, extraction CLC 27 is well suited for plume containment, capture, and cleanup with the remaining time period.

7.0 RECOMMENDATIONS

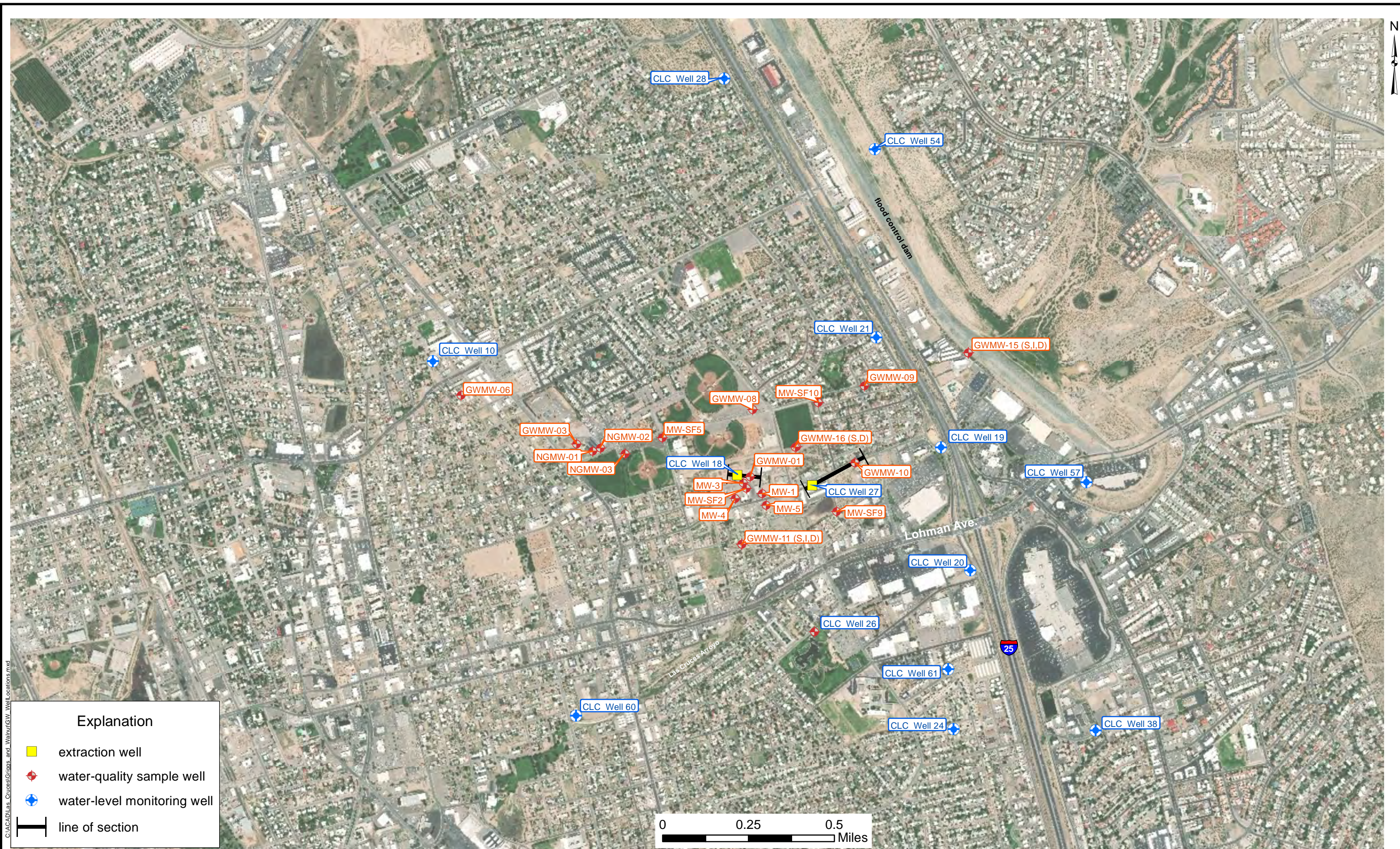
The purpose of the annual performance evaluation of Griggs and Walnut Site groundwater extraction wells is to assess whether operation of the extraction and treatment system is making adequate progress toward achieving the Remedial Action Objectives and Remedial Goals, and to ensure the JSP is removing the mass of contaminants in the aquifer in an effective manner, each year, as part of the Operation and Maintenance reporting requirements specified in the Statement of Work (EPA, 2017). The following recommendations are for the year 2019.

1. Pumping from CLC 61 was stopped March 2019. Reduce pumping from CLC 61 may be possible in the future. Pumping effects from CLC 61 on the Griggs and Walnut plume remediation system were not observed in previous years when CLC 61 was pumping 500 ac-ft/yr or less. Model simulations agree with observation from the monitoring network.
2. Keep pumping CLC 18 as optimized. No modifications to the pumping rate are proposed. Specific conductance and PCE concentration data would suggest the daily pumping duration can be reduced to 4 to 6 hours rather than the current 8 hrs/day.
3. Increase average pumping rate for extraction CLC 27 at a rate of 220 to 240 gpm to optimize for 2019. The existing pump should be able to sustain an average rate of 240 gpm.

8.0 REFERENCES

- [EPA] U.S. Environmental Protection Agency, 2006, Remedial investigation report, Griggs and Walnut Ground Water Plume Superfund Site, Las Cruces, Doña Ana County, New Mexico, EPA ID NM0002271286: prepared by CH2M Hill, Inc.
- [EPA] U.S. Environmental Protection Agency, 2017, Appendix B, Statement of Work Griggs and Walnut Ground Water Plume Superfund Site, Las Cruces, New Mexico: EPA CERCLA Docket No. 06-07-17, 15 p.
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- [JSAI] John Shomaker & Associates, Inc., 2011, Results of back plugging and testing wells No. 18 and No. 27, Griggs and Walnut Superfund Project, City of Las Cruces, New Mexico: consultant's report prepared by JSAI for City of Las Cruces and the Griggs and Walnut Joint Superfund Project, January 7, 2011.
- [JSAI] John Shomaker & Associates, Inc., 2013, First year (May 2012 to May 2013) assessment of the Griggs and Walnut PCE plume capture wells and recommendations for optimizing capture efficiency: consultant's report prepared by JSAI for City of Las Cruces.
- [JSAI] John Shomaker & Associates, Inc., 2015, Recommendations for the optimization of PCE capture from Wells 18 and 27: consultant's technical memorandum prepared by JSAI for City of Las Cruces, January 2015.
- [JSAI] John Shomaker & Associates, Inc., 2016, Assessment of the Griggs and Walnut PCE plume and capture wells 2013 through 2015: consultant's report prepared by JSAI for DBS&A and City of Las Cruces, February 22, 2016.
- [JSAI] John Shomaker & Associates, Inc., 2017, Assessment of the Griggs and Walnut PCE plume and capture wells 2012 through 2016: consultant's report prepared by JSAI for DBS&A and City of Las Cruces, June 6, 2017.
- [JSAI] John Shomaker & Associates, Inc., 2019, Groundwater program evaluation report Griggs and Walnut groundwater plume superfund site, Las Cruces, New Mexico: consultant's report prepared by JSAI for the Griggs and Walnut Joint Superfund Project, April 2019.

ILLUSTRATIONS



C:\ACAD\Las_Cruces\Griggs_and_Walnut\GVW_WellLocations.mxd

Aerial photography source: DigitalGlobe July 2017

Figure 1. Aerial photograph of the Griggs and Walnut Site showing monitoring network, Las Cruces, New Mexico.

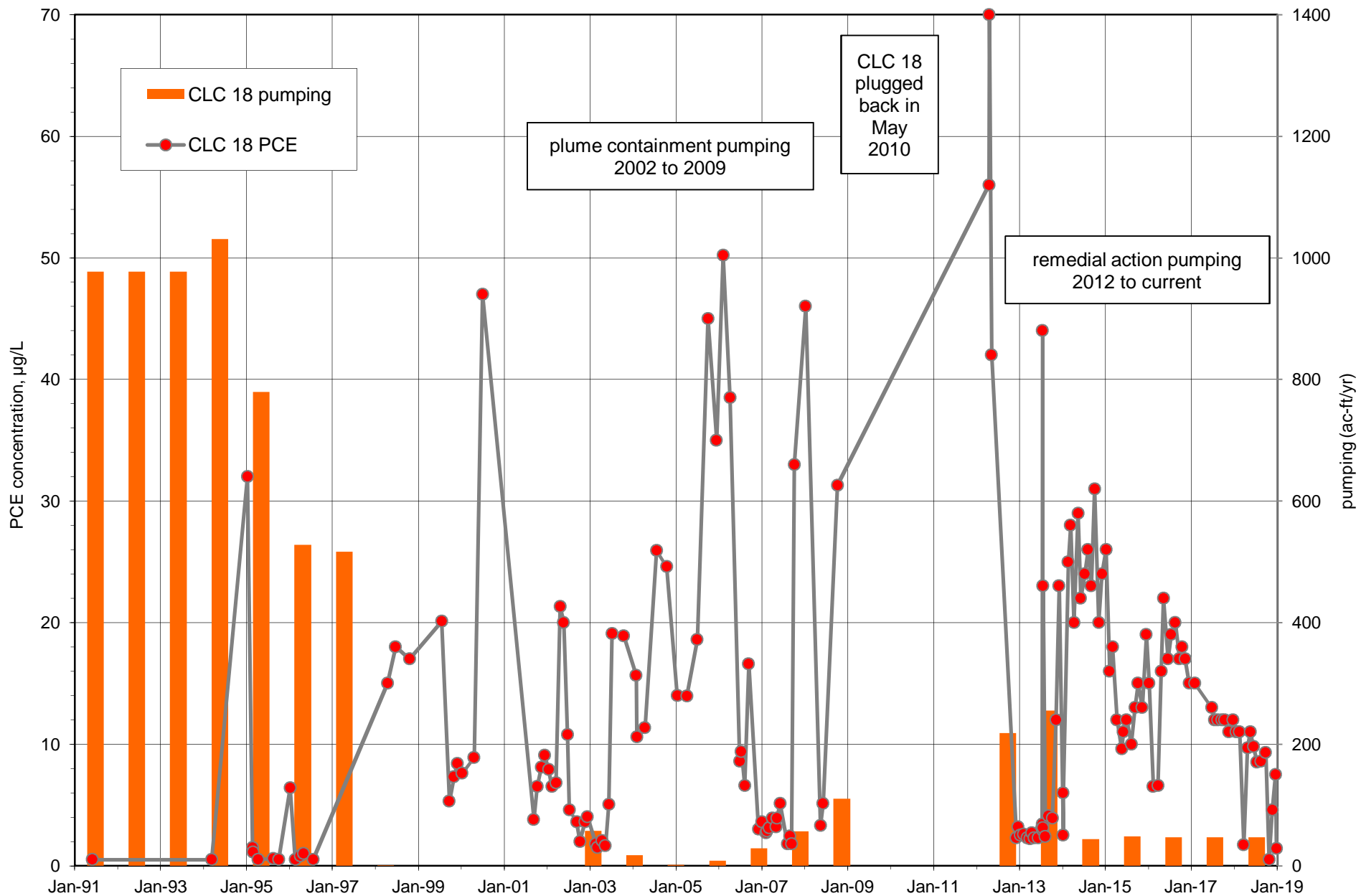


Figure 2. Graph showing PCE concentrations and pumping versus time for CLC 18, Griggs and Walnut Site, Las Cruces, New Mexico.

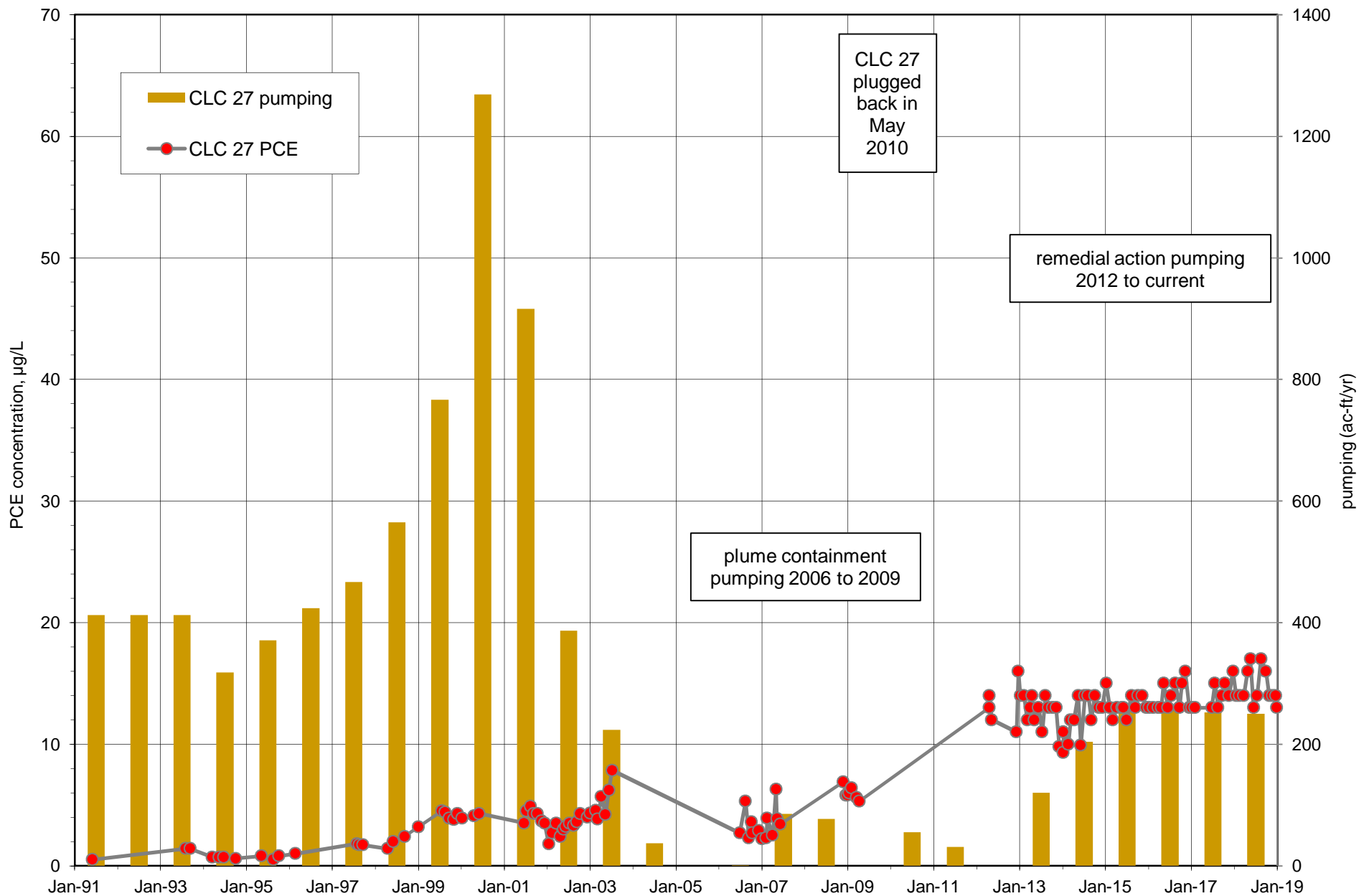


Figure 3. Graph showing PCE concentrations and pumping versus time for CLC 27, Griggs and Walnut Site, Las Cruces, New Mexico.

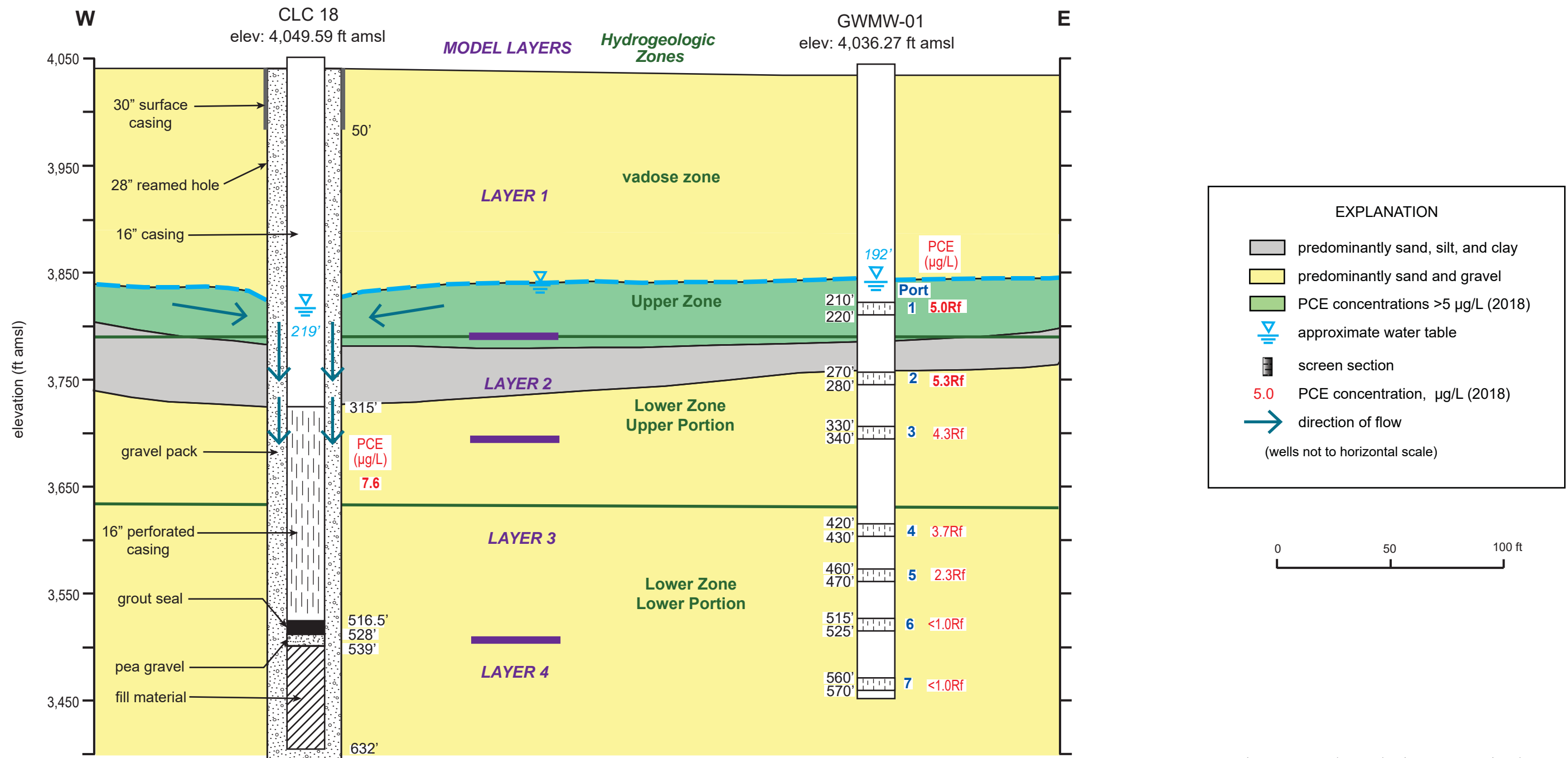
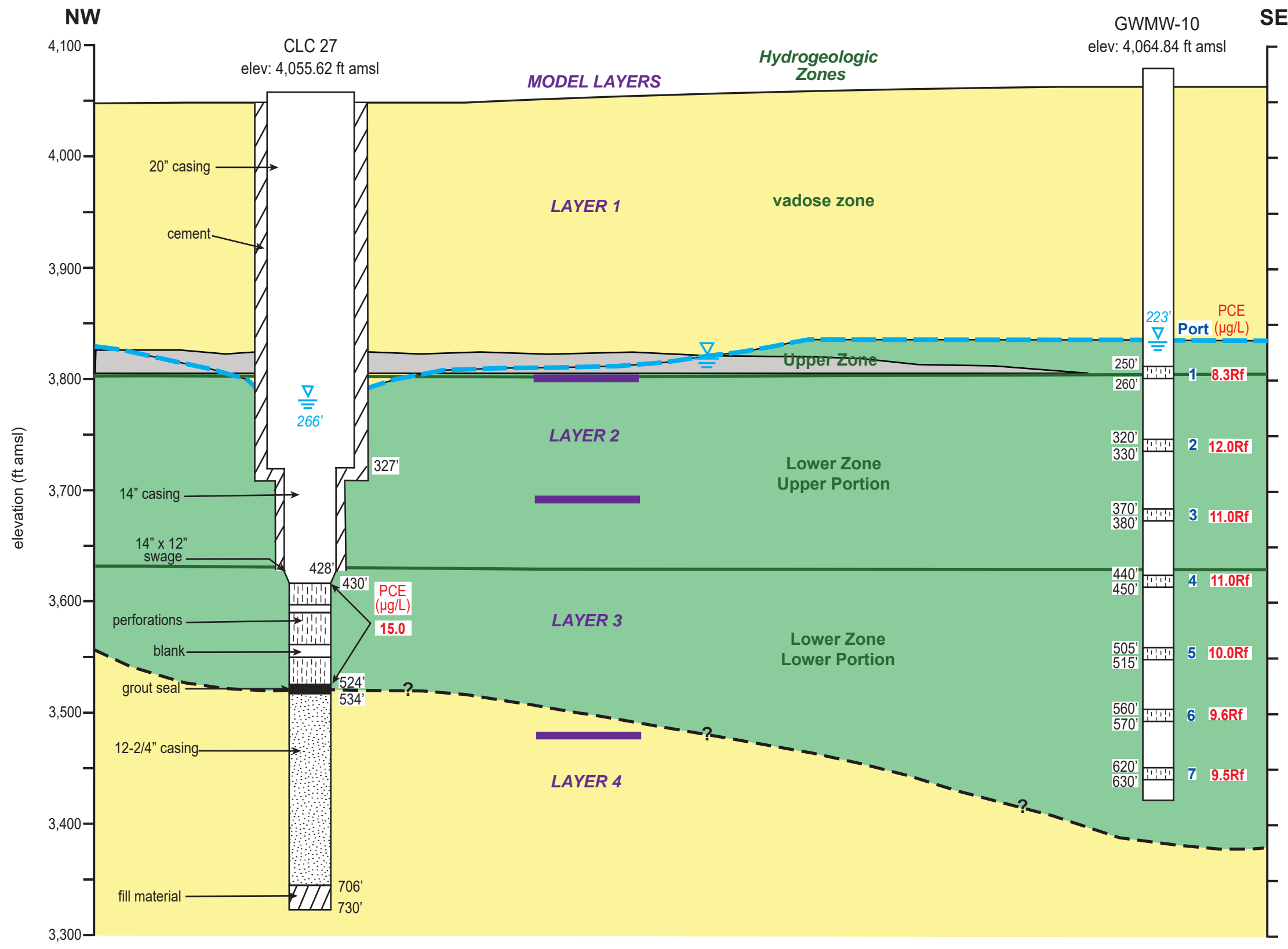


Figure 4. Hydrogeologic cross-section between CLC 18 and GWMW-01 showing well completion details and distribution of winter 2018 PCE concentrations, Griggs and Walnut Site, Las Cruces, New Mexico.



EXPLANATION

- predominantly sand, silt, and clay
- predominantly sand and gravel
- PCE concentrations >5 µg/L (2018)
- approximate water table
- screen section
- 11.0 PCE concentration, µg/L (2018)
- Rf rejected, the data are unusable, FLUTE well liner lacks integrity
- ? - - dashed where inferred, depth unknown due to failure of FLUTE wells

(wells not to horizontal scale)

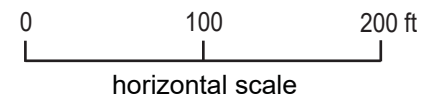


Figure 5. Hydrogeologic cross-section between CLC 27 and GWMW-10 showing well completion details and distribution of winter 2018 PCE concentrations, Griggs and Walnut Site, Las Cruces, New Mexico.

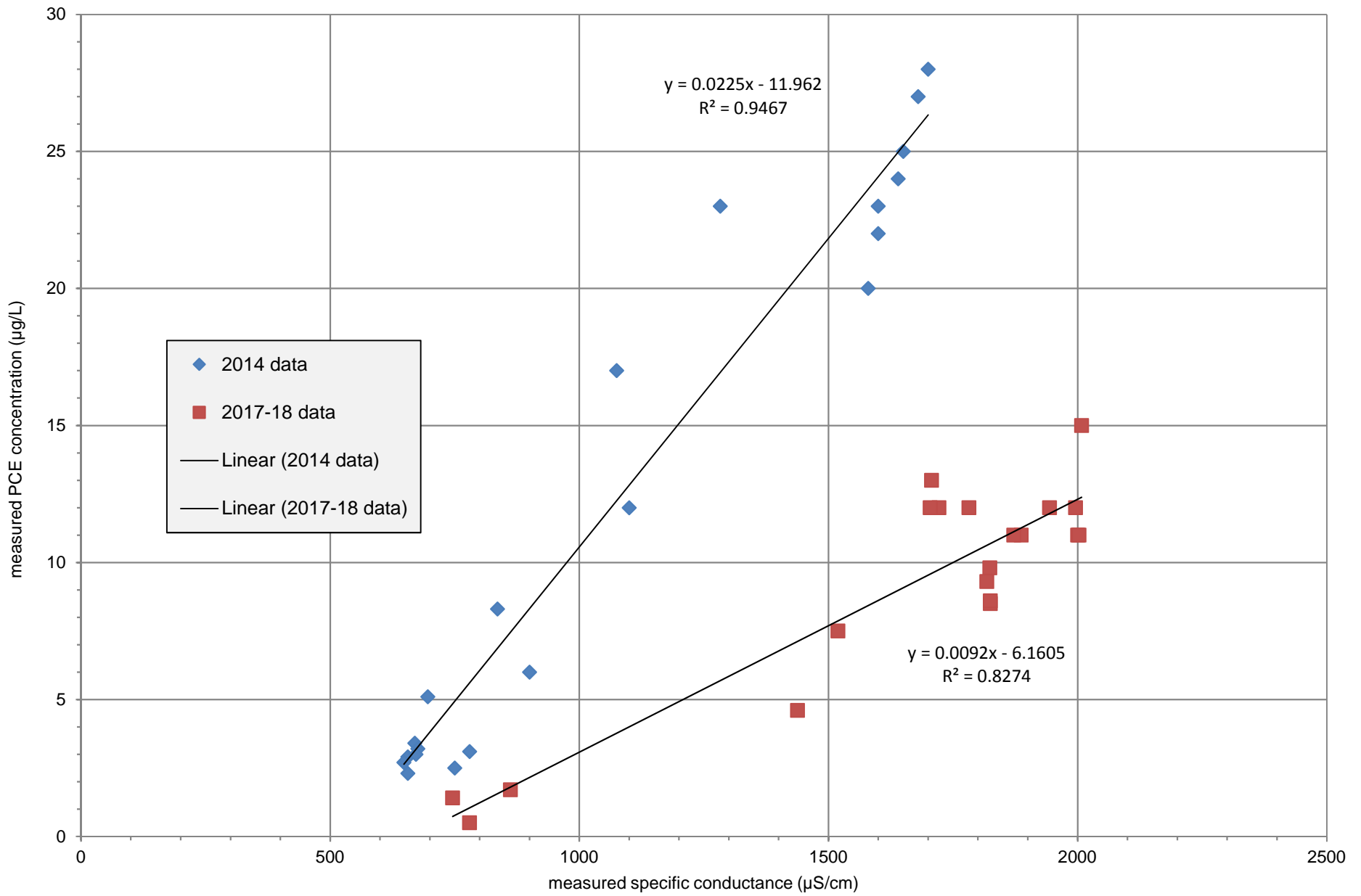


Figure 6. Graph showing correlation between specific conductance and PCE at extraction well CLC 18, Griggs and Walnut Site, Las Cruces, New Mexico.

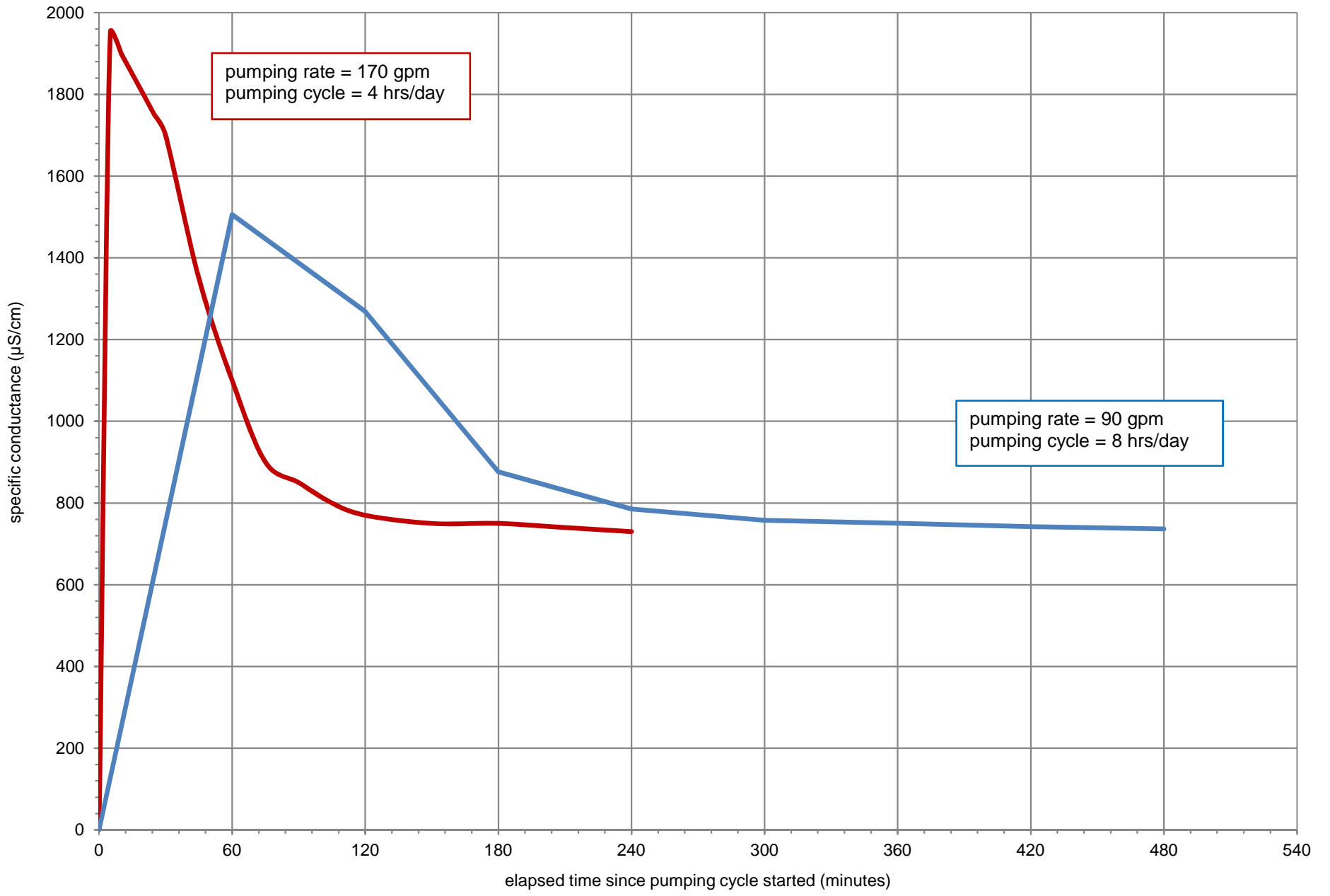


Figure 7. Graph of specific conductance for extraction well CLC 18 pumping cycles, Griggs and Walnut Site, Las Cruces, New Mexico.

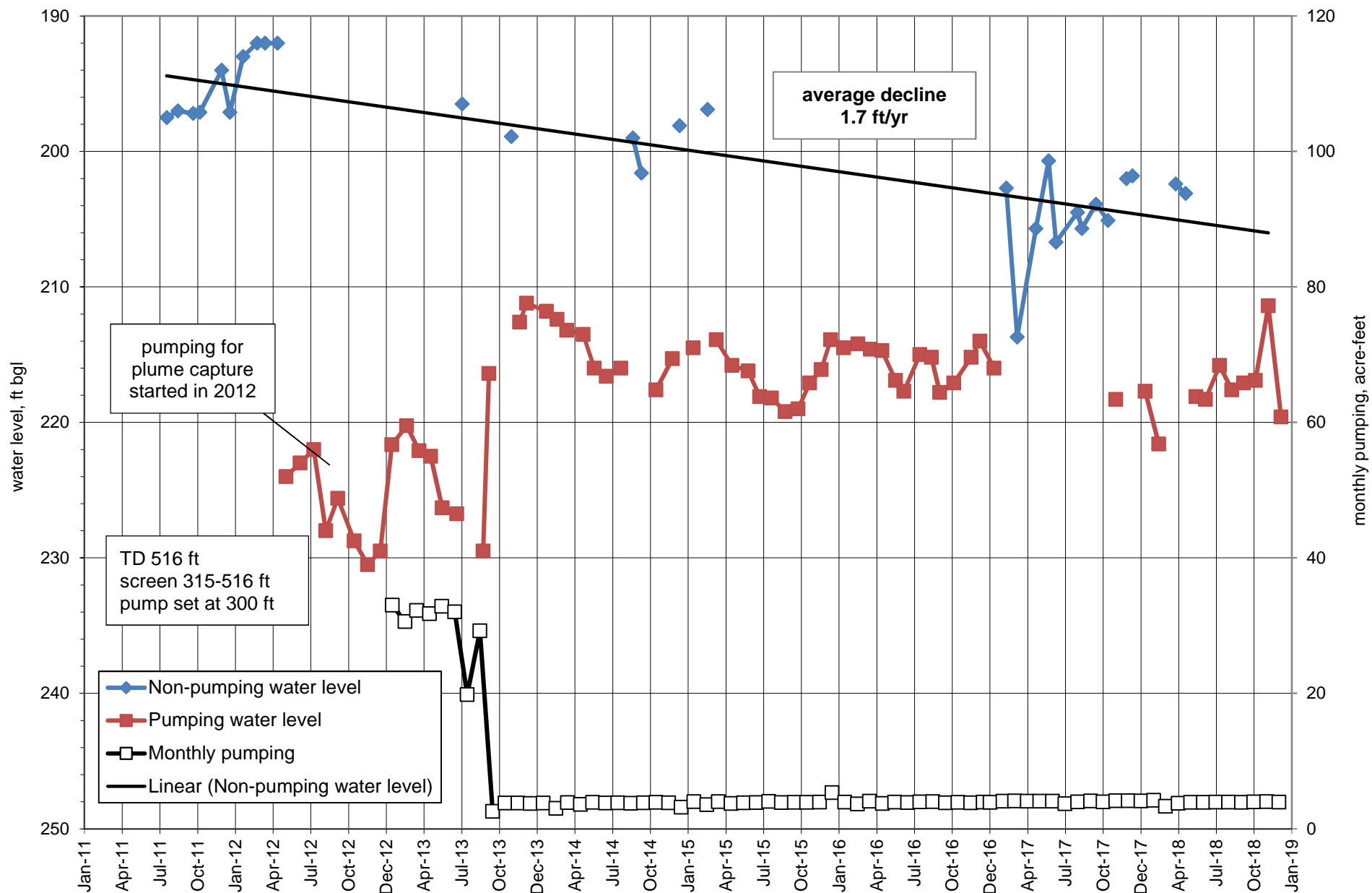


Figure 8. Graph of groundwater-level data and monthly pumping data collected by the City of Las Cruces for CLC18.

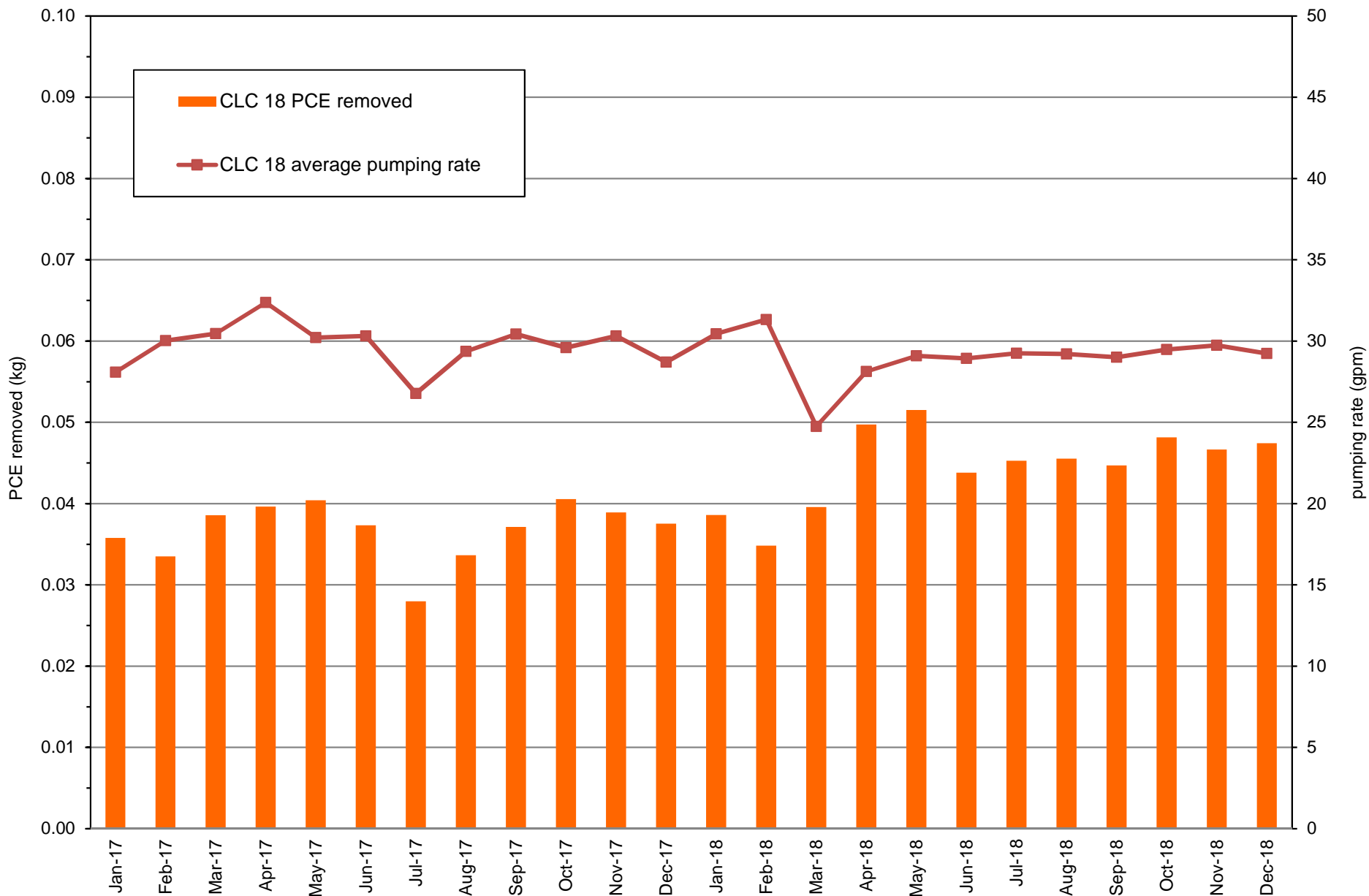


Figure 10. Graph of extraction well CLC 18 monthly pumping from 2017 through 2018 and PCE mass removal rate, Griggs and Walnut Site, Las Cruces, New Mexico.

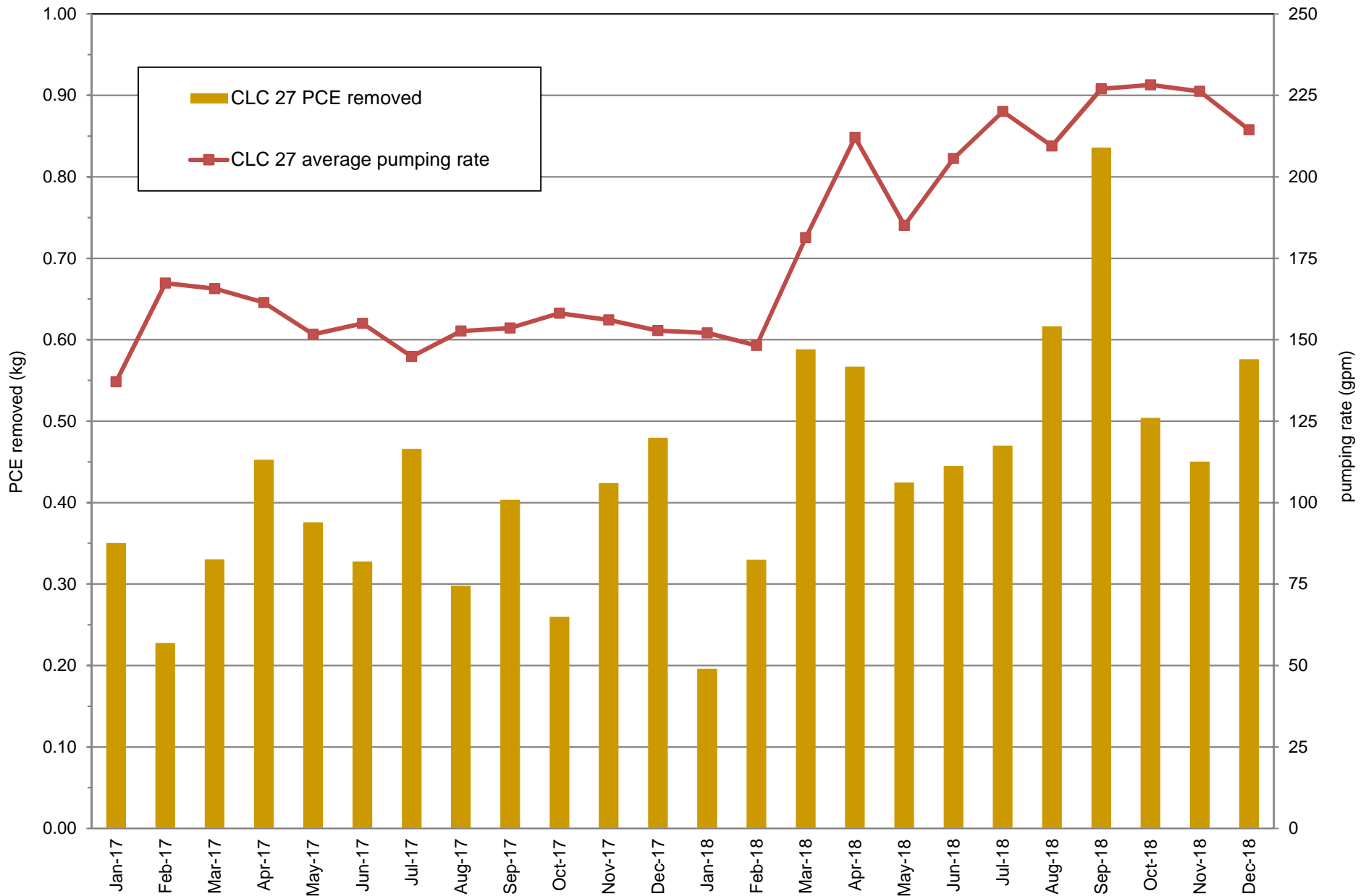


Figure 11. Graph of extraction well CLC 27 monthly pumping from 2017 through 2018 and PCE mass removal rate, Griggs and Walnut Site, Las Cruces, New Mexico.

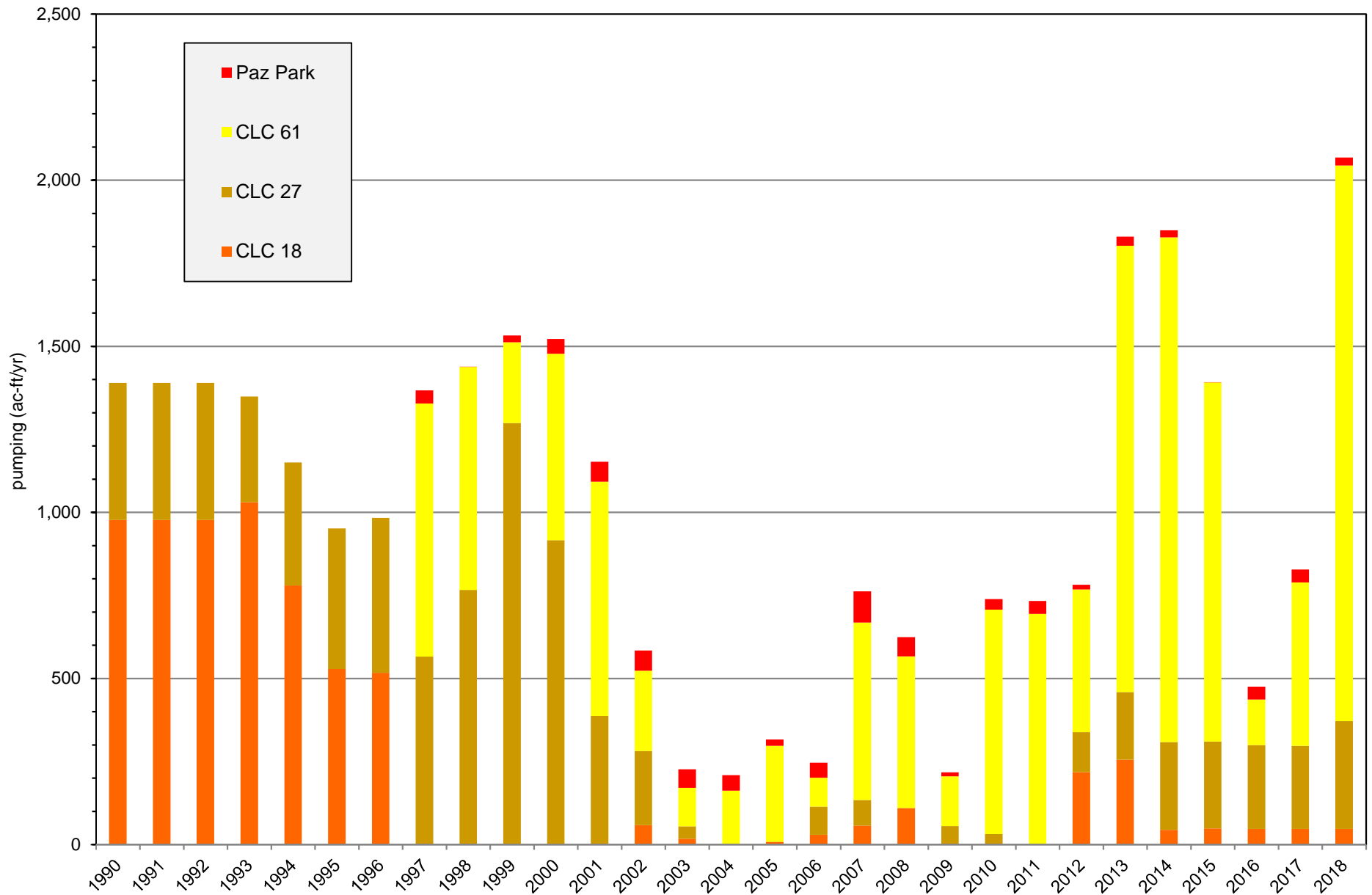
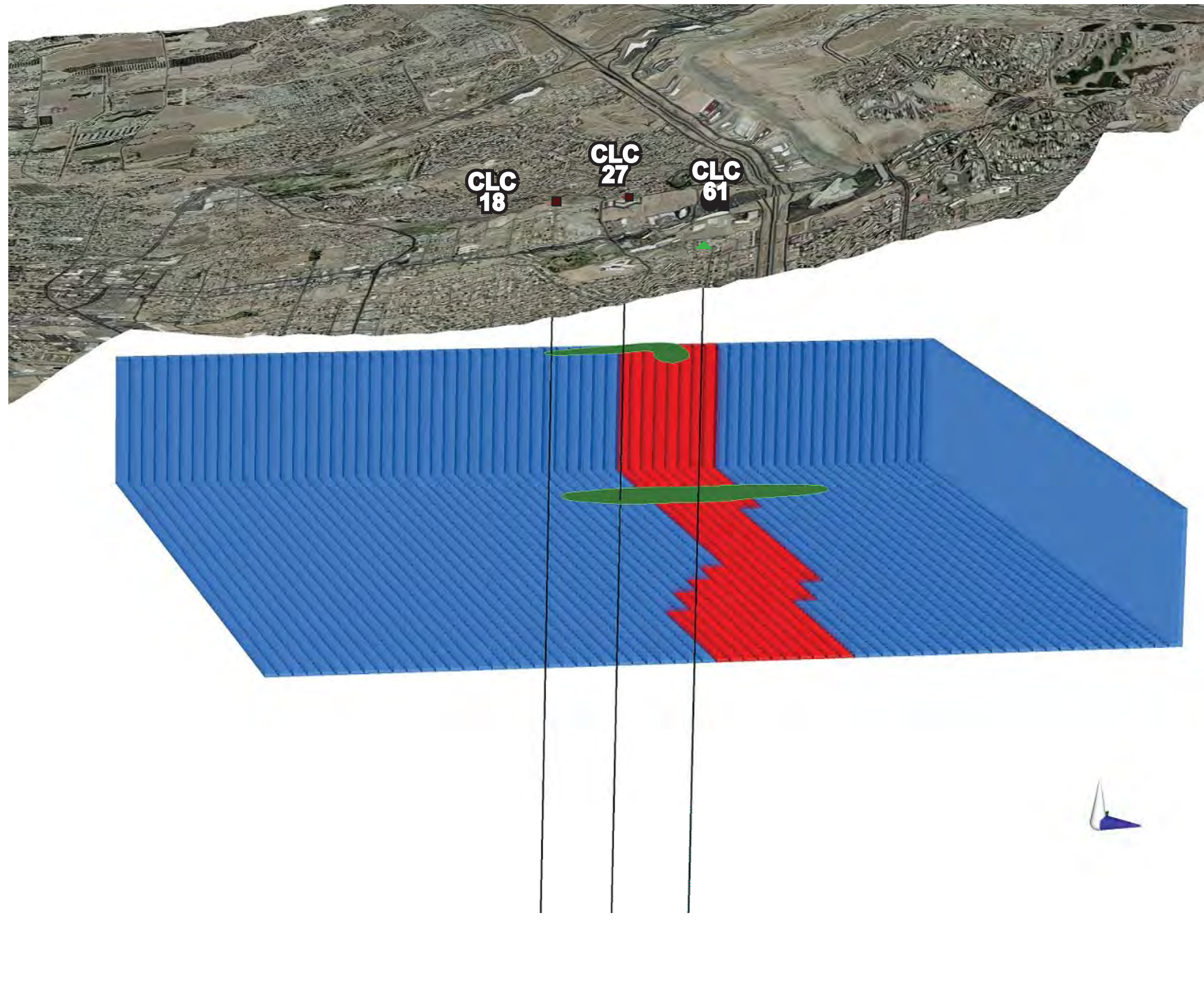


Figure 12. Bar graph of model-simulated annual pumping from 2012 to current, Griggs and Walnut Site, Las Cruces, New Mexico.



- Legend**
- extraction well
 - ▲ pumping well
 - k = 5 ft/day
 - k = 40 ft/day (red)
 - plume (green)

Figure 13. Illustration showing aerial photograph overlay, model Layer 3 hydraulic conductivity zones with 2018 upper and low PCE plume extents, Griggs and Walnut Site, Las Cruces, New Mexico.

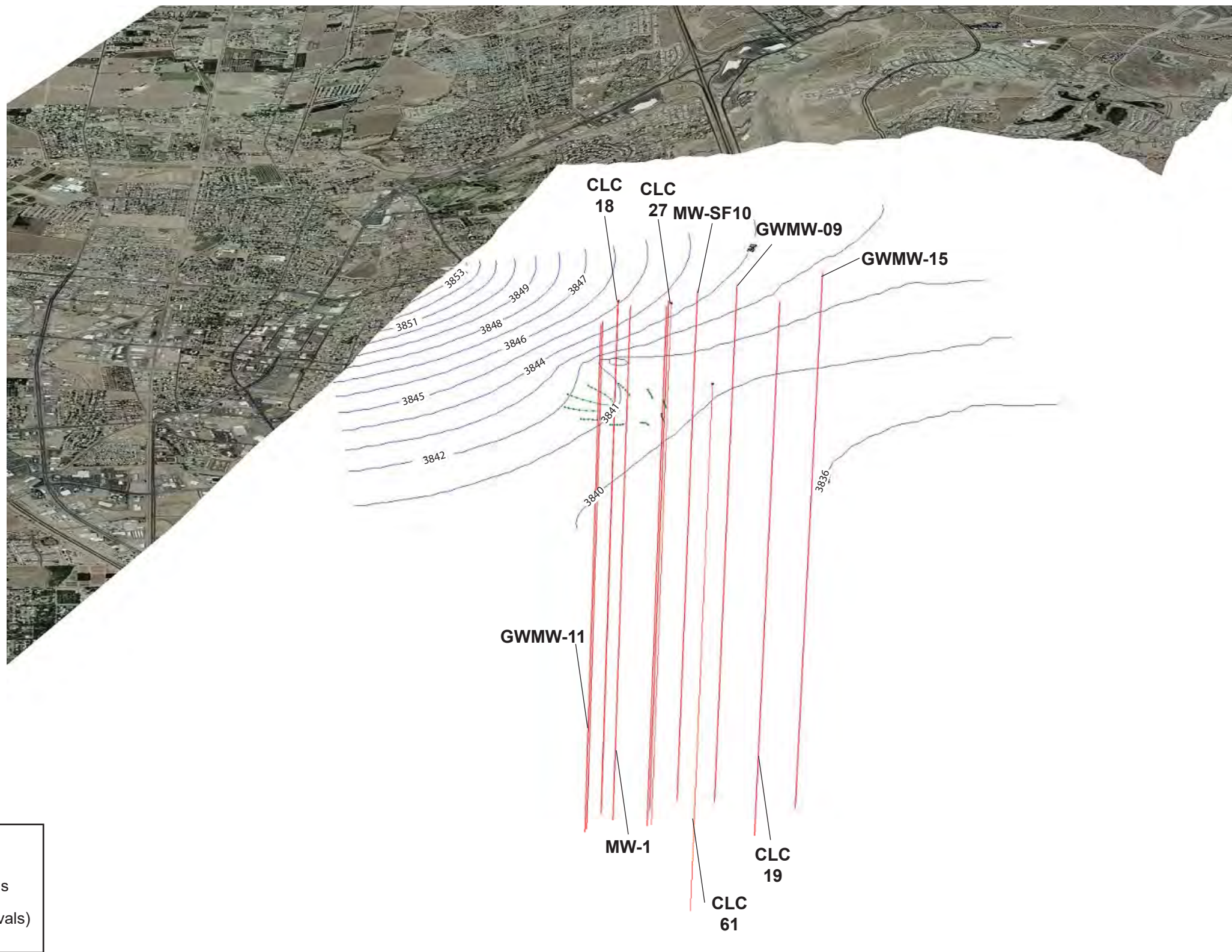


Figure 14. Aerial photograph showing 2018 model-simulated heads in Layer 1, and capture zone for extraction CLC 18 simulated by particle tracking, Griggs and Walnut Site, Las Cruces, New Mexico.

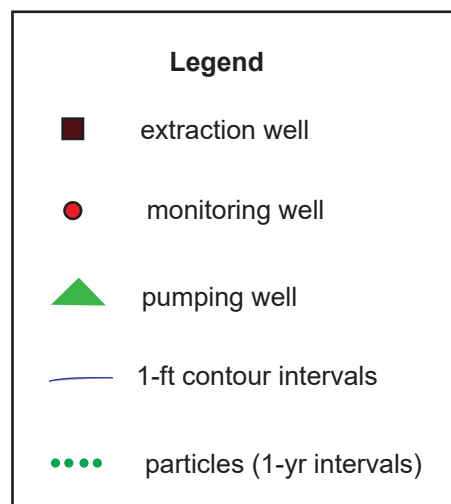
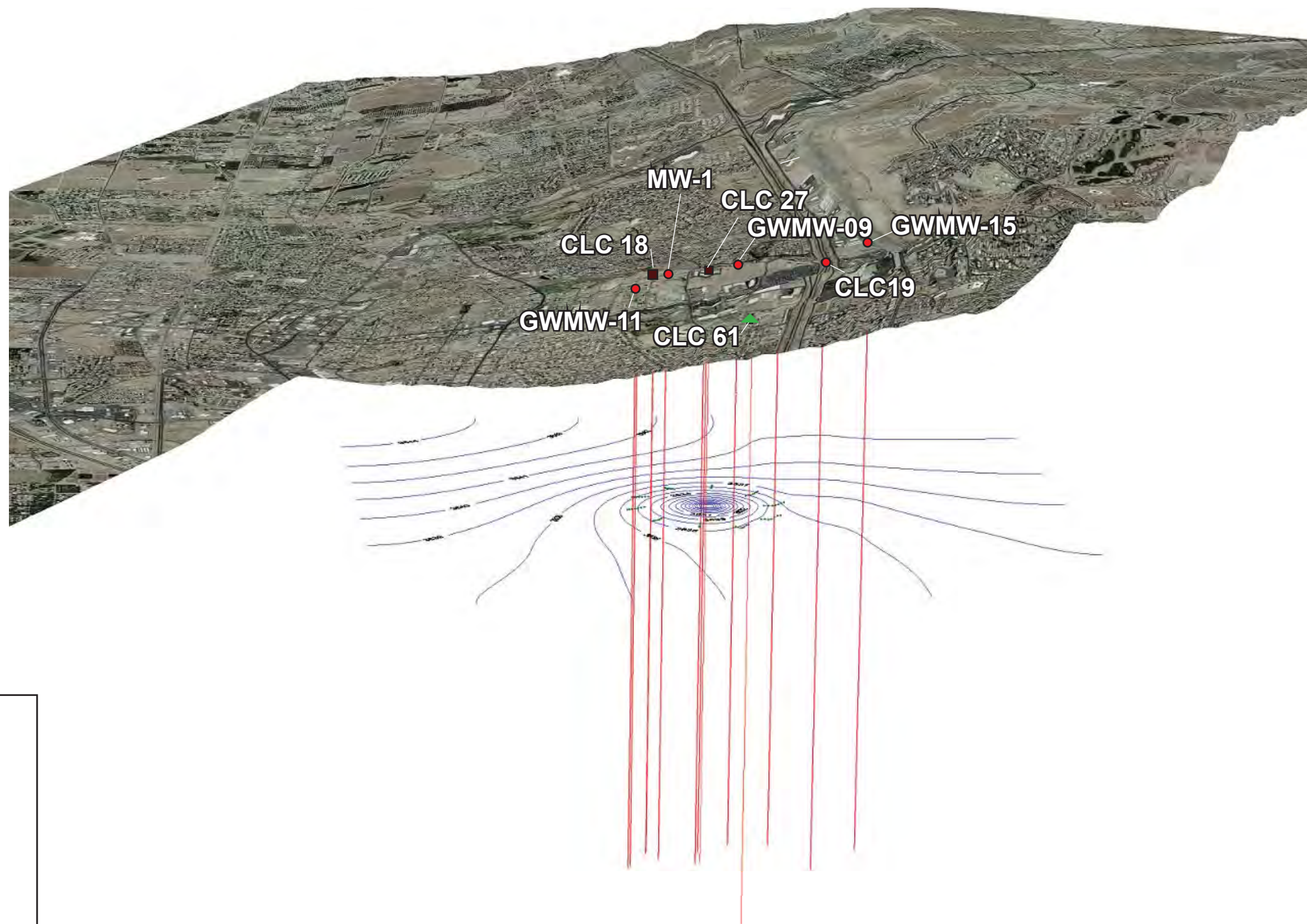


Figure 15. Aerial photograph showing 2018 model-simulated heads in Layer 3, and capture zone for extraction CLC 27 simulated by particle tracking, Griggs and Walnut Site, Las Cruces, New Mexico.

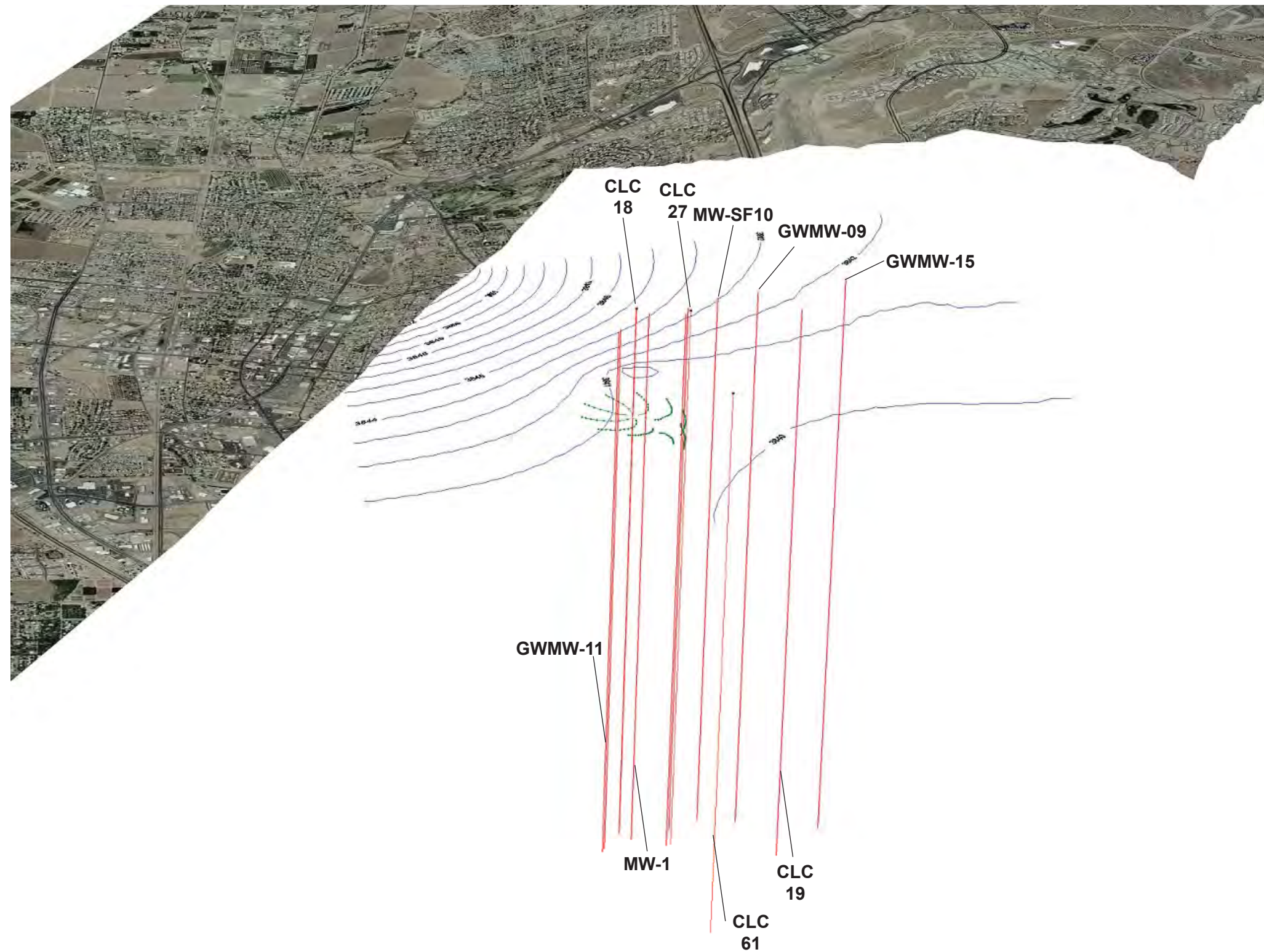


Figure 16. Aerial photograph showing 2026 model-simulated heads in Layer 1, and capture zone for extraction CLC 18 simulated by particle tracking, Griggs and Walnut Site, Las Cruces, New Mexico.

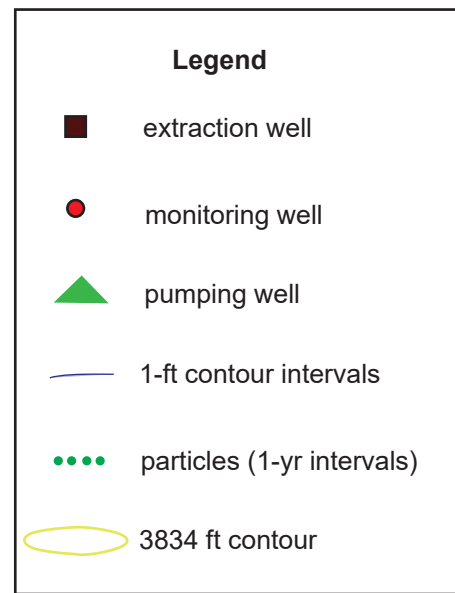
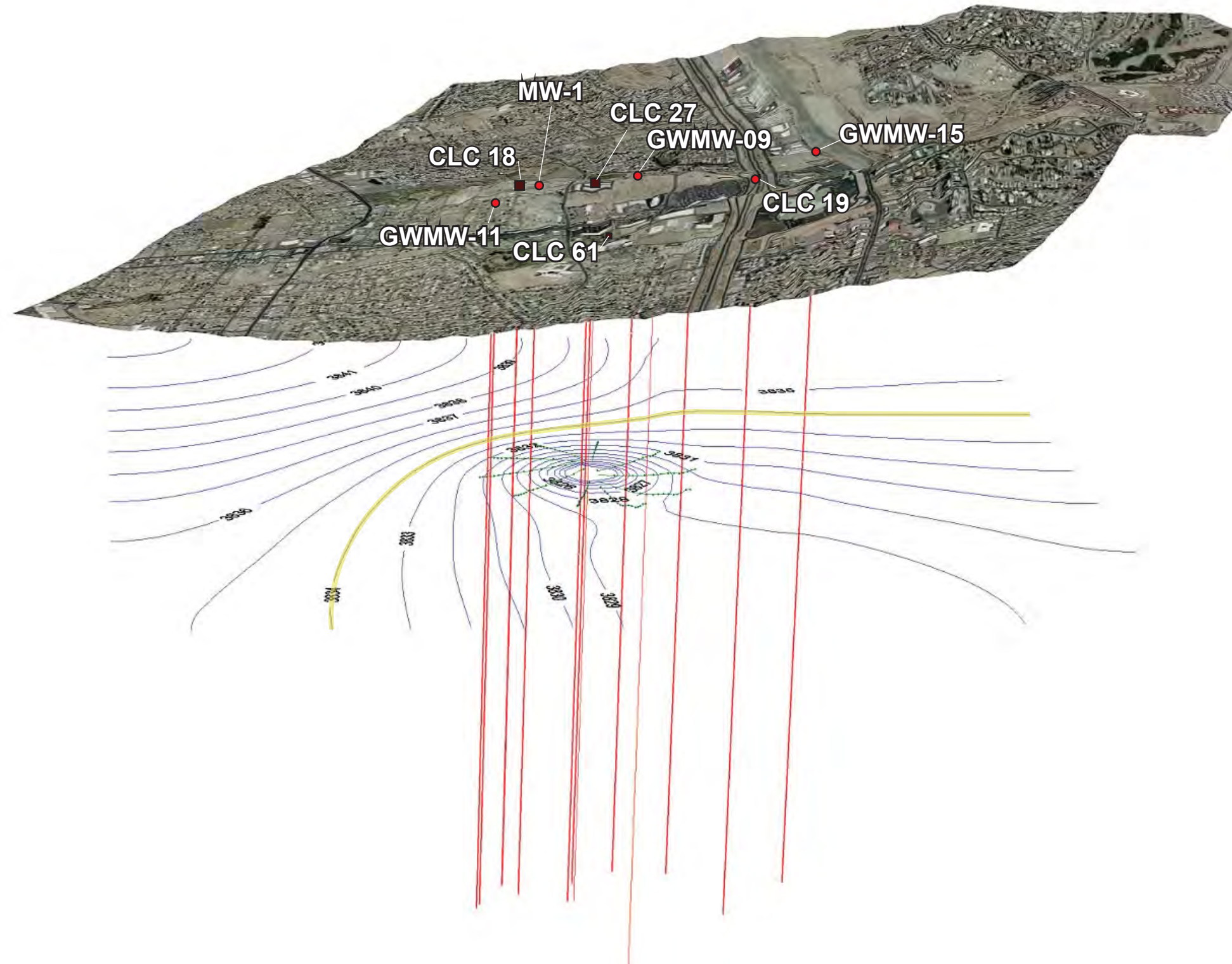


Figure 17. Aerial photograph showing 2026 model-simulated heads in Layer 3 with CLC 61 pumping, and capture zone for extraction CLC 27 simulated by particle tracking, Griggs and Walnut Site, Las Cruces, New Mexico.

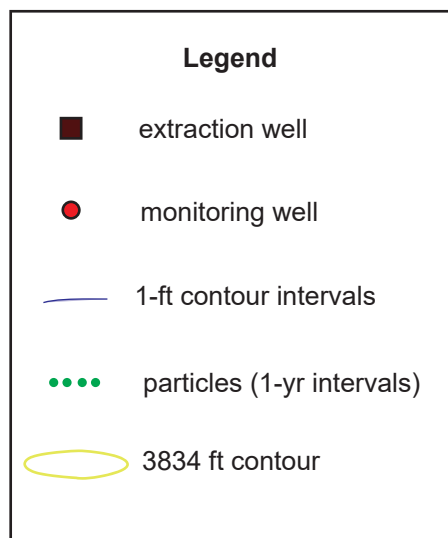
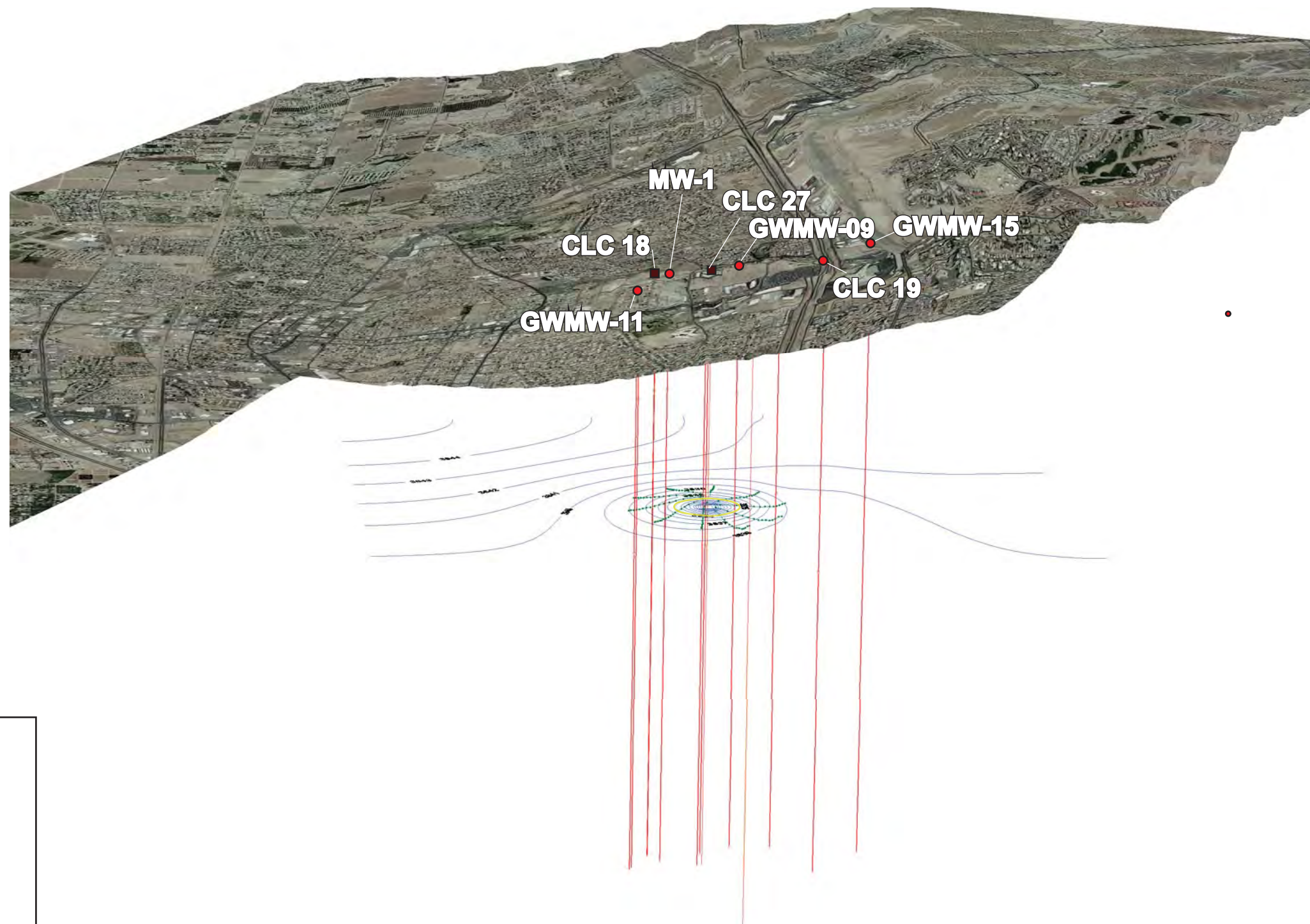


Figure 18. Aerial photograph showing 2026 model-simulated heads in Layer 3 without CLC 61 pumping, and capture zone for extraction CLC 27 simulated by particle tracking, Griggs and Walnut Site, Las Cruces, New Mexico.

Appendix C
Daily Operational Data

Appendix C. Daily Operational Data

Date	Volume Pumped (gallons)		
	CLC 18	CLC 27	Total
1/1/2017	41,456	217,712	259,168
1/2/2017	41,476	217,012	258,489
1/3/2017	41,632	216,478	258,110
1/4/2017	41,632	215,979	257,611
1/5/2017	41,640	215,963	257,603
1/6/2017	41,619	215,578	257,197
1/7/2017	41,602	215,250	256,852
1/8/2017	41,697	215,609	257,305
1/9/2017	41,626	215,462	257,088
1/10/2017	41,639	214,822	256,461
1/11/2017	41,656	215,270	256,925
1/12/2017	41,684	215,100	256,784
1/13/2017	41,634	213,762	255,396
1/14/2017	83,213	208,287	291,500
1/15/2017	41,625	195,791	237,415
1/16/2017	41,655	186,336	227,991
1/17/2017	38,255	216,552	254,807
1/18/2017	41,714	173,422	215,136
1/19/2017	0	106,533	106,533
1/20/2017	41,688	241,660	283,348
1/21/2017	41,623	241,382	283,005
1/22/2017	41,608	241,215	282,823
1/23/2017	41,656	241,253	282,909
1/24/2017	41,642	241,007	282,649
1/25/2017	41,694	241,082	282,776
1/26/2017	41,656	241,311	282,967
1/27/2017	41,588	240,898	282,487
1/28/2017	41,537	240,719	282,256
1/29/2017	41,504	240,544	282,048
1/30/2017	41,474	240,595	282,069
1/31/2017	41,526	240,679	282,205
2/1/2017	41,502	240,389	281,891
2/2/2017	41,412	240,072	281,483
2/3/2017	41,277	240,192	281,469
2/4/2017	41,493	240,241	281,734
2/5/2017	41,394	240,129	281,523
2/6/2017	41,418	240,111	281,529
2/7/2017	41,455	240,001	281,456
2/8/2017	41,452	239,765	281,217
2/9/2017	41,436	239,591	281,027
2/10/2017	42,245	239,408	281,653
2/11/2017	42,269	239,648	281,917
2/12/2017	42,384	239,638	282,022
2/13/2017	42,309	238,510	280,820
2/14/2017	42,395	238,749	281,145
2/15/2017	42,316	238,615	280,931

Appendix C. Daily Operational Data

Date	Volume Pumped (gallons)		
	CLC 18	CLC 27	Total
2/16/2017	42,358	238,668	281,026
2/17/2017	42,349	238,830	281,180
2/18/2017	42,301	238,805	281,106
2/19/2017	42,357	238,519	280,875
2/20/2017	42,292	238,331	280,623
2/21/2017	42,278	238,149	280,427
2/22/2017	42,226	237,964	280,190
2/23/2017	28,585	227,002	255,587
2/24/2017	42,233	240,031	282,263
2/25/2017	42,221	239,729	281,950
2/26/2017	42,192	239,718	281,910
2/27/2017	42,169	239,595	281,764
2/28/2017	42,136	239,464	281,600
3/1/2017	42,153	239,010	281,164
3/2/2017	42,193	231,419	273,612
3/3/2017	42,191	238,829	281,019
3/4/2017	42,215	238,948	281,163
3/5/2017	42,242	238,998	281,240
3/6/2017	42,190	239,040	281,230
3/7/2017	42,168	238,457	280,625
3/8/2017	42,181	238,423	280,604
3/9/2017	42,119	238,435	280,554
3/10/2017	42,126	238,384	280,510
3/11/2017	42,073	238,139	280,211
3/12/2017	42,053	228,420	270,473
3/13/2017	42,091	237,966	280,057
3/14/2017	42,099	237,808	279,907
3/15/2017	42,075	237,432	279,507
3/16/2017	42,064	237,234	279,298
3/17/2017	42,028	237,046	279,074
3/18/2017	42,028	237,038	279,066
3/19/2017	42,096	237,005	279,100
3/20/2017	42,072	236,802	278,874
3/21/2017	42,086	236,785	278,871
3/22/2017	42,103	235,695	277,797
3/23/2017	42,045	235,676	277,722
3/24/2017	41,959	235,457	277,416
3/25/2017	42,040	235,402	277,441
3/26/2017	42,077	235,027	277,104
3/27/2017	41,824	234,814	276,638
3/28/2017	41,839	234,703	276,542
3/29/2017	41,792	233,527	275,319
3/30/2017	41,847	233,849	275,696
3/31/2017	41,844	233,267	275,111
4/1/2017	41,922	232,701	274,623
4/2/2017	41,879	231,975	273,853

Appendix C. Daily Operational Data

Date	Volume Pumped (gallons)		
	CLC 18	CLC 27	Total
4/3/2017	41,862	229,053	270,914
4/4/2017	41,818	226,135	267,953
4/5/2017	41,807	221,964	263,771
4/6/2017	41,792	237,364	279,155
4/7/2017	41,781	155,356	197,137
4/8/2017	39,231	146,368	185,599
4/9/2017	41,779	238,522	280,301
4/10/2017	41,901	238,414	280,315
4/11/2017	41,856	238,137	279,993
4/12/2017	41,850	238,275	280,125
4/13/2017	41,845	238,811	280,656
4/14/2017	41,847	238,832	280,679
4/15/2017	41,935	239,061	280,996
4/16/2017	41,930	237,897	279,827
4/17/2017	41,875	236,878	278,753
4/18/2017	41,844	236,119	277,963
4/19/2017	41,786	235,293	277,078
4/20/2017	19,476	223,424	242,900
4/21/2017	41,771	233,233	275,004
4/22/2017	41,814	232,528	274,342
4/23/2017	41,778	232,885	274,664
4/24/2017	41,817	232,967	274,783
4/25/2017	41,812	235,543	277,355
4/26/2017	41,790	237,361	279,151
4/27/2017	41,847	237,506	279,353
4/28/2017	41,794	237,443	279,237
4/29/2017	41,754	236,952	278,706
4/30/2017	41,841	237,078	278,919
5/1/2017	41,803	233,801	275,604
5/2/2017	41,847	221,196	263,043
5/3/2017	41,833	219,944	261,777
5/4/2017	41,815	219,302	261,117
5/5/2017	41,799	219,262	261,062
5/6/2017	41,803	219,121	260,924
5/7/2017	41,878	219,492	261,370
5/8/2017	41,792	220,664	262,456
5/9/2017	41,826	220,464	262,290
5/10/2017	41,701	219,620	261,321
5/11/2017	41,763	219,321	261,084
5/12/2017	41,774	219,594	261,368
5/13/2017	41,746	218,981	260,728
5/14/2017	41,751	218,245	259,996
5/15/2017	41,705	218,538	260,243
5/16/2017	41,762	217,675	259,436
5/17/2017	41,731	215,193	256,924
5/18/2017	41,724	211,738	253,462

Appendix C. Daily Operational Data

Date	Volume Pumped (gallons)		
	CLC 18	CLC 27	Total
5/19/2017	41,610	213,055	254,665
5/20/2017	41,549	211,541	253,090
5/21/2017	41,685	210,261	251,947
5/22/2017	41,728	210,249	251,977
5/23/2017	41,778	209,878	251,656
5/24/2017	41,698	209,831	251,529
5/25/2017	41,716	212,828	254,544
5/26/2017	41,712	216,413	258,125
5/27/2017	41,710	217,529	259,239
5/28/2017	41,723	221,393	263,116
5/29/2017	41,717	222,779	264,496
5/30/2017	41,754	204,082	245,836
5/31/2017	41,784	140,381	182,165
6/1/2017	41,782	217,417	259,199
6/2/2017	41,742	221,585	263,327
6/3/2017	41,760	222,598	264,357
6/4/2017	41,730	222,577	264,307
6/5/2017	41,408	223,110	264,517
6/6/2017	41,344	221,748	263,092
6/7/2017	41,260	215,355	256,615
6/8/2017	41,275	213,357	254,633
6/9/2017	42,088	211,168	253,255
6/10/2017	42,154	209,456	251,611
6/11/2017	42,183	209,034	251,217
6/12/2017	42,185	207,768	249,952
6/13/2017	42,167	210,164	252,331
6/14/2017	42,165	211,963	254,128
6/15/2017	42,196	211,615	253,811
6/16/2017	42,101	208,801	250,902
6/17/2017	42,190	208,223	250,413
6/18/2017	42,200	208,295	250,495
6/19/2017	42,113	220,011	262,124
6/20/2017	42,238	228,216	270,453
6/21/2017	42,096	235,279	277,375
6/22/2017	42,097	234,277	276,374
6/23/2017	42,056	233,673	275,729
6/24/2017	42,107	232,125	274,232
6/25/2017	42,092	220,867	262,959
6/26/2017	42,113	223,598	265,711
6/27/2017	42,170	225,201	267,370
6/28/2017	42,156	225,064	267,220
6/29/2017	42,119	224,226	266,345
6/30/2017	42,125	223,497	265,623
7/1/2017	42,107	217,966	260,073
7/2/2017	42,189	219,792	261,981
7/3/2017	42,162	220,974	263,136

Appendix C. Daily Operational Data

Date	Volume Pumped (gallons)		
	CLC 18	CLC 27	Total
7/4/2017	42,118	221,931	264,049
7/5/2017	42,077	223,238	265,315
7/6/2017	42,086	222,166	264,252
7/7/2017	41,996	221,928	263,924
7/8/2017	41,968	221,249	263,218
7/9/2017	42,017	221,175	263,192
7/10/2017	41,984	220,204	262,188
7/11/2017	41,953	216,782	258,735
7/12/2017	42,089	210,788	252,877
7/13/2017	42,207	209,729	251,936
7/14/2017	42,165	212,074	254,240
7/15/2017	42,210	214,436	256,646
7/16/2017	42,195	220,810	263,005
7/17/2017	42,219	220,062	262,280
7/18/2017	12,234	212,688	224,923
7/19/2017	43,802	236,266	280,068
7/20/2017	42,237	236,271	278,508
7/21/2017	42,237	235,945	278,182
7/22/2017	42,210	229,968	272,178
7/24/2017	42,225	216,137	258,362
7/25/2017	42,252	212,637	254,888
7/26/2017	42,246	212,824	255,070
7/27/2017	42,305	212,648	254,953
7/28/2017	42,276	211,903	254,179
7/29/2017	42,262	212,422	254,685
7/30/2017	42,292	214,068	256,360
7/31/2017	42,317	220,157	262,474
8/1/2017	42,335	223,134	265,470
8/2/2017	42,318	215,373	257,691
8/3/2017	42,294	216,219	258,513
8/4/2017	42,323	216,521	258,844
8/5/2017	42,241	217,409	259,649
8/6/2017	42,225	217,703	259,928
8/7/2017	42,189	216,584	258,773
8/8/2017	42,191	215,498	257,689
8/9/2017	42,167	214,063	256,230
8/10/2017	42,201	223,660	265,861
8/11/2017	42,047	230,452	272,499
8/12/2017	42,094	228,419	270,513
8/13/2017	42,145	227,591	269,736
8/14/2017	42,188	223,166	265,354
8/15/2017	42,224	222,414	264,639
8/16/2017	42,133	219,828	261,960
8/17/2017	42,141	218,403	260,544
8/18/2017	42,148	217,699	259,847
8/19/2017	42,122	215,814	257,936

Appendix C. Daily Operational Data

Date	Volume Pumped (gallons)		
	CLC 18	CLC 27	Total
8/20/2017	42,145	214,161	256,306
8/21/2017	42,195	213,377	255,572
8/22/2017	42,219	212,392	254,611
8/23/2017	42,174	211,133	253,307
8/24/2017	42,209	210,670	252,879
8/25/2017	42,198	219,201	261,399
8/26/2017	42,215	223,756	265,972
8/27/2017	42,212	222,629	264,841
8/28/2017	42,233	217,466	259,699
8/29/2017	42,245	206,313	248,559
8/30/2017	42,219	204,299	246,519
8/31/2017	42,248	202,720	244,968
9/1/2017	42,216	204,142	246,358
9/2/2017	42,240	203,310	245,549
9/3/2017	42,217	206,442	248,659
9/4/2017	42,136	215,677	257,814
9/5/2017	42,247	221,631	263,878
9/6/2017	42,190	221,989	264,178
9/7/2017	42,218	222,802	265,019
9/8/2017	42,161	220,083	262,244
9/9/2017	42,198	219,802	262,000
9/10/2017	42,150	219,201	261,351
9/11/2017	42,207	218,181	260,389
9/12/2017	42,236	215,903	258,139
9/13/2017	42,218	211,295	253,514
9/14/2017	42,227	210,675	252,902
9/15/2017	42,234	208,659	250,893
9/16/2017	42,266	209,454	251,720
9/17/2017	42,259	210,103	252,361
9/18/2017	42,275	205,086	247,361
9/19/2017	42,304	207,281	249,585
9/20/2017	42,233	208,199	250,432
9/21/2017	42,265	208,543	250,808
9/22/2017	42,197	226,030	268,227
9/23/2017	42,201	232,345	274,546
9/24/2017	42,201	231,443	273,644
9/25/2017	42,250	229,941	272,191
9/26/2017	42,217	229,488	271,706
9/27/2017	42,235	228,904	271,139
9/28/2017	42,217	228,585	270,802
9/29/2017	42,269	228,823	271,092
9/30/2017	42,271	221,024	263,296
10/1/2017	42,276	218,157	260,433
10/2/2017	42,312	217,214	259,526
10/3/2017	42,357	216,165	258,522
10/4/2017	42,358	227,017	269,375

Appendix C. Daily Operational Data

Date	Volume Pumped (gallons)		
	CLC 18	CLC 27	Total
10/5/2017	42,313	217,475	259,789
10/6/2017	42,371	208,147	250,519
10/7/2017	42,377	216,098	258,475
10/8/2017	42,338	221,967	264,305
10/9/2017	42,360	223,018	265,378
10/10/2017	42,320	219,228	261,548
10/11/2017	42,329	215,430	257,760
10/12/2017	42,306	217,623	259,929
10/13/2017	42,279	215,823	258,102
10/14/2017	42,281	232,643	274,924
10/15/2017	42,309	232,394	274,703
10/16/2017	42,239	232,515	274,755
10/17/2017	42,237	232,631	274,868
10/18/2017	42,270	224,629	266,899
10/19/2017	42,282	213,359	255,642
10/20/2017	42,212	212,436	254,648
10/21/2017	42,307	213,169	255,476
10/22/2017	42,323	212,886	255,209
10/23/2017	42,311	211,393	253,704
10/24/2017	42,377	215,743	258,120
10/25/2017	42,303	222,026	264,329
10/26/2017	0	211,164	211,164
10/27/2017	42,356	237,457	279,812
10/28/2017	42,367	237,420	279,786
10/29/2017	42,421	237,426	279,847
10/30/2017	42,416	237,447	279,864
10/31/2017	42,415	237,264	279,679
11/1/2017	42,464	237,188	279,653
11/2/2017	42,461	237,094	279,555
11/3/2017	42,459	237,106	279,565
11/4/2017	42,498	237,073	279,571
11/5/2017	42,506	246,835	289,341
11/6/2017	42,419	234,716	277,134
11/7/2017	42,474	228,886	271,360
11/8/2017	42,458	228,252	270,710
11/9/2017	42,461	225,558	268,019
11/10/2017	42,511	219,909	262,419
11/11/2017	42,493	221,706	264,198
11/12/2017	42,554	222,042	264,596
11/13/2017	42,436	222,312	264,748
11/14/2017	27,458	222,099	249,557
11/15/2017	42,511	220,476	262,987
11/16/2017	42,518	220,408	262,926
11/17/2017	42,477	220,101	262,578
11/18/2017	42,478	219,778	262,256
11/19/2017	42,498	219,678	262,176

Appendix C. Daily Operational Data

Date	Volume Pumped (gallons)		
	CLC 18	CLC 27	Total
11/20/2017	42,516	219,455	261,971
11/21/2017	42,523	216,539	259,062
11/22/2017	42,494	218,680	261,174
11/23/2017	42,534	218,424	260,957
11/24/2017	42,479	217,420	259,899
11/25/2017	42,470	216,224	258,694
11/26/2017	42,517	214,264	256,780
11/27/2017	42,480	213,177	255,657
11/28/2017	42,522	212,654	255,176
11/29/2017	42,513	211,963	254,476
11/30/2017	42,486	211,590	254,076
12/1/2017	42,501	211,410	253,910
12/2/2017	42,461	213,709	256,170
12/3/2017	42,412	214,892	257,304
12/4/2017	42,491	216,086	258,577
12/5/2017	42,445	215,192	257,637
12/6/2017	42,417	214,456	256,873
12/7/2017	27,905	208,814	236,719
12/8/2017	42,468	208,127	250,595
12/9/2017	42,452	208,907	251,358
12/10/2017	42,424	211,799	254,223
12/11/2017	42,428	217,082	259,510
12/12/2017	42,385	216,968	259,353
12/13/2017	42,447	216,743	259,190
12/14/2017	42,403	216,367	258,770
12/15/2017	42,481	216,155	258,636
12/16/2017	42,430	215,747	258,177
12/17/2017	42,329	217,258	259,587
12/18/2017	42,463	217,174	259,638
12/19/2017	7,855	185,604	193,460
12/20/2017	42,471	231,207	273,678
12/21/2017	42,472	231,245	273,717
12/22/2017	42,499	231,470	273,968
12/23/2017	42,477	209,896	252,372
12/24/2017	8,331	170,157	178,487
12/25/2017	42,605	232,612	275,216
12/26/2017	42,283	232,285	274,568
12/27/2017	42,359	232,157	274,516
12/28/2017	42,445	232,340	274,785
12/29/2017	42,455	226,387	268,843
12/30/2017	42,519	219,857	262,376
12/31/2017	42,798	218,664	261,462
1/1/2018	42,828	218,764	261,592
1/2/2018	42,766	218,511	261,278
1/3/2018	42,816	217,275	260,092
1/4/2018	42,900	209,139	252,039

Appendix C. Daily Operational Data

Date	Volume Pumped (gallons)		
	CLC 18	CLC 27	Total
1/5/2018	42,837	210,021	252,857
1/6/2018	42,819	207,865	250,683
1/7/2018	42,793	208,804	251,597
1/8/2018	42,759	209,494	252,253
1/9/2018	0	183,135	183,135
1/10/2018	42,777	231,635	274,412
1/11/2018	42,819	231,663	274,482
1/12/2018	42,772	231,258	274,030
1/13/2018	42,808	230,678	273,486
1/14/2018	42,856	230,962	273,819
1/15/2018	42,812	230,648	273,460
1/16/2018	42,839	230,868	273,707
1/17/2018	42,815	225,397	268,212
1/18/2018	42,816	219,505	262,321
1/19/2018	42,796	221,700	264,496
1/20/2018	42,802	219,162	261,964
1/21/2018	42,763	217,877	260,640
1/22/2018	42,780	217,897	260,678
1/23/2018	42,745	217,941	260,686
1/24/2018	42,747	217,446	260,193
1/25/2018	42,778	217,682	260,460
1/26/2018	42,768	216,936	259,703
1/27/2018	42,718	216,336	259,054
1/28/2018	42,722	215,891	258,612
1/29/2018	42,711	215,489	258,200
1/30/2018	42,731	214,899	257,629
1/31/2018	42,716	214,128	256,844
2/1/2018	42,779	213,581	256,360
2/2/2018	42,653	213,215	255,868
2/3/2018	42,682	213,126	255,809
2/4/2018	42,681	213,153	255,834
2/5/2018	42,661	213,267	255,928
2/6/2018	42,675	213,584	256,260
2/7/2018	42,698	213,282	255,980
2/8/2018	42,704	213,385	256,089
2/9/2018	42,589	212,733	255,322
2/10/2018	42,504	214,219	256,723
2/11/2018	42,576	216,119	258,695
2/12/2018	42,592	215,615	258,207
2/13/2018	42,545	214,828	257,374
2/14/2018	42,578	214,656	257,234
2/15/2018	42,254	214,279	256,534
2/16/2018	42,207	212,564	254,771
2/17/2018	42,156	212,022	254,178
2/18/2018	42,145	211,849	253,994
2/19/2018	42,190	211,898	254,088

Appendix C. Daily Operational Data

Date	Volume Pumped (gallons)		
	CLC 18	CLC 27	Total
2/20/2018	42,203	211,685	253,888
2/21/2018	42,194	211,531	253,725
2/22/2018	42,185	211,188	253,372
2/23/2018	42,215	211,218	253,434
2/24/2018	42,198	211,812	254,010
2/25/2018	42,165	211,278	253,443
2/26/2018	42,076	210,859	252,935
2/27/2018	42,122	211,036	253,158
2/28/2018	42,068	211,099	253,167
3/1/2018	42,081	210,653	252,734
3/2/2018	42,030	210,028	252,057
3/3/2018	41,992	210,601	252,593
3/4/2018	42,078	211,400	253,479
3/5/2018	0	63,103	63,103
3/6/2018	0	0	0
3/7/2018	0	-13	-13
3/8/2018	-13	-13	-27
3/9/2018	1,539	218,430	219,969
3/10/2018	487	377,343	377,829
3/11/2018	21,489	360,918	382,408
3/12/2018	21,426	376,170	397,596
3/13/2018	21,481	342,860	364,341
3/14/2018	43,022	322,661	365,683
3/15/2018	43,081	317,292	360,373
3/16/2018	43,084	315,029	358,113
3/17/2018	43,111	314,295	357,406
3/18/2018	43,163	290,967	334,130
3/19/2018	43,112	313,431	356,543
3/20/2018	44,131	277,091	321,222
3/21/2018	43,095	297,784	340,878
3/22/2018	43,016	316,694	359,710
3/23/2018	43,329	204,736	248,064
3/24/2018	43,100	314,743	357,843
3/25/2018	43,066	314,498	357,564
3/26/2018	43,063	314,383	357,447
3/27/2018	43,049	314,007	357,056
3/28/2018	42,993	312,526	355,519
3/29/2018	42,980	311,822	354,803
3/30/2018	42,919	311,635	354,554
3/31/2018	42,928	311,627	354,555
4/1/2018	42,974	311,363	354,338
4/2/2018	42,968	311,268	354,236
4/3/2018	40,251	297,729	337,980
4/4/2018	42,847	311,484	354,331
4/5/2018	42,811	311,104	353,914
4/6/2018	42,816	311,030	353,845

Appendix C. Daily Operational Data

Date	Volume Pumped (gallons)		
	CLC 18	CLC 27	Total
4/7/2018	42,859	310,991	353,850
4/8/2018	42,878	310,904	353,782
4/9/2018	42,842	310,561	353,403
4/10/2018	42,768	310,363	353,131
4/11/2018	42,786	310,418	353,204
4/12/2018	42,759	310,424	353,183
4/13/2018	42,768	309,969	352,737
4/14/2018	42,668	308,627	351,294
4/15/2018	42,698	308,432	351,131
4/16/2018	42,738	308,828	351,567
4/17/2018	42,734	308,389	351,123
4/18/2018	42,684	305,906	348,591
4/19/2018	42,689	305,521	348,210
4/20/2018	42,728	305,454	348,181
4/21/2018	42,615	305,179	347,794
4/22/2018	42,678	305,185	347,863
4/23/2018	42,681	305,182	347,863
4/24/2018	32,977	283,818	316,795
4/25/2018	42,664	299,862	342,526
4/26/2018	42,628	299,624	342,251
4/27/2018	42,635	293,925	336,560
4/28/2018	42,593	289,169	331,762
4/29/2018	42,497	288,576	331,073
4/30/2018	42,515	288,683	331,198
5/1/2018	32,547	283,707	316,254
5/2/2018	42,644	282,065	324,709
5/3/2018	42,547	281,683	324,230
5/4/2018	42,551	281,251	323,802
5/5/2018	42,498	280,993	323,491
5/6/2018	42,564	281,048	323,611
5/7/2018	42,628	281,157	323,785
5/8/2018	42,620	279,244	321,864
5/9/2018	42,649	275,142	317,791
5/10/2018	42,591	261,361	303,952
5/11/2018	42,636	256,836	299,473
5/12/2018	42,537	255,731	298,268
5/13/2018	42,541	255,829	298,370
5/14/2018	42,581	257,996	300,577
5/15/2018	42,547	257,854	300,401
5/16/2018	34,171	232,536	266,707
5/17/2018	42,513	286,548	329,061
5/18/2018	42,533	286,644	329,177
5/19/2018	42,443	286,481	328,923
5/20/2018	42,475	286,451	328,926
5/21/2018	42,552	269,390	311,942
5/22/2018	42,541	253,224	295,764

Appendix C. Daily Operational Data

Date	Volume Pumped (gallons)		
	CLC 18	CLC 27	Total
5/23/2018	42,585	252,883	295,468
5/24/2018	42,540	252,537	295,078
5/25/2018	42,583	251,853	294,436
5/26/2018	42,560	251,384	293,945
5/27/2018	42,581	251,665	294,246
5/28/2018	42,586	251,719	294,305
5/29/2018	42,559	251,609	294,168
5/30/2018	42,578	251,142	293,720
5/31/2018	42,537	250,656	293,192
6/1/2018	42,544	250,538	293,082
6/2/2018	42,445	252,131	294,576
6/3/2018	42,490	254,080	296,570
6/4/2018	42,492	253,324	295,816
6/5/2018	42,487	252,271	294,758
6/6/2018	42,067	251,344	293,411
6/7/2018	42,507	238,416	280,922
6/8/2018	42,434	231,906	274,340
6/9/2018	42,461	240,338	282,799
6/10/2018	42,486	240,447	282,933
6/11/2018	42,369	284,202	326,571
6/12/2018	42,380	313,237	355,617
6/13/2018	42,411	319,331	361,742
6/14/2018	42,325	322,515	364,841
6/15/2018	42,402	322,011	364,414
6/16/2018	42,309	321,684	363,993
6/17/2018	42,312	321,487	363,800
6/18/2018	42,417	321,810	364,227
6/19/2018	42,444	321,812	364,256
6/20/2018	42,437	325,419	367,856
6/21/2018	42,387	302,180	344,567
6/22/2018	42,407	324,645	367,053
6/23/2018	42,297	324,420	366,716
6/24/2018	42,291	324,427	366,718
6/25/2018	42,284	324,337	366,621
6/26/2018	42,246	324,104	366,350
6/27/2018	42,289	324,089	366,377
6/28/2018	42,213	324,018	366,230
6/29/2018	42,244	324,123	366,366
6/30/2018	42,147	323,820	365,967
7/1/2018	42,179	323,781	365,960
7/2/2018	42,194	324,010	366,204
7/3/2018	42,150	323,306	365,456
7/4/2018	42,212	323,680	365,892
7/5/2018	42,168	323,751	365,919
7/6/2018	42,180	323,740	365,919
7/7/2018	42,194	323,560	365,755

Appendix C. Daily Operational Data

Date	Volume Pumped (gallons)		
	CLC 18	CLC 27	Total
7/8/2018	42,206	323,634	365,841
7/9/2018	42,192	320,007	362,199
7/10/2018	42,221	316,587	358,808
7/11/2018	42,350	316,442	358,792
7/12/2018	42,388	316,292	358,680
7/13/2018	42,467	316,126	358,593
7/14/2018	42,449	315,942	358,391
7/15/2018	42,495	315,714	358,209
7/16/2018	42,494	314,787	357,281
7/17/2018	42,436	313,420	355,856
7/18/2018	42,503	313,063	355,565
7/19/2018	42,406	312,604	355,010
7/20/2018	42,419	312,674	355,093
7/21/2018	42,310	311,975	354,285
7/22/2018	42,274	311,798	354,072
7/23/2018	42,331	311,887	354,217
7/24/2018	42,208	311,446	353,654
7/25/2018	42,260	311,620	353,880
7/26/2018	42,240	311,369	353,609
7/27/2018	42,226	311,182	353,408
7/28/2018	42,167	310,880	353,047
7/29/2018	42,231	310,789	353,019
7/30/2018	42,253	310,578	352,831
7/31/2018	42,186	310,318	352,504
8/1/2018	42,273	310,164	352,437
8/2/2018	42,198	309,611	351,809
8/3/2018	42,232	309,723	351,955
8/4/2018	42,109	309,353	351,461
8/5/2018	42,141	309,024	351,166
8/6/2018	42,160	309,211	351,371
8/7/2018	42,104	308,722	350,826
8/8/2018	42,123	308,612	350,735
8/9/2018	42,036	292,378	334,414
8/10/2018	42,036	281,436	323,472
8/11/2018	42,072	281,999	324,071
8/12/2018	42,081	283,051	325,132
8/13/2018	42,138	283,107	325,245
8/14/2018	42,160	282,218	324,378
8/15/2018	42,166	281,473	323,639
8/16/2018	42,111	280,681	322,792
8/17/2018	42,183	278,823	321,006
8/18/2018	42,103	282,873	324,976
8/19/2018	42,151	284,065	326,215
8/20/2018	42,194	283,359	325,553
8/21/2018	42,158	282,924	325,083
8/22/2018	42,185	282,017	324,202

Appendix C. Daily Operational Data

Date	Volume Pumped (gallons)		
	CLC 18	CLC 27	Total
8/23/2018	42,135	281,275	323,410
8/24/2018	42,154	309,250	351,404
8/25/2018	42,095	328,823	370,918
8/26/2018	42,120	328,620	370,740
8/27/2018	42,160	328,695	370,855
8/28/2018	42,137	328,653	370,791
8/29/2018	42,141	328,171	370,313
8/30/2018	42,054	324,185	366,239
8/31/2018	42,060	330,750	372,810
9/1/2018	42,000	330,336	372,336
9/2/2018	41,990	330,219	372,209
9/3/2018	41,993	330,386	372,378
9/4/2018	42,007	330,623	372,630
9/5/2018	42,043	316,888	358,931
9/6/2018	42,005	317,639	359,644
9/7/2018	42,089	327,313	369,402
9/8/2018	42,092	327,223	369,315
9/9/2018	42,121	327,470	369,591
9/10/2018	42,206	327,178	369,384
9/11/2018	42,168	327,439	369,606
9/12/2018	42,214	327,147	369,360
9/13/2018	42,116	326,984	369,100
9/14/2018	42,114	327,105	369,219
9/15/2018	42,090	326,911	369,001
9/16/2018	42,078	326,779	368,857
9/17/2018	42,078	326,895	368,973
9/18/2018	26,746	292,355	319,101
9/19/2018	42,134	328,273	370,408
9/20/2018	42,049	328,229	370,278
9/21/2018	42,082	328,212	370,294
9/22/2018	42,002	328,116	370,118
9/23/2018	42,089	328,244	370,333
9/24/2018	42,144	328,402	370,546
9/25/2018	42,179	328,237	370,417
9/26/2018	42,165	328,156	370,321
9/27/2018	42,058	327,865	369,923
9/28/2018	42,069	327,950	370,019
9/29/2018	42,112	327,856	369,968
9/30/2018	42,121	327,950	370,071
10/1/2018	42,100	327,827	369,927
10/2/2018	42,132	327,884	370,016
10/3/2018	42,095	327,632	369,726
10/4/2018	42,117	327,640	369,757
10/5/2018	42,118	327,534	369,652
10/6/2018	42,134	327,761	369,896
10/7/2018	42,127	327,685	369,812

Appendix C. Daily Operational Data

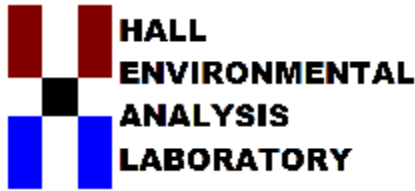
Date	Volume Pumped (gallons)		
	CLC 18	CLC 27	Total
10/8/2018	42,114	327,788	369,902
10/9/2018	42,149	327,487	369,635
10/10/2018	42,139	327,347	369,486
10/11/2018	42,091	327,444	369,535
10/12/2018	42,112	327,653	369,765
10/13/2018	42,204	327,614	369,818
10/14/2018	42,245	327,894	370,139
10/15/2018	42,218	327,570	369,788
10/16/2018	42,243	327,454	369,696
10/17/2018	42,249	327,574	369,823
10/18/2018	42,252	327,470	369,722
10/19/2018	42,274	327,580	369,854
10/20/2018	42,322	327,716	370,038
10/21/2018	42,290	327,632	369,922
10/22/2018	42,313	327,760	370,073
10/23/2018	42,362	327,804	370,166
10/24/2018	42,357	327,872	370,229
10/25/2018	42,394	327,956	370,350
10/26/2018	42,377	327,690	370,067
10/27/2018	42,376	327,726	370,103
10/28/2018	42,380	327,752	370,132
10/29/2018	42,405	327,943	370,348
10/30/2018	42,431	328,094	370,525
10/31/2018	42,439	328,073	370,512
11/1/2018	42,429	327,937	370,365
11/2/2018	42,445	327,913	370,358
11/3/2018	42,475	328,069	370,544
11/4/2018	42,434	341,208	383,641
11/5/2018	42,419	327,779	370,198
11/6/2018	42,416	323,113	365,528
11/7/2018	42,409	316,328	358,737
11/8/2018	42,427	315,469	357,895
11/9/2018	42,368	314,909	357,277
11/10/2018	42,412	314,778	357,190
11/11/2018	42,490	316,798	359,289
11/12/2018	42,404	326,289	368,693
11/13/2018	42,485	326,659	369,144
11/14/2018	42,421	326,689	369,110
11/15/2018	42,444	326,528	368,972
11/16/2018	42,493	326,507	369,000
11/17/2018	42,564	326,329	368,893
11/18/2018	42,576	326,086	368,662
11/19/2018	42,528	326,210	368,738
11/20/2018	42,502	326,114	368,616
11/21/2018	42,464	326,240	368,704
11/22/2018	42,571	326,359	368,929

Appendix C. Daily Operational Data

Date	Volume Pumped (gallons)		
	CLC 18	CLC 27	Total
11/23/2018	42,565	326,265	368,831
11/24/2018	42,566	326,233	368,800
11/25/2018	42,583	326,356	368,939
11/26/2018	42,531	326,182	368,713
11/27/2018	42,593	326,415	369,008
11/28/2018	42,547	326,132	368,679
11/29/2018	42,596	323,255	365,851
11/30/2018	42,648	320,753	363,401
12/1/2018	42,690	320,727	363,417
12/2/2018	42,647	320,178	362,825
12/3/2018	42,569	319,990	362,559
12/4/2018	42,647	320,262	362,909
12/5/2018	42,573	319,976	362,549
12/6/2018	42,553	315,379	357,931
12/7/2018	42,562	309,193	351,755
12/8/2018	42,577	307,927	350,503
12/9/2018	42,667	307,423	350,090
12/10/2018	42,562	307,355	349,918
12/11/2018	42,644	306,966	349,610
12/12/2018	42,772	306,833	349,605
12/13/2018	42,809	307,346	350,156
12/14/2018	42,788	304,311	347,099
12/15/2018	42,778	303,941	346,719
12/16/2018	42,774	304,920	347,694
12/17/2018	42,684	305,242	347,926
12/18/2018	42,760	305,407	348,167
12/19/2018	42,783	305,086	347,868
12/20/2018	42,759	304,827	347,586
12/21/2018	42,778	304,689	347,467
12/22/2018	42,790	304,213	347,003
12/23/2018	42,752	303,379	346,131
12/24/2018	42,733	302,687	345,420
12/25/2018	42,782	302,411	345,194
12/26/2018	42,791	302,321	345,112
12/27/2018	42,817	303,186	346,003
12/28/2018	42,829	305,184	348,013
12/29/2018	42,766	304,437	347,202
12/30/2018	42,895	305,019	347,914
12/31/2018	42,849	305,052	347,902

Appendix D

Laboratory Reports for Remediation System Sampling



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

February 07, 2017

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP- Joint Superfund Project Center
Monthly Analysis

OrderNo.: 1701C23

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 2 sample(s) on 1/31/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1701C23

Date Reported: 2/7/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1-170130

Project: JSP- Joint Superfund Project Center

Collection Date: 1/30/2017 9:44:00 AM

Lab ID: 1701C23-001

Matrix: AIR

Received Date: 1/31/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
Toluene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
Ethylbenzene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
Naphthalene	ND	0.20		µg/L	1	2/6/2017 1:40:12 PM	W40534
1-Methylnaphthalene	ND	0.40		µg/L	1	2/6/2017 1:40:12 PM	W40534
2-Methylnaphthalene	ND	0.40		µg/L	1	2/6/2017 1:40:12 PM	W40534
Acetone	ND	1.0		µg/L	1	2/6/2017 1:40:12 PM	W40534
Bromobenzene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
Bromodichloromethane	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
Bromoform	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
Bromomethane	ND	0.20		µg/L	1	2/6/2017 1:40:12 PM	W40534
2-Butanone	ND	1.0		µg/L	1	2/6/2017 1:40:12 PM	W40534
Carbon disulfide	ND	1.0		µg/L	1	2/6/2017 1:40:12 PM	W40534
Carbon tetrachloride	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
Chlorobenzene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
Chloroethane	ND	0.20		µg/L	1	2/6/2017 1:40:12 PM	W40534
Chloroform	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
Chloromethane	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
2-Chlorotoluene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
4-Chlorotoluene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
cis-1,2-DCE	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	2/6/2017 1:40:12 PM	W40534
Dibromochloromethane	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
Dibromomethane	ND	0.20		µg/L	1	2/6/2017 1:40:12 PM	W40534
1,2-Dichlorobenzene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
1,3-Dichlorobenzene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
1,4-Dichlorobenzene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
Dichlorodifluoromethane	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
1,1-Dichloroethane	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
1,1-Dichloroethene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
1,2-Dichloropropane	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
1,3-Dichloropropane	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
2,2-Dichloropropane	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 1 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1701C23

Date Reported: 2/7/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1-170130

Project: JSP- Joint Superfund Project Center

Collection Date: 1/30/2017 9:44:00 AM

Lab ID: 1701C23-001

Matrix: AIR

Received Date: 1/31/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
Hexachlorobutadiene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
2-Hexanone	ND	1.0		µg/L	1	2/6/2017 1:40:12 PM	W40534
Isopropylbenzene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
4-Isopropyltoluene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
4-Methyl-2-pentanone	ND	1.0		µg/L	1	2/6/2017 1:40:12 PM	W40534
Methylene chloride	ND	0.30		µg/L	1	2/6/2017 1:40:12 PM	W40534
n-Butylbenzene	ND	0.30		µg/L	1	2/6/2017 1:40:12 PM	W40534
n-Propylbenzene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
sec-Butylbenzene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
Styrene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
tert-Butylbenzene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
trans-1,2-DCE	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
1,1,1-Trichloroethane	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
1,1,2-Trichloroethane	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
Trichloroethene (TCE)	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
Trichlorofluoromethane	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
1,2,3-Trichloropropane	ND	0.20		µg/L	1	2/6/2017 1:40:12 PM	W40534
Vinyl chloride	ND	0.10		µg/L	1	2/6/2017 1:40:12 PM	W40534
Xylenes, Total	ND	0.15		µg/L	1	2/6/2017 1:40:12 PM	W40534
Surr: Dibromofluoromethane	99.9	70-130		%Rec	1	2/6/2017 1:40:12 PM	W40534
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	2/6/2017 1:40:12 PM	W40534
Surr: Toluene-d8	105	70-130		%Rec	1	2/6/2017 1:40:12 PM	W40534
Surr: 4-Bromofluorobenzene	97.1	70-130		%Rec	1	2/6/2017 1:40:12 PM	W40534

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1701C23

Date Reported: 2/7/2017

CLIENT: City of Las Cruces

Client Sample ID: AS2-170130

Project: JSP- Joint Superfund Project Center

Collection Date: 1/30/2017 9:53:00 AM

Lab ID: 1701C23-002

Matrix: AIR

Received Date: 1/31/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
Toluene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
Ethylbenzene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
Naphthalene	ND	0.20		µg/L	1	2/6/2017 2:09:45 PM	W40534
1-Methylnaphthalene	ND	0.40		µg/L	1	2/6/2017 2:09:45 PM	W40534
2-Methylnaphthalene	ND	0.40		µg/L	1	2/6/2017 2:09:45 PM	W40534
Acetone	ND	1.0		µg/L	1	2/6/2017 2:09:45 PM	W40534
Bromobenzene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
Bromodichloromethane	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
Bromoform	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
Bromomethane	ND	0.20		µg/L	1	2/6/2017 2:09:45 PM	W40534
2-Butanone	ND	1.0		µg/L	1	2/6/2017 2:09:45 PM	W40534
Carbon disulfide	ND	1.0		µg/L	1	2/6/2017 2:09:45 PM	W40534
Carbon tetrachloride	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
Chlorobenzene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
Chloroethane	ND	0.20		µg/L	1	2/6/2017 2:09:45 PM	W40534
Chloroform	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
Chloromethane	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
2-Chlorotoluene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
4-Chlorotoluene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
cis-1,2-DCE	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	2/6/2017 2:09:45 PM	W40534
Dibromochloromethane	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
Dibromomethane	ND	0.20		µg/L	1	2/6/2017 2:09:45 PM	W40534
1,2-Dichlorobenzene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
1,3-Dichlorobenzene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
1,4-Dichlorobenzene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
Dichlorodifluoromethane	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
1,1-Dichloroethane	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
1,1-Dichloroethene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
1,2-Dichloropropane	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
1,3-Dichloropropane	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
2,2-Dichloropropane	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 3 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1701C23

Date Reported: 2/7/2017

CLIENT: City of Las Cruces

Client Sample ID: AS2-170130

Project: JSP- Joint Superfund Project Center

Collection Date: 1/30/2017 9:53:00 AM

Lab ID: 1701C23-002

Matrix: AIR

Received Date: 1/31/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
Hexachlorobutadiene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
2-Hexanone	ND	1.0		µg/L	1	2/6/2017 2:09:45 PM	W40534
Isopropylbenzene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
4-Isopropyltoluene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
4-Methyl-2-pentanone	ND	1.0		µg/L	1	2/6/2017 2:09:45 PM	W40534
Methylene chloride	ND	0.30		µg/L	1	2/6/2017 2:09:45 PM	W40534
n-Butylbenzene	ND	0.30		µg/L	1	2/6/2017 2:09:45 PM	W40534
n-Propylbenzene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
sec-Butylbenzene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
Styrene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
tert-Butylbenzene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
trans-1,2-DCE	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
1,1,1-Trichloroethane	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
1,1,2-Trichloroethane	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
Trichloroethene (TCE)	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
Trichlorofluoromethane	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
1,2,3-Trichloropropane	ND	0.20		µg/L	1	2/6/2017 2:09:45 PM	W40534
Vinyl chloride	ND	0.10		µg/L	1	2/6/2017 2:09:45 PM	W40534
Xylenes, Total	ND	0.15		µg/L	1	2/6/2017 2:09:45 PM	W40534
Surr: Dibromofluoromethane	97.3	70-130		%Rec	1	2/6/2017 2:09:45 PM	W40534
Surr: 1,2-Dichloroethane-d4	92.7	70-130		%Rec	1	2/6/2017 2:09:45 PM	W40534
Surr: Toluene-d8	102	70-130		%Rec	1	2/6/2017 2:09:45 PM	W40534
Surr: 4-Bromofluorobenzene	97.8	70-130		%Rec	1	2/6/2017 2:09:45 PM	W40534

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1701C23

RcptNo. 1

Received by/date: aj 1/31/17

Logged By: Andy Jansson 1/31/2017 9:00:00 AM aj

Completed By: Andy Jansson 1/31/17

Reviewed By: aj 1/31/17

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No
(Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No
(If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
(<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____

By Whom: _____ Via: eMail Phone Fax In Person

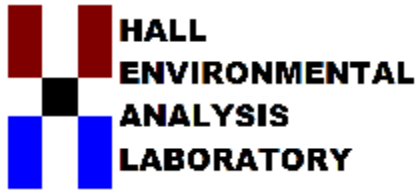
Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	NA	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

February 02, 2017

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: CLC Joint Superfund Project Cnter, Monthly Analysis

OrderNo.: 1701C25

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 1/31/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces

Client Sample ID: CLC18-170130

Project: CLC Joint Superfund Project Cntr, Mont

Collection Date: 1/30/2017 9:02:00 AM

Lab ID: 1701C25-001

Matrix: AQUEOUS

Received Date: 1/31/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
Toluene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
Ethylbenzene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
Naphthalene	ND	2.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
1-Methylnaphthalene	ND	4.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
2-Methylnaphthalene	ND	4.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
Acetone	ND	10		µg/L	1	2/1/2017 3:06:45 PM	R40448
Bromobenzene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
Bromodichloromethane	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
Bromoform	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
Bromomethane	ND	3.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
2-Butanone	ND	10		µg/L	1	2/1/2017 3:06:45 PM	R40448
Carbon disulfide	ND	10		µg/L	1	2/1/2017 3:06:45 PM	R40448
Carbon Tetrachloride	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
Chlorobenzene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
Chloroethane	ND	2.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
Chloroform	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
Chloromethane	ND	3.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
2-Chlorotoluene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
4-Chlorotoluene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
cis-1,2-DCE	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
Dibromochloromethane	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
Dibromomethane	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
1,1-Dichloroethane	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
1,1-Dichloroethene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
1,2-Dichloropropane	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
1,3-Dichloropropane	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
2,2-Dichloropropane	ND	2.0		µg/L	1	2/1/2017 3:06:45 PM	R40448

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1701C25

Date Reported: 2/2/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC18-170130

Project: CLC Joint Superfund Project Cnter, Mont

Collection Date: 1/30/2017 9:02:00 AM

Lab ID: 1701C25-001

Matrix: AQUEOUS

Received Date: 1/31/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
Hexachlorobutadiene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
2-Hexanone	ND	10		µg/L	1	2/1/2017 3:06:45 PM	R40448
Isopropylbenzene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
4-Isopropyltoluene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
4-Methyl-2-pentanone	ND	10		µg/L	1	2/1/2017 3:06:45 PM	R40448
Methylene Chloride	ND	3.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
n-Butylbenzene	ND	3.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
n-Propylbenzene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
sec-Butylbenzene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
Styrene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
tert-Butylbenzene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
Tetrachloroethene (PCE)	15	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
trans-1,2-DCE	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
Trichlorofluoromethane	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
Vinyl chloride	ND	1.0		µg/L	1	2/1/2017 3:06:45 PM	R40448
Xylenes, Total	ND	1.5		µg/L	1	2/1/2017 3:06:45 PM	R40448
Surr: 1,2-Dichloroethane-d4	77.3	70-130		%Rec	1	2/1/2017 3:06:45 PM	R40448
Surr: 4-Bromofluorobenzene	93.1	70-130		%Rec	1	2/1/2017 3:06:45 PM	R40448
Surr: Dibromofluoromethane	112	70-130		%Rec	1	2/1/2017 3:06:45 PM	R40448
Surr: Toluene-d8	92.6	70-130		%Rec	1	2/1/2017 3:06:45 PM	R40448

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1701C25

Date Reported: 2/2/2017

CLIENT: City of Las Cruces

Client Sample ID: IS1-170130

Project: CLC Joint Superfund Project Cntr, Mont

Collection Date: 1/30/2017 9:24:00 AM

Lab ID: 1701C25-002

Matrix: AQUEOUS

Received Date: 1/31/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
Toluene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
Ethylbenzene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
Naphthalene	ND	2.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
1-Methylnaphthalene	ND	4.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
2-Methylnaphthalene	ND	4.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
Acetone	ND	10		µg/L	1	2/1/2017 3:36:05 PM	R40448
Bromobenzene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
Bromodichloromethane	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
Bromoform	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
Bromomethane	ND	3.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
2-Butanone	ND	10		µg/L	1	2/1/2017 3:36:05 PM	R40448
Carbon disulfide	ND	10		µg/L	1	2/1/2017 3:36:05 PM	R40448
Carbon Tetrachloride	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
Chlorobenzene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
Chloroethane	ND	2.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
Chloroform	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
Chloromethane	ND	3.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
2-Chlorotoluene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
4-Chlorotoluene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
cis-1,2-DCE	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
Dibromochloromethane	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
Dibromomethane	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
1,1-Dichloroethane	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
1,1-Dichloroethene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
1,2-Dichloropropane	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
1,3-Dichloropropane	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
2,2-Dichloropropane	ND	2.0		µg/L	1	2/1/2017 3:36:05 PM	R40448

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1701C25

Date Reported: 2/2/2017

CLIENT: City of Las Cruces

Client Sample ID: IS1-170130

Project: CLC Joint Superfund Project Cnter, Mont

Collection Date: 1/30/2017 9:24:00 AM

Lab ID: 1701C25-002

Matrix: AQUEOUS

Received Date: 1/31/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
Hexachlorobutadiene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
2-Hexanone	ND	10		µg/L	1	2/1/2017 3:36:05 PM	R40448
Isopropylbenzene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
4-Isopropyltoluene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
4-Methyl-2-pentanone	ND	10		µg/L	1	2/1/2017 3:36:05 PM	R40448
Methylene Chloride	ND	3.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
n-Butylbenzene	ND	3.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
n-Propylbenzene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
sec-Butylbenzene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
Styrene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
tert-Butylbenzene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
Tetrachloroethene (PCE)	7.8	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
trans-1,2-DCE	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
Trichlorofluoromethane	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
Vinyl chloride	ND	1.0		µg/L	1	2/1/2017 3:36:05 PM	R40448
Xylenes, Total	ND	1.5		µg/L	1	2/1/2017 3:36:05 PM	R40448
Surr: 1,2-Dichloroethane-d4	82.8	70-130		%Rec	1	2/1/2017 3:36:05 PM	R40448
Surr: 4-Bromofluorobenzene	98.6	70-130		%Rec	1	2/1/2017 3:36:05 PM	R40448
Surr: Dibromofluoromethane	110	70-130		%Rec	1	2/1/2017 3:36:05 PM	R40448
Surr: Toluene-d8	94.8	70-130		%Rec	1	2/1/2017 3:36:05 PM	R40448

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces

Client Sample ID: IS1-170130 DUP

Project: CLC Joint Superfund Project Cntr, Mont

Collection Date: 1/30/2017 9:24:00 AM

Lab ID: 1701C25-003

Matrix: AQUEOUS

Received Date: 1/31/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
Toluene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
Ethylbenzene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
Naphthalene	ND	2.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
1-Methylnaphthalene	ND	4.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
2-Methylnaphthalene	ND	4.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
Acetone	ND	10		µg/L	1	2/1/2017 5:03:51 PM	R40448
Bromobenzene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
Bromodichloromethane	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
Bromoform	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
Bromomethane	ND	3.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
2-Butanone	ND	10		µg/L	1	2/1/2017 5:03:51 PM	R40448
Carbon disulfide	ND	10		µg/L	1	2/1/2017 5:03:51 PM	R40448
Carbon Tetrachloride	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
Chlorobenzene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
Chloroethane	ND	2.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
Chloroform	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
Chloromethane	ND	3.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
2-Chlorotoluene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
4-Chlorotoluene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
cis-1,2-DCE	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
Dibromochloromethane	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
Dibromomethane	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
1,1-Dichloroethane	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
1,1-Dichloroethene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
1,2-Dichloropropane	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
1,3-Dichloropropane	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
2,2-Dichloropropane	ND	2.0		µg/L	1	2/1/2017 5:03:51 PM	R40448

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1701C25

Date Reported: 2/2/2017

CLIENT: City of Las Cruces

Client Sample ID: IS1-170130 DUP

Project: CLC Joint Superfund Project Cnter, Mont

Collection Date: 1/30/2017 9:24:00 AM

Lab ID: 1701C25-003

Matrix: AQUEOUS

Received Date: 1/31/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
Hexachlorobutadiene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
2-Hexanone	ND	10		µg/L	1	2/1/2017 5:03:51 PM	R40448
Isopropylbenzene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
4-Isopropyltoluene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
4-Methyl-2-pentanone	ND	10		µg/L	1	2/1/2017 5:03:51 PM	R40448
Methylene Chloride	ND	3.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
n-Butylbenzene	ND	3.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
n-Propylbenzene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
sec-Butylbenzene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
Styrene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
tert-Butylbenzene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
Tetrachloroethene (PCE)	7.1	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
trans-1,2-DCE	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
Trichlorofluoromethane	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
Vinyl chloride	ND	1.0		µg/L	1	2/1/2017 5:03:51 PM	R40448
Xylenes, Total	ND	1.5		µg/L	1	2/1/2017 5:03:51 PM	R40448
Surr: 1,2-Dichloroethane-d4	88.5	70-130		%Rec	1	2/1/2017 5:03:51 PM	R40448
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	2/1/2017 5:03:51 PM	R40448
Surr: Dibromofluoromethane	106	70-130		%Rec	1	2/1/2017 5:03:51 PM	R40448
Surr: Toluene-d8	95.3	70-130		%Rec	1	2/1/2017 5:03:51 PM	R40448

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1701C25

Date Reported: 2/2/2017

CLIENT: City of Las Cruces

Client Sample ID: C1-170130

Project: CLC Joint Superfund Project Cnter, Mont

Collection Date: 1/30/2017 9:29:00 AM

Lab ID: 1701C25-004

Matrix: AQUEOUS

Received Date: 1/31/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
Toluene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
Ethylbenzene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
Naphthalene	ND	2.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
1-Methylnaphthalene	ND	4.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
2-Methylnaphthalene	ND	4.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
Acetone	ND	10		µg/L	1	2/1/2017 5:33:02 PM	R40448
Bromobenzene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
Bromodichloromethane	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
Bromoform	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
Bromomethane	ND	3.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
2-Butanone	ND	10		µg/L	1	2/1/2017 5:33:02 PM	R40448
Carbon disulfide	ND	10		µg/L	1	2/1/2017 5:33:02 PM	R40448
Carbon Tetrachloride	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
Chlorobenzene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
Chloroethane	ND	2.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
Chloroform	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
Chloromethane	ND	3.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
2-Chlorotoluene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
4-Chlorotoluene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
cis-1,2-DCE	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
Dibromochloromethane	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
Dibromomethane	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
1,1-Dichloroethane	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
1,1-Dichloroethene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
1,2-Dichloropropane	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
1,3-Dichloropropane	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
2,2-Dichloropropane	ND	2.0		µg/L	1	2/1/2017 5:33:02 PM	R40448

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1701C25

Date Reported: 2/2/2017

CLIENT: City of Las Cruces

Client Sample ID: C1-170130

Project: CLC Joint Superfund Project Cnter, Mont

Collection Date: 1/30/2017 9:29:00 AM

Lab ID: 1701C25-004

Matrix: AQUEOUS

Received Date: 1/31/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
Hexachlorobutadiene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
2-Hexanone	ND	10		µg/L	1	2/1/2017 5:33:02 PM	R40448
Isopropylbenzene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
4-Isopropyltoluene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
4-Methyl-2-pentanone	ND	10		µg/L	1	2/1/2017 5:33:02 PM	R40448
Methylene Chloride	ND	3.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
n-Butylbenzene	ND	3.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
n-Propylbenzene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
sec-Butylbenzene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
Styrene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
tert-Butylbenzene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
trans-1,2-DCE	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
Trichlorofluoromethane	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
Vinyl chloride	ND	1.0		µg/L	1	2/1/2017 5:33:02 PM	R40448
Xylenes, Total	ND	1.5		µg/L	1	2/1/2017 5:33:02 PM	R40448
Surr: 1,2-Dichloroethane-d4	87.2	70-130		%Rec	1	2/1/2017 5:33:02 PM	R40448
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	2/1/2017 5:33:02 PM	R40448
Surr: Dibromofluoromethane	105	70-130		%Rec	1	2/1/2017 5:33:02 PM	R40448
Surr: Toluene-d8	93.7	70-130		%Rec	1	2/1/2017 5:33:02 PM	R40448

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1701C25

Date Reported: 2/2/2017

CLIENT: City of Las Cruces

Client Sample ID: C2-170130

Project: CLC Joint Superfund Project Cnter, Mont

Collection Date: 1/30/2017 9:31:00 AM

Lab ID: 1701C25-005

Matrix: AQUEOUS

Received Date: 1/31/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
Toluene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
Ethylbenzene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
Naphthalene	ND	2.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
1-Methylnaphthalene	ND	4.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
2-Methylnaphthalene	ND	4.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
Acetone	ND	10		µg/L	1	2/1/2017 6:02:09 PM	R40448
Bromobenzene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
Bromodichloromethane	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
Bromoform	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
Bromomethane	ND	3.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
2-Butanone	ND	10		µg/L	1	2/1/2017 6:02:09 PM	R40448
Carbon disulfide	ND	10		µg/L	1	2/1/2017 6:02:09 PM	R40448
Carbon Tetrachloride	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
Chlorobenzene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
Chloroethane	ND	2.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
Chloroform	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
Chloromethane	ND	3.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
2-Chlorotoluene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
4-Chlorotoluene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
cis-1,2-DCE	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
Dibromochloromethane	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
Dibromomethane	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
1,1-Dichloroethane	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
1,1-Dichloroethene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
1,2-Dichloropropane	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
1,3-Dichloropropane	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
2,2-Dichloropropane	ND	2.0		µg/L	1	2/1/2017 6:02:09 PM	R40448

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1701C25

Date Reported: 2/2/2017

CLIENT: City of Las Cruces

Client Sample ID: C2-170130

Project: CLC Joint Superfund Project Cnter, Mont

Collection Date: 1/30/2017 9:31:00 AM

Lab ID: 1701C25-005

Matrix: AQUEOUS

Received Date: 1/31/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
Hexachlorobutadiene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
2-Hexanone	ND	10		µg/L	1	2/1/2017 6:02:09 PM	R40448
Isopropylbenzene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
4-Isopropyltoluene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
4-Methyl-2-pentanone	ND	10		µg/L	1	2/1/2017 6:02:09 PM	R40448
Methylene Chloride	ND	3.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
n-Butylbenzene	ND	3.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
n-Propylbenzene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
sec-Butylbenzene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
Styrene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
tert-Butylbenzene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
trans-1,2-DCE	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
Trichlorofluoromethane	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
Vinyl chloride	ND	1.0		µg/L	1	2/1/2017 6:02:09 PM	R40448
Xylenes, Total	ND	1.5		µg/L	1	2/1/2017 6:02:09 PM	R40448
Surr: 1,2-Dichloroethane-d4	91.7	70-130		%Rec	1	2/1/2017 6:02:09 PM	R40448
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	2/1/2017 6:02:09 PM	R40448
Surr: Dibromofluoromethane	106	70-130		%Rec	1	2/1/2017 6:02:09 PM	R40448
Surr: Toluene-d8	94.9	70-130		%Rec	1	2/1/2017 6:02:09 PM	R40448

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1701C25

Date Reported: 2/2/2017

CLIENT: City of Las Cruces

Client Sample ID: ES1-170130

Project: CLC Joint Superfund Project Cnter, Mont

Collection Date: 1/30/2017 9:34:00 AM

Lab ID: 1701C25-006

Matrix: AQUEOUS

Received Date: 1/31/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
Toluene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
Ethylbenzene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
Naphthalene	ND	2.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
1-Methylnaphthalene	ND	4.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
2-Methylnaphthalene	ND	4.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
Acetone	ND	10		µg/L	1	2/1/2017 6:31:13 PM	R40448
Bromobenzene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
Bromodichloromethane	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
Bromoform	7.8	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
Bromomethane	ND	3.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
2-Butanone	ND	10		µg/L	1	2/1/2017 6:31:13 PM	R40448
Carbon disulfide	ND	10		µg/L	1	2/1/2017 6:31:13 PM	R40448
Carbon Tetrachloride	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
Chlorobenzene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
Chloroethane	ND	2.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
Chloroform	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
Chloromethane	ND	3.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
2-Chlorotoluene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
4-Chlorotoluene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
cis-1,2-DCE	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
Dibromochloromethane	2.9	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
Dibromomethane	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
1,1-Dichloroethane	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
1,1-Dichloroethene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
1,2-Dichloropropane	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
1,3-Dichloropropane	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
2,2-Dichloropropane	ND	2.0		µg/L	1	2/1/2017 6:31:13 PM	R40448

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1701C25

Date Reported: 2/2/2017

CLIENT: City of Las Cruces

Client Sample ID: ES1-170130

Project: CLC Joint Superfund Project Cntr, Mont

Collection Date: 1/30/2017 9:34:00 AM

Lab ID: 1701C25-006

Matrix: AQUEOUS

Received Date: 1/31/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
Hexachlorobutadiene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
2-Hexanone	ND	10		µg/L	1	2/1/2017 6:31:13 PM	R40448
Isopropylbenzene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
4-Isopropyltoluene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
4-Methyl-2-pentanone	ND	10		µg/L	1	2/1/2017 6:31:13 PM	R40448
Methylene Chloride	ND	3.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
n-Butylbenzene	ND	3.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
n-Propylbenzene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
sec-Butylbenzene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
Styrene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
tert-Butylbenzene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
trans-1,2-DCE	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
Trichlorofluoromethane	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
Vinyl chloride	ND	1.0		µg/L	1	2/1/2017 6:31:13 PM	R40448
Xylenes, Total	ND	1.5		µg/L	1	2/1/2017 6:31:13 PM	R40448
Surr: 1,2-Dichloroethane-d4	95.7	70-130		%Rec	1	2/1/2017 6:31:13 PM	R40448
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	2/1/2017 6:31:13 PM	R40448
Surr: Dibromofluoromethane	107	70-130		%Rec	1	2/1/2017 6:31:13 PM	R40448
Surr: Toluene-d8	97.4	70-130		%Rec	1	2/1/2017 6:31:13 PM	R40448

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1701C25

Date Reported: 2/2/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC27-170130

Project: CLC Joint Superfund Project Cnter, Mont

Collection Date: 1/30/2017 9:14:00 AM

Lab ID: 1701C25-007

Matrix: AQUEOUS

Received Date: 1/31/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
Toluene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
Ethylbenzene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
Naphthalene	ND	2.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
1-Methylnaphthalene	ND	4.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
2-Methylnaphthalene	ND	4.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
Acetone	ND	10		µg/L	1	2/1/2017 7:00:12 PM	R40448
Bromobenzene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
Bromodichloromethane	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
Bromoform	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
Bromomethane	ND	3.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
2-Butanone	ND	10		µg/L	1	2/1/2017 7:00:12 PM	R40448
Carbon disulfide	ND	10		µg/L	1	2/1/2017 7:00:12 PM	R40448
Carbon Tetrachloride	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
Chlorobenzene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
Chloroethane	ND	2.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
Chloroform	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
Chloromethane	ND	3.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
2-Chlorotoluene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
4-Chlorotoluene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
cis-1,2-DCE	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
Dibromochloromethane	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
Dibromomethane	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
1,1-Dichloroethane	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
1,1-Dichloroethene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
1,2-Dichloropropane	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
1,3-Dichloropropane	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
2,2-Dichloropropane	ND	2.0		µg/L	1	2/1/2017 7:00:12 PM	R40448

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1701C25

Date Reported: 2/2/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC27-170130

Project: CLC Joint Superfund Project Cntr, Mont

Collection Date: 1/30/2017 9:14:00 AM

Lab ID: 1701C25-007

Matrix: AQUEOUS

Received Date: 1/31/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
Hexachlorobutadiene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
2-Hexanone	ND	10		µg/L	1	2/1/2017 7:00:12 PM	R40448
Isopropylbenzene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
4-Isopropyltoluene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
4-Methyl-2-pentanone	ND	10		µg/L	1	2/1/2017 7:00:12 PM	R40448
Methylene Chloride	ND	3.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
n-Butylbenzene	ND	3.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
n-Propylbenzene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
sec-Butylbenzene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
Styrene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
tert-Butylbenzene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
Tetrachloroethene (PCE)	13	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
trans-1,2-DCE	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
Trichlorofluoromethane	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
Vinyl chloride	ND	1.0		µg/L	1	2/1/2017 7:00:12 PM	R40448
Xylenes, Total	ND	1.5		µg/L	1	2/1/2017 7:00:12 PM	R40448
Surr: 1,2-Dichloroethane-d4	95.6	70-130		%Rec	1	2/1/2017 7:00:12 PM	R40448
Surr: 4-Bromofluorobenzene	96.5	70-130		%Rec	1	2/1/2017 7:00:12 PM	R40448
Surr: Dibromofluoromethane	99.7	70-130		%Rec	1	2/1/2017 7:00:12 PM	R40448
Surr: Toluene-d8	94.9	70-130		%Rec	1	2/1/2017 7:00:12 PM	R40448

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1701C25

02-Feb-17

Client: City of Las Cruces
Project: CLC Joint Superfund Project Cnter, Monthly An

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R40448	RunNo:	40448					
Prep Date:		Analysis Date:	2/1/2017	SeqNo:	1267514	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1701C25

02-Feb-17

Client: City of Las Cruces
Project: CLC Joint Superfund Project Cnter, Monthly An

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R40448			RunNo: 40448					
Prep Date:		Analysis Date: 2/1/2017			SeqNo: 1267514		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.5		10.00		94.9	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.3	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	9.9		10.00		99.3	70	130			

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: R40448			RunNo: 40448					
Prep Date:		Analysis Date: 2/1/2017			SeqNo: 1267516		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.7	70	130			
Toluene	21	1.0	20.00	0	106	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1701C25

02-Feb-17

Client: City of Las Cruces
Project: CLC Joint Superfund Project Cnter, Monthly An

Sample ID: 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R40448		RunNo: 40448							
Prep Date:	Analysis Date: 2/1/2017		SeqNo: 1267516		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21	1.0	20.00	0	107	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	88.7	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.9	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		94.6	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1701C25

RcptNo: 1

Received by/date: aj 1/31/17

Logged By: Andy Jansson 1/31/2017 9:00:00 AM

Completed By: Andy Jansson 1/31/17

Reviewed By: aj/e 1/31/17

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C? Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces
 Mailing Address: Water Quality Lab
P.O. Box 2000
Las Cruces, N.M. 88004
 Phone #: 575-522-3604
 email or Fax#: Las-Cruces.org/575-522-3604
 QA/QC Package: Standard Level 4 (Full Validation) Other _____
 Accreditation NELAP Other _____
 EDD (Type) _____

DATE-AUGUING TIME:

Standard Rush
 Project Name: JSP Joint Superfund
Project Cost, Monthly Analysis
 Project #: _____
CDC-JSP - Griego Walnut
 Project Manager: Luis Guerra
575-522-3609
 Sampler: _____
 On Ice: Yes No
 Sample Temperature: 10°C

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
30-07	0902	Primary Water	CN17-170130	340ml Nis HaCl2		1701025
30-07	0924	Primary Water	151-170180			-001
30-07	0924	Primary Water	151-170130 DID			-002
30-07	0929	Primary Water	C1-170130			-003
30-07	0931	Primary Water	C2-170130			-004
30-07	0934	Primary Water	E51-170130			-005
30-07	0914	Primary Water	CN27-170130	340ml Nis HaCl2		-006
						-007

Date: 30-07 Time: 1500 Relinquished by: Jedwin Ryan
 Date: 30-07 Time: _____ Relinquished by: _____
 Received by: [Signature] Date: 1/31/17 Time: 0900
 Received by: _____ Date: _____ Time: _____

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA) VDC	8270 (Semi-VOA)	Air Eubbles (Y or N)
									X		
									X		
									X		
									X		
									X		
									X		
									X		

Remarks: Send Results to:
Luis Guerra lguerra@las-cruces.org
Joshua P. Hernandez jphernandez@las-cruces.org
(Send Labile to CDC of Luis Guerra)

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly indicated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 01, 2017

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP-Joint Superfund Project Monthly Analysis

OrderNo.: 1702A99

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 2 sample(s) on 2/24/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1702A99

Date Reported: 3/1/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1-170223

Project: JSP-Joint Superfund Project Monthly An

Collection Date: 2/23/2017 8:23:00 AM

Lab ID: 1702A99-001

Matrix: AIR

Received Date: 2/24/2017 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
Toluene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
Ethylbenzene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
Naphthalene	ND	0.20		µg/L	1	2/28/2017 12:06:15 PM	R41062
1-Methylnaphthalene	ND	0.40		µg/L	1	2/28/2017 12:06:15 PM	R41062
2-Methylnaphthalene	ND	0.40		µg/L	1	2/28/2017 12:06:15 PM	R41062
Acetone	ND	1.0		µg/L	1	2/28/2017 12:06:15 PM	R41062
Bromobenzene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
Bromodichloromethane	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
Bromoform	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
Bromomethane	ND	0.20		µg/L	1	2/28/2017 12:06:15 PM	R41062
2-Butanone	ND	1.0		µg/L	1	2/28/2017 12:06:15 PM	R41062
Carbon disulfide	ND	1.0		µg/L	1	2/28/2017 12:06:15 PM	R41062
Carbon tetrachloride	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
Chlorobenzene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
Chloroethane	ND	0.20		µg/L	1	2/28/2017 12:06:15 PM	R41062
Chloroform	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
Chloromethane	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
2-Chlorotoluene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
4-Chlorotoluene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
cis-1,2-DCE	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	2/28/2017 12:06:15 PM	R41062
Dibromochloromethane	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
Dibromomethane	ND	0.20		µg/L	1	2/28/2017 12:06:15 PM	R41062
1,2-Dichlorobenzene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
1,3-Dichlorobenzene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
1,4-Dichlorobenzene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
Dichlorodifluoromethane	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
1,1-Dichloroethane	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
1,1-Dichloroethene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
1,2-Dichloropropane	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
1,3-Dichloropropane	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
2,2-Dichloropropane	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 1 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1702A99

Date Reported: 3/1/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1-170223

Project: JSP-Joint Superfund Project Monthly An

Collection Date: 2/23/2017 8:23:00 AM

Lab ID: 1702A99-001

Matrix: AIR

Received Date: 2/24/2017 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
Hexachlorobutadiene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
2-Hexanone	ND	1.0		µg/L	1	2/28/2017 12:06:15 PM	R41062
Isopropylbenzene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
4-Isopropyltoluene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
4-Methyl-2-pentanone	ND	1.0		µg/L	1	2/28/2017 12:06:15 PM	R41062
Methylene chloride	ND	0.30		µg/L	1	2/28/2017 12:06:15 PM	R41062
n-Butylbenzene	ND	0.30		µg/L	1	2/28/2017 12:06:15 PM	R41062
n-Propylbenzene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
sec-Butylbenzene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
Styrene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
tert-Butylbenzene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
trans-1,2-DCE	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
1,1,1-Trichloroethane	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
1,1,2-Trichloroethane	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
Trichloroethene (TCE)	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
Trichlorofluoromethane	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
1,2,3-Trichloropropane	ND	0.20		µg/L	1	2/28/2017 12:06:15 PM	R41062
Vinyl chloride	ND	0.10		µg/L	1	2/28/2017 12:06:15 PM	R41062
Xylenes, Total	ND	0.15		µg/L	1	2/28/2017 12:06:15 PM	R41062
Surr: Dibromofluoromethane	92.9	70-130		%Rec	1	2/28/2017 12:06:15 PM	R41062
Surr: 1,2-Dichloroethane-d4	92.7	70-130		%Rec	1	2/28/2017 12:06:15 PM	R41062
Surr: Toluene-d8	104	70-130		%Rec	1	2/28/2017 12:06:15 PM	R41062
Surr: 4-Bromofluorobenzene	93.2	70-130		%Rec	1	2/28/2017 12:06:15 PM	R41062

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1702A99

Date Reported: 3/1/2017

CLIENT: City of Las Cruces

Client Sample ID: AS2-170223

Project: JSP-Joint Superfund Project Monthly An

Collection Date: 2/23/2017 8:37:00 AM

Lab ID: 1702A99-002

Matrix: AIR

Received Date: 2/24/2017 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
Toluene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
Ethylbenzene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
Naphthalene	ND	0.20		µg/L	1	2/28/2017 12:37:22 PM	R41062
1-Methylnaphthalene	ND	0.40		µg/L	1	2/28/2017 12:37:22 PM	R41062
2-Methylnaphthalene	ND	0.40		µg/L	1	2/28/2017 12:37:22 PM	R41062
Acetone	ND	1.0		µg/L	1	2/28/2017 12:37:22 PM	R41062
Bromobenzene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
Bromodichloromethane	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
Bromoform	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
Bromomethane	ND	0.20		µg/L	1	2/28/2017 12:37:22 PM	R41062
2-Butanone	ND	1.0		µg/L	1	2/28/2017 12:37:22 PM	R41062
Carbon disulfide	ND	1.0		µg/L	1	2/28/2017 12:37:22 PM	R41062
Carbon tetrachloride	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
Chlorobenzene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
Chloroethane	ND	0.20		µg/L	1	2/28/2017 12:37:22 PM	R41062
Chloroform	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
Chloromethane	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
2-Chlorotoluene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
4-Chlorotoluene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
cis-1,2-DCE	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	2/28/2017 12:37:22 PM	R41062
Dibromochloromethane	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
Dibromomethane	ND	0.20		µg/L	1	2/28/2017 12:37:22 PM	R41062
1,2-Dichlorobenzene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
1,3-Dichlorobenzene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
1,4-Dichlorobenzene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
Dichlorodifluoromethane	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
1,1-Dichloroethane	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
1,1-Dichloroethene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
1,2-Dichloropropane	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
1,3-Dichloropropane	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
2,2-Dichloropropane	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 3 of 4
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1702A99

Date Reported: 3/1/2017

CLIENT: City of Las Cruces

Client Sample ID: AS2-170223

Project: JSP-Joint Superfund Project Monthly An

Collection Date: 2/23/2017 8:37:00 AM

Lab ID: 1702A99-002

Matrix: AIR

Received Date: 2/24/2017 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
Hexachlorobutadiene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
2-Hexanone	ND	1.0		µg/L	1	2/28/2017 12:37:22 PM	R41062
Isopropylbenzene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
4-Isopropyltoluene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
4-Methyl-2-pentanone	ND	1.0		µg/L	1	2/28/2017 12:37:22 PM	R41062
Methylene chloride	ND	0.30		µg/L	1	2/28/2017 12:37:22 PM	R41062
n-Butylbenzene	ND	0.30		µg/L	1	2/28/2017 12:37:22 PM	R41062
n-Propylbenzene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
sec-Butylbenzene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
Styrene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
tert-Butylbenzene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
trans-1,2-DCE	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
1,1,1-Trichloroethane	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
1,1,2-Trichloroethane	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
Trichloroethene (TCE)	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
Trichlorofluoromethane	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
1,2,3-Trichloropropane	ND	0.20		µg/L	1	2/28/2017 12:37:22 PM	R41062
Vinyl chloride	ND	0.10		µg/L	1	2/28/2017 12:37:22 PM	R41062
Xylenes, Total	ND	0.15		µg/L	1	2/28/2017 12:37:22 PM	R41062
Surr: Dibromofluoromethane	104	70-130		%Rec	1	2/28/2017 12:37:22 PM	R41062
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	2/28/2017 12:37:22 PM	R41062
Surr: Toluene-d8	101	70-130		%Rec	1	2/28/2017 12:37:22 PM	R41062
Surr: 4-Bromofluorobenzene	93.8	70-130		%Rec	1	2/28/2017 12:37:22 PM	R41062

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 4 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1702A99

RcptNo: 1

Received by/date: AT 02/24/17

Logged By: **Anne Thorne** 2/24/2017 9:05:00 AM *Anne Thorne*

Completed By: **Anne Thorne** 2/24/2017 9:43:14 AM *Anne Thorne*

Reviewed By: *[Signature]* 02/24/17

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? UPS

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No
(Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No
(If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

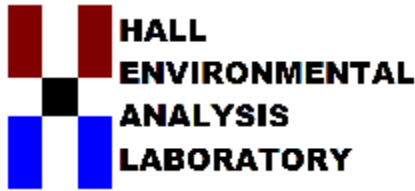
Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

February 28, 2017

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: Joint Superfund Project Center, Monthly Analysis

OrderNo.: 1702B06

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 2/24/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1702B06

Date Reported: 2/28/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC18-170223

Project: Joint Superfund Project Center, Monthly

Collection Date: 2/23/2017 9:03:00 AM

Lab ID: 1702B06-001

Matrix: DRINKING W

Received Date: 2/24/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
Toluene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
Ethylbenzene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
Naphthalene	ND	2.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
1-Methylnaphthalene	ND	4.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
2-Methylnaphthalene	ND	4.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
Acetone	ND	10		µg/L	1	2/27/2017 4:41:00 PM	R41008
Bromobenzene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
Bromodichloromethane	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
Bromoform	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
Bromomethane	ND	3.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
2-Butanone	ND	10		µg/L	1	2/27/2017 4:41:00 PM	R41008
Carbon disulfide	ND	10		µg/L	1	2/27/2017 4:41:00 PM	R41008
Carbon Tetrachloride	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
Chlorobenzene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
Chloroethane	ND	2.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
Chloroform	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
Chloromethane	ND	3.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
2-Chlorotoluene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
4-Chlorotoluene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
cis-1,2-DCE	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
Dibromochloromethane	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
Dibromomethane	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
1,1-Dichloroethane	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
1,1-Dichloroethene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
1,2-Dichloropropane	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
1,3-Dichloropropane	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
2,2-Dichloropropane	ND	2.0		µg/L	1	2/27/2017 4:41:00 PM	R41008

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1702B06

Date Reported: 2/28/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC18-170223

Project: Joint Superfund Project Center, Monthly

Collection Date: 2/23/2017 9:03:00 AM

Lab ID: 1702B06-001

Matrix: DRINKING W

Received Date: 2/24/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
Hexachlorobutadiene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
2-Hexanone	ND	10		µg/L	1	2/27/2017 4:41:00 PM	R41008
Isopropylbenzene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
4-Isopropyltoluene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
4-Methyl-2-pentanone	ND	10		µg/L	1	2/27/2017 4:41:00 PM	R41008
Methylene Chloride	ND	3.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
n-Butylbenzene	ND	3.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
n-Propylbenzene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
sec-Butylbenzene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
Styrene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
tert-Butylbenzene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
Tetrachloroethene (PCE)	18	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
trans-1,2-DCE	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
Trichlorofluoromethane	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
Vinyl chloride	ND	1.0		µg/L	1	2/27/2017 4:41:00 PM	R41008
Xylenes, Total	ND	1.5		µg/L	1	2/27/2017 4:41:00 PM	R41008
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	2/27/2017 4:41:00 PM	R41008
Surr: 4-Bromofluorobenzene	98.0	70-130		%Rec	1	2/27/2017 4:41:00 PM	R41008
Surr: Dibromofluoromethane	114	70-130		%Rec	1	2/27/2017 4:41:00 PM	R41008
Surr: Toluene-d8	103	70-130		%Rec	1	2/27/2017 4:41:00 PM	R41008

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1702B06

Date Reported: 2/28/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC18-170223 Dup

Project: Joint Superfund Project Center, Monthly

Collection Date: 2/23/2017 9:03:00 AM

Lab ID: 1702B06-002

Matrix: DRINKING W

Received Date: 2/24/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
Toluene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
Ethylbenzene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
Naphthalene	ND	2.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
1-Methylnaphthalene	ND	4.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
2-Methylnaphthalene	ND	4.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
Acetone	ND	10		µg/L	1	2/27/2017 5:52:00 PM	R41008
Bromobenzene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
Bromodichloromethane	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
Bromoform	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
Bromomethane	ND	3.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
2-Butanone	ND	10		µg/L	1	2/27/2017 5:52:00 PM	R41008
Carbon disulfide	ND	10		µg/L	1	2/27/2017 5:52:00 PM	R41008
Carbon Tetrachloride	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
Chlorobenzene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
Chloroethane	ND	2.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
Chloroform	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
Chloromethane	ND	3.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
2-Chlorotoluene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
4-Chlorotoluene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
cis-1,2-DCE	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
Dibromochloromethane	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
Dibromomethane	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
1,1-Dichloroethane	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
1,1-Dichloroethene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
1,2-Dichloropropane	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
1,3-Dichloropropane	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
2,2-Dichloropropane	ND	2.0		µg/L	1	2/27/2017 5:52:00 PM	R41008

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1702B06

Date Reported: 2/28/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC18-170223 Dup

Project: Joint Superfund Project Center, Monthly

Collection Date: 2/23/2017 9:03:00 AM

Lab ID: 1702B06-002

Matrix: DRINKING W

Received Date: 2/24/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
Hexachlorobutadiene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
2-Hexanone	ND	10		µg/L	1	2/27/2017 5:52:00 PM	R41008
Isopropylbenzene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
4-Isopropyltoluene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
4-Methyl-2-pentanone	ND	10		µg/L	1	2/27/2017 5:52:00 PM	R41008
Methylene Chloride	ND	3.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
n-Butylbenzene	ND	3.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
n-Propylbenzene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
sec-Butylbenzene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
Styrene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
tert-Butylbenzene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
Tetrachloroethene (PCE)	16	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
trans-1,2-DCE	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
Trichlorofluoromethane	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
Vinyl chloride	ND	1.0		µg/L	1	2/27/2017 5:52:00 PM	R41008
Xylenes, Total	ND	1.5		µg/L	1	2/27/2017 5:52:00 PM	R41008
Surr: 1,2-Dichloroethane-d4	117	70-130		%Rec	1	2/27/2017 5:52:00 PM	R41008
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	2/27/2017 5:52:00 PM	R41008
Surr: Dibromofluoromethane	119	70-130		%Rec	1	2/27/2017 5:52:00 PM	R41008
Surr: Toluene-d8	100	70-130		%Rec	1	2/27/2017 5:52:00 PM	R41008

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1702B06

Date Reported: 2/28/2017

CLIENT: City of Las Cruces

Client Sample ID: IS1-170223

Project: Joint Superfund Project Center, Monthly

Collection Date: 2/23/2017 8:21:00 AM

Lab ID: 1702B06-003

Matrix: DRINKING W

Received Date: 2/24/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
Toluene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
Ethylbenzene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
Naphthalene	ND	2.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
1-Methylnaphthalene	ND	4.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
2-Methylnaphthalene	ND	4.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
Acetone	ND	10		µg/L	1	2/27/2017 6:16:00 PM	R41008
Bromobenzene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
Bromodichloromethane	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
Bromoform	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
Bromomethane	ND	3.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
2-Butanone	ND	10		µg/L	1	2/27/2017 6:16:00 PM	R41008
Carbon disulfide	ND	10		µg/L	1	2/27/2017 6:16:00 PM	R41008
Carbon Tetrachloride	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
Chlorobenzene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
Chloroethane	ND	2.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
Chloroform	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
Chloromethane	ND	3.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
2-Chlorotoluene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
4-Chlorotoluene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
cis-1,2-DCE	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
Dibromochloromethane	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
Dibromomethane	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
1,1-Dichloroethane	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
1,1-Dichloroethene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
1,2-Dichloropropane	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
1,3-Dichloropropane	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
2,2-Dichloropropane	ND	2.0		µg/L	1	2/27/2017 6:16:00 PM	R41008

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1702B06

Date Reported: 2/28/2017

CLIENT: City of Las Cruces

Client Sample ID: IS1-170223

Project: Joint Superfund Project Center, Monthly

Collection Date: 2/23/2017 8:21:00 AM

Lab ID: 1702B06-003

Matrix: DRINKING W

Received Date: 2/24/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
Hexachlorobutadiene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
2-Hexanone	ND	10		µg/L	1	2/27/2017 6:16:00 PM	R41008
Isopropylbenzene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
4-Isopropyltoluene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
4-Methyl-2-pentanone	ND	10		µg/L	1	2/27/2017 6:16:00 PM	R41008
Methylene Chloride	ND	3.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
n-Butylbenzene	ND	3.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
n-Propylbenzene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
sec-Butylbenzene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
Styrene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
tert-Butylbenzene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
Tetrachloroethene (PCE)	9.6	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
trans-1,2-DCE	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
Trichlorofluoromethane	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
Vinyl chloride	ND	1.0		µg/L	1	2/27/2017 6:16:00 PM	R41008
Xylenes, Total	ND	1.5		µg/L	1	2/27/2017 6:16:00 PM	R41008
Surr: 1,2-Dichloroethane-d4	115	70-130		%Rec	1	2/27/2017 6:16:00 PM	R41008
Surr: 4-Bromofluorobenzene	99.3	70-130		%Rec	1	2/27/2017 6:16:00 PM	R41008
Surr: Dibromofluoromethane	118	70-130		%Rec	1	2/27/2017 6:16:00 PM	R41008
Surr: Toluene-d8	105	70-130		%Rec	1	2/27/2017 6:16:00 PM	R41008

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1702B06

Date Reported: 2/28/2017

CLIENT: City of Las Cruces

Client Sample ID: C1-170223

Project: Joint Superfund Project Center, Monthly

Collection Date: 2/23/2017 8:28:00 AM

Lab ID: 1702B06-004

Matrix: DRINKING W

Received Date: 2/24/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
Toluene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
Ethylbenzene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
Naphthalene	ND	2.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
1-Methylnaphthalene	ND	4.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
2-Methylnaphthalene	ND	4.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
Acetone	ND	10		µg/L	1	2/27/2017 6:39:00 PM	R41008
Bromobenzene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
Bromodichloromethane	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
Bromoform	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
Bromomethane	ND	3.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
2-Butanone	ND	10		µg/L	1	2/27/2017 6:39:00 PM	R41008
Carbon disulfide	ND	10		µg/L	1	2/27/2017 6:39:00 PM	R41008
Carbon Tetrachloride	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
Chlorobenzene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
Chloroethane	ND	2.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
Chloroform	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
Chloromethane	ND	3.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
2-Chlorotoluene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
4-Chlorotoluene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
cis-1,2-DCE	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
Dibromochloromethane	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
Dibromomethane	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
1,1-Dichloroethane	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
1,1-Dichloroethene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
1,2-Dichloropropane	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
1,3-Dichloropropane	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
2,2-Dichloropropane	ND	2.0		µg/L	1	2/27/2017 6:39:00 PM	R41008

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1702B06

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Lab ID: 1702B06-004

Matrix: DRINKING W

Received Date: 2/24/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
Hexachlorobutadiene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
2-Hexanone	ND	10		µg/L	1	2/27/2017 6:39:00 PM	R41008
Isopropylbenzene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
4-Isopropyltoluene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
4-Methyl-2-pentanone	ND	10		µg/L	1	2/27/2017 6:39:00 PM	R41008
Methylene Chloride	ND	3.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
n-Butylbenzene	ND	3.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
n-Propylbenzene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
sec-Butylbenzene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
Styrene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
tert-Butylbenzene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
trans-1,2-DCE	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
Trichlorofluoromethane	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
Vinyl chloride	ND	1.0		µg/L	1	2/27/2017 6:39:00 PM	R41008
Xylenes, Total	ND	1.5		µg/L	1	2/27/2017 6:39:00 PM	R41008
Surr: 1,2-Dichloroethane-d4	90.5	70-130		%Rec	1	2/27/2017 6:39:00 PM	R41008
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	2/27/2017 6:39:00 PM	R41008
Surr: Dibromofluoromethane	107	70-130		%Rec	1	2/27/2017 6:39:00 PM	R41008
Surr: Toluene-d8	101	70-130		%Rec	1	2/27/2017 6:39:00 PM	R41008

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	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1702B06

Date Reported: 2/28/2017

CLIENT: City of Las Cruces

Client Sample ID: C2-170223

Project: Joint Superfund Project Center, Monthly

Collection Date: 2/23/2017 8:31:00 AM

Lab ID: 1702B06-005

Matrix: DRINKING W

Received Date: 2/24/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
Toluene	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
Ethylbenzene	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
Naphthalene	ND	2.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
1-Methylnaphthalene	ND	4.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
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Acetone	ND	10		µg/L	1	2/27/2017 7:03:00 PM	R41008
Bromobenzene	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
Bromodichloromethane	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
Bromoform	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
Bromomethane	ND	3.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
2-Butanone	ND	10		µg/L	1	2/27/2017 7:03:00 PM	R41008
Carbon disulfide	ND	10		µg/L	1	2/27/2017 7:03:00 PM	R41008
Carbon Tetrachloride	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
Chlorobenzene	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
Chloroethane	ND	2.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
Chloroform	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
Chloromethane	ND	3.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
2-Chlorotoluene	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
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cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
Dibromochloromethane	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
Dibromomethane	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
1,1-Dichloroethane	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
1,1-Dichloroethene	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
1,2-Dichloropropane	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
1,3-Dichloropropane	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
2,2-Dichloropropane	ND	2.0		µg/L	1	2/27/2017 7:03:00 PM	R41008

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Analytical Report

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2-Hexanone	ND	10		µg/L	1	2/27/2017 7:03:00 PM	R41008
Isopropylbenzene	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
4-Isopropyltoluene	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
4-Methyl-2-pentanone	ND	10		µg/L	1	2/27/2017 7:03:00 PM	R41008
Methylene Chloride	ND	3.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
n-Butylbenzene	ND	3.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
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Styrene	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
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1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
trans-1,2-DCE	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
Trichlorofluoromethane	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
Vinyl chloride	ND	1.0		µg/L	1	2/27/2017 7:03:00 PM	R41008
Xylenes, Total	ND	1.5		µg/L	1	2/27/2017 7:03:00 PM	R41008
Surr: 1,2-Dichloroethane-d4	120	70-130		%Rec	1	2/27/2017 7:03:00 PM	R41008
Surr: 4-Bromofluorobenzene	98.3	70-130		%Rec	1	2/27/2017 7:03:00 PM	R41008
Surr: Dibromofluoromethane	118	70-130		%Rec	1	2/27/2017 7:03:00 PM	R41008
Surr: Toluene-d8	101	70-130		%Rec	1	2/27/2017 7:03:00 PM	R41008

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	R RPD outside accepted recovery limits	RL Reporting Detection Limit
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Project: Joint Superfund Project Center, Monthly

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Ethylbenzene	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
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1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
Naphthalene	ND	2.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
1-Methylnaphthalene	ND	4.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
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Acetone	ND	10		µg/L	1	2/27/2017 7:26:00 PM	R41008
Bromobenzene	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
Bromodichloromethane	2.3	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
Bromoform	2.6	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
Bromomethane	ND	3.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
2-Butanone	ND	10		µg/L	1	2/27/2017 7:26:00 PM	R41008
Carbon disulfide	ND	10		µg/L	1	2/27/2017 7:26:00 PM	R41008
Carbon Tetrachloride	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
Chlorobenzene	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
Chloroethane	ND	2.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
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Chloromethane	ND	3.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
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4-Chlorotoluene	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
cis-1,2-DCE	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
Dibromochloromethane	3.6	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
Dibromomethane	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
1,1-Dichloroethane	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
1,1-Dichloroethene	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
1,2-Dichloropropane	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
1,3-Dichloropropane	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
2,2-Dichloropropane	ND	2.0		µg/L	1	2/27/2017 7:26:00 PM	R41008

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1702B06

Date Reported: 2/28/2017

CLIENT: City of Las Cruces

Client Sample ID: ES1-170223

Project: Joint Superfund Project Center, Monthly

Collection Date: 2/23/2017 8:34:00 AM

Lab ID: 1702B06-006

Matrix: DRINKING W

Received Date: 2/24/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
Hexachlorobutadiene	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
2-Hexanone	ND	10		µg/L	1	2/27/2017 7:26:00 PM	R41008
Isopropylbenzene	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
4-Isopropyltoluene	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
4-Methyl-2-pentanone	ND	10		µg/L	1	2/27/2017 7:26:00 PM	R41008
Methylene Chloride	ND	3.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
n-Butylbenzene	ND	3.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
n-Propylbenzene	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
sec-Butylbenzene	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
Styrene	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
tert-Butylbenzene	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
trans-1,2-DCE	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
Trichlorofluoromethane	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
Vinyl chloride	ND	1.0		µg/L	1	2/27/2017 7:26:00 PM	R41008
Xylenes, Total	ND	1.5		µg/L	1	2/27/2017 7:26:00 PM	R41008
Surr: 1,2-Dichloroethane-d4	91.0	70-130		%Rec	1	2/27/2017 7:26:00 PM	R41008
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	2/27/2017 7:26:00 PM	R41008
Surr: Dibromofluoromethane	111	70-130		%Rec	1	2/27/2017 7:26:00 PM	R41008
Surr: Toluene-d8	107	70-130		%Rec	1	2/27/2017 7:26:00 PM	R41008

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1702B06

Date Reported: 2/28/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC27-170223

Project: Joint Superfund Project Center, Monthly

Collection Date: 2/23/2017 8:02:00 AM

Lab ID: 1702B06-007

Matrix: DRINKING W

Received Date: 2/24/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
Toluene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
Ethylbenzene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
Naphthalene	ND	2.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
1-Methylnaphthalene	ND	4.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
2-Methylnaphthalene	ND	4.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
Acetone	ND	10		µg/L	1	2/27/2017 7:50:00 PM	R41008
Bromobenzene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
Bromodichloromethane	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
Bromoform	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
Bromomethane	ND	3.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
2-Butanone	ND	10		µg/L	1	2/27/2017 7:50:00 PM	R41008
Carbon disulfide	ND	10		µg/L	1	2/27/2017 7:50:00 PM	R41008
Carbon Tetrachloride	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
Chlorobenzene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
Chloroethane	ND	2.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
Chloroform	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
Chloromethane	ND	3.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
2-Chlorotoluene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
4-Chlorotoluene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
cis-1,2-DCE	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
Dibromochloromethane	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
Dibromomethane	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
1,1-Dichloroethane	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
1,1-Dichloroethene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
1,2-Dichloropropane	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
1,3-Dichloropropane	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
2,2-Dichloropropane	ND	2.0		µg/L	1	2/27/2017 7:50:00 PM	R41008

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1702B06

Date Reported: 2/28/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC27-170223

Project: Joint Superfund Project Center, Monthly

Collection Date: 2/23/2017 8:02:00 AM

Lab ID: 1702B06-007

Matrix: DRINKING W

Received Date: 2/24/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
Hexachlorobutadiene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
2-Hexanone	ND	10		µg/L	1	2/27/2017 7:50:00 PM	R41008
Isopropylbenzene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
4-Isopropyltoluene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
4-Methyl-2-pentanone	ND	10		µg/L	1	2/27/2017 7:50:00 PM	R41008
Methylene Chloride	ND	3.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
n-Butylbenzene	ND	3.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
n-Propylbenzene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
sec-Butylbenzene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
Styrene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
tert-Butylbenzene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
Tetrachloroethene (PCE)	16	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
trans-1,2-DCE	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
Trichlorofluoromethane	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
Vinyl chloride	ND	1.0		µg/L	1	2/27/2017 7:50:00 PM	R41008
Xylenes, Total	ND	1.5		µg/L	1	2/27/2017 7:50:00 PM	R41008
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	2/27/2017 7:50:00 PM	R41008
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	2/27/2017 7:50:00 PM	R41008
Surr: Dibromofluoromethane	114	70-130		%Rec	1	2/27/2017 7:50:00 PM	R41008
Surr: Toluene-d8	108	70-130		%Rec	1	2/27/2017 7:50:00 PM	R41008

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1702B06

28-Feb-17

Client: City of Las Cruces
Project: Joint Superfund Project Center, Monthly Analysis

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R41008		RunNo: 41008							
Prep Date:	Analysis Date: 2/27/2017		SeqNo: 1284869		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	104	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	93.2	70	130			
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.8	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	11		10.00		105	70	130			

Sample ID RB	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R41008		RunNo: 41008							
Prep Date:	Analysis Date: 2/27/2017		SeqNo: 1284877		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1702B06

28-Feb-17

Client: City of Las Cruces
Project: Joint Superfund Project Center, Monthly Analysis

Sample ID	RB	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R41008			RunNo: 41008					
Prep Date:		Analysis Date: 2/27/2017			SeqNo: 1284877		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1702B06

28-Feb-17

Client: City of Las Cruces
Project: Joint Superfund Project Center, Monthly Analysis

Sample ID	RB	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R41008		RunNo: 41008						
Prep Date:		Analysis Date: 2/27/2017		SeqNo: 1284877			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.2	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.5	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	10		10.00		105	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
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| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1702B06

RcptNo: 1

Received by/date: LM 02/24/17

Logged By: **Anne Thorne** 2/24/2017 9:08:00 AM *Anne Thorne*

Completed By: **Anne Thorne** 2/24/2017, 10:17:31 AM *Anne Thorne*

Reviewed By: *[Signature]* 02/24/17

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes No
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? (If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	1.4	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces
 Mailing Address: Water Quality Laboratory
P.O. Box 200001
Las Cruces, N.M. 88004
 Phone #: 575-528-3604
 email or Fax#: Guerra@las-cruces.org 528-3630
 QA/QC Package: Standard Level 4 (Full Validation)
 Accreditation: NELAP Other
 EDD (Type) _____
 Project Name: BP - Joint Superfund
 Project #: Project Center, Monthly Analysis
 Project Manager: ALJSP: Griggs Walnut
Luis Guerra
 575-528-3604
 Sampler: Luis Guerra
 On Ice: Yes No
 Sample Temperature: 14

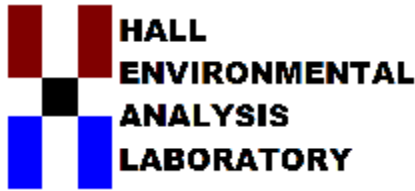
Turn-Around Time: Standard Rush
 Tel. 505-345-3975 Fax 505-345-4107
 www.hallenvironmental.com

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
2-23-17	0903	Drinking Water	CNC18-170223	320ml Vials	HgCl ₂	-001
2-23-17	0903	Drinking Water	CNC18-170223 Dup			002
2-23-17	0821	Drinking Water	151-170223			003
2-23-17	0828	Drinking Water	C1-170223			004
2-23-17	0831	Drinking Water	C2-170223			005
2-23-17	0834	Drinking Water	E51-170223			006
2-23-17	0802	Drinking Water	CNC27-170223	320ml Vials	HgCl ₂	007

BTEX + MTBE + TMBs (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCBs	8260B (VOC) / 8270 (Semi-VOC)	Air Bubbles (Y or N)
									X	
									X	
									X	
									X	
									X	
									X	
									X	

Date: 02-23-17 Time: 1500
 Relinquished by: [Signature]
 Date: 02-24-17 Time: 0908
 Received by: [Signature]
 Remarks: Send results to:
Luis Guerra: guerra@las-cruces.org
Joshua Rosenthal: jrosenthal@las-cruces.org
(Send invoice to CAC c/o Luis Guerra)

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 28, 2017

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: CLC Joint Superfund Project Center, Monthly Analysis

OrderNo.: 1703B92

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 2 sample(s) on 3/23/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703B92

Date Reported: 3/28/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1-170322

Project: CLC Joint Superfund Project Center, Mo

Collection Date: 3/22/2017 9:15:00 AM

Lab ID: 1703B92-001

Matrix: AIR

Received Date: 3/23/2017 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
Toluene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
Ethylbenzene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
Naphthalene	ND	0.20		µg/L	1	3/27/2017 2:25:47 PM	A41674
1-Methylnaphthalene	ND	0.40		µg/L	1	3/27/2017 2:25:47 PM	A41674
2-Methylnaphthalene	ND	0.40		µg/L	1	3/27/2017 2:25:47 PM	A41674
Acetone	ND	1.0		µg/L	1	3/27/2017 2:25:47 PM	A41674
Bromobenzene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
Bromodichloromethane	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
Bromoform	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
Bromomethane	ND	0.20		µg/L	1	3/27/2017 2:25:47 PM	A41674
2-Butanone	ND	1.0		µg/L	1	3/27/2017 2:25:47 PM	A41674
Carbon disulfide	ND	1.0		µg/L	1	3/27/2017 2:25:47 PM	A41674
Carbon tetrachloride	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
Chlorobenzene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
Chloroethane	ND	0.20		µg/L	1	3/27/2017 2:25:47 PM	A41674
Chloroform	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
Chloromethane	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
2-Chlorotoluene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
4-Chlorotoluene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
cis-1,2-DCE	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	3/27/2017 2:25:47 PM	A41674
Dibromochloromethane	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
Dibromomethane	ND	0.20		µg/L	1	3/27/2017 2:25:47 PM	A41674
1,2-Dichlorobenzene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
1,3-Dichlorobenzene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
1,4-Dichlorobenzene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
Dichlorodifluoromethane	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
1,1-Dichloroethane	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
1,1-Dichloroethene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
1,2-Dichloropropane	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
1,3-Dichloropropane	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
2,2-Dichloropropane	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 1 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703B92

Date Reported: 3/28/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1-170322

Project: CLC Joint Superfund Project Center, Mo

Collection Date: 3/22/2017 9:15:00 AM

Lab ID: 1703B92-001

Matrix: AIR

Received Date: 3/23/2017 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
Hexachlorobutadiene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
2-Hexanone	ND	1.0		µg/L	1	3/27/2017 2:25:47 PM	A41674
Isopropylbenzene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
4-Isopropyltoluene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
4-Methyl-2-pentanone	ND	1.0		µg/L	1	3/27/2017 2:25:47 PM	A41674
Methylene chloride	ND	0.30		µg/L	1	3/27/2017 2:25:47 PM	A41674
n-Butylbenzene	ND	0.30		µg/L	1	3/27/2017 2:25:47 PM	A41674
n-Propylbenzene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
sec-Butylbenzene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
Styrene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
tert-Butylbenzene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
trans-1,2-DCE	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
1,1,1-Trichloroethane	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
1,1,2-Trichloroethane	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
Trichloroethene (TCE)	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
Trichlorofluoromethane	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
1,2,3-Trichloropropane	ND	0.20		µg/L	1	3/27/2017 2:25:47 PM	A41674
Vinyl chloride	ND	0.10		µg/L	1	3/27/2017 2:25:47 PM	A41674
Xylenes, Total	ND	0.15		µg/L	1	3/27/2017 2:25:47 PM	A41674
Surr: Dibromofluoromethane	112	70-130		%Rec	1	3/27/2017 2:25:47 PM	A41674
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	3/27/2017 2:25:47 PM	A41674
Surr: Toluene-d8	95.7	70-130		%Rec	1	3/27/2017 2:25:47 PM	A41674
Surr: 4-Bromofluorobenzene	91.0	70-130		%Rec	1	3/27/2017 2:25:47 PM	A41674

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703B92

Date Reported: 3/28/2017

CLIENT: City of Las Cruces

Client Sample ID: AS2-170322

Project: CLC Joint Superfund Project Center, Mo

Collection Date: 3/22/2017 9:19:00 AM

Lab ID: 1703B92-002

Matrix: AIR

Received Date: 3/23/2017 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
Toluene	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
Ethylbenzene	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
Naphthalene	ND	0.20		µg/L	1	3/27/2017 2:54:30 PM	A41674
1-Methylnaphthalene	ND	0.40		µg/L	1	3/27/2017 2:54:30 PM	A41674
2-Methylnaphthalene	ND	0.40		µg/L	1	3/27/2017 2:54:30 PM	A41674
Acetone	ND	1.0		µg/L	1	3/27/2017 2:54:30 PM	A41674
Bromobenzene	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
Bromodichloromethane	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
Bromoform	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
Bromomethane	ND	0.20		µg/L	1	3/27/2017 2:54:30 PM	A41674
2-Butanone	ND	1.0		µg/L	1	3/27/2017 2:54:30 PM	A41674
Carbon disulfide	ND	1.0		µg/L	1	3/27/2017 2:54:30 PM	A41674
Carbon tetrachloride	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
Chlorobenzene	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
Chloroethane	ND	0.20		µg/L	1	3/27/2017 2:54:30 PM	A41674
Chloroform	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
Chloromethane	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
2-Chlorotoluene	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
4-Chlorotoluene	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
cis-1,2-DCE	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	3/27/2017 2:54:30 PM	A41674
Dibromochloromethane	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
Dibromomethane	ND	0.20		µg/L	1	3/27/2017 2:54:30 PM	A41674
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1,4-Dichlorobenzene	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
Dichlorodifluoromethane	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
1,1-Dichloroethane	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
1,1-Dichloroethene	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
1,2-Dichloropropane	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
1,3-Dichloropropane	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
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Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 3 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703B92

Date Reported: 3/28/2017

CLIENT: City of Las Cruces

Client Sample ID: AS2-170322

Project: CLC Joint Superfund Project Center, Mo

Collection Date: 3/22/2017 9:19:00 AM

Lab ID: 1703B92-002

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Received Date: 3/23/2017 9:10:00 AM

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1,1-Dichloropropene	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
Hexachlorobutadiene	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
2-Hexanone	ND	1.0		µg/L	1	3/27/2017 2:54:30 PM	A41674
Isopropylbenzene	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
4-Isopropyltoluene	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
4-Methyl-2-pentanone	ND	1.0		µg/L	1	3/27/2017 2:54:30 PM	A41674
Methylene chloride	ND	0.30		µg/L	1	3/27/2017 2:54:30 PM	A41674
n-Butylbenzene	ND	0.30		µg/L	1	3/27/2017 2:54:30 PM	A41674
n-Propylbenzene	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
sec-Butylbenzene	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
Styrene	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
tert-Butylbenzene	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
trans-1,2-DCE	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
1,1,1-Trichloroethane	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
1,1,2-Trichloroethane	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
Trichloroethene (TCE)	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
Trichlorofluoromethane	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
1,2,3-Trichloropropane	ND	0.20		µg/L	1	3/27/2017 2:54:30 PM	A41674
Vinyl chloride	ND	0.10		µg/L	1	3/27/2017 2:54:30 PM	A41674
Xylenes, Total	ND	0.15		µg/L	1	3/27/2017 2:54:30 PM	A41674
Surr: Dibromofluoromethane	111	70-130		%Rec	1	3/27/2017 2:54:30 PM	A41674
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	3/27/2017 2:54:30 PM	A41674
Surr: Toluene-d8	98.1	70-130		%Rec	1	3/27/2017 2:54:30 PM	A41674
Surr: 4-Bromofluorobenzene	86.1	70-130		%Rec	1	3/27/2017 2:54:30 PM	A41674

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1703B92

RcptNo: 1

Received by/date: EM 03/23/17

Logged By: **Lindsay Mangin** 3/23/2017 9:10:00 AM *[Signature]*

Completed By: **Lindsay Mangin** 3/23/2017 11:59:21 AM *[Signature]*

Reviewed By: AS 03/23/17

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	NA	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
 Mailing Address: P.O. Box 20000
Las Cruces, N.M. 88004
 Phone #: 575-528-3604
 email or Fax#: lguerra@labstnms.org / 575-528-3630
 Standard Level 4 (Full Validation)
 Standard Other _____
 Accreditation
 NELAP Other _____
 EDD (Type) _____

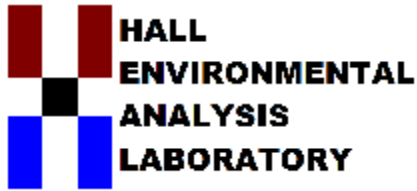
Turn-Around Time:
 Standard Rush
 Project Name: JSP Joint Superfund
Project Contn, Monthly analysis
 Project #: _____
CLC-JSP: Griegs Walnut
 Project Manager: Luis Guerra
575-528-3609
 Sampler: Luis Guerra
 On Ice: Yes No
 Sample Temperature: N/A

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
<u>3-22-17</u>	<u>0915</u>	<u>AIR</u>	<u>451-170322</u>	<u>Tiger Box</u>	<u>None</u>	<u>170322</u>
<u>3-22-17</u>	<u>0919</u>	<u>AIR</u>	<u>452-170322</u>	<u>Tiger Box</u>	<u>None</u>	<u>-002</u>

BTEX + MTBE + TMBs (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAHs (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F ⁻ , Cl ⁻ , NO ₃ ⁻ , NO ₂ ⁻ , PO ₄ ³⁻ , SO ₄ ²⁻)	8081 Pesticides / 8082 PCBs	8260B (VQA) VOC	8270 (Semi-VQA)	Air Bubbles (Y or N)

Received by: [Signature] Date: 3/23/17 Time: 9:10
 Relinquished by: [Signature]
 Received by: [Signature] Date: _____ Time: _____
 Relinquished by: _____
 Remarks: Send Results to:
Luis Guerra: lguerra@labstnms.org
Wishu Rpserratti: rpserratti@labstnms.org
Send invoice to CR of Luis Guerra

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 27, 2017

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: Joint Superfund Project Center, Monthly Analysis

OrderNo.: 1703B96

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 3/23/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703B96

Date Reported: 3/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC18-170322

Project: Joint Superfund Project Center, Monthly

Collection Date: 3/22/2017 9:04:00 AM

Lab ID: 1703B96-001

Matrix: DRINKING W

Received Date: 3/23/2017 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
Toluene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
Ethylbenzene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
Naphthalene	ND	2.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
1-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
2-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
Acetone	ND	10		µg/L	1	3/24/2017 11:56:39 AM	R41654
Bromobenzene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
Bromodichloromethane	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
Bromoform	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
Bromomethane	ND	3.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
2-Butanone	ND	10		µg/L	1	3/24/2017 11:56:39 AM	R41654
Carbon disulfide	ND	10		µg/L	1	3/24/2017 11:56:39 AM	R41654
Carbon Tetrachloride	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
Chlorobenzene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
Chloroethane	ND	2.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
Chloroform	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
Chloromethane	ND	3.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
2-Chlorotoluene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
4-Chlorotoluene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
cis-1,2-DCE	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
Dibromochloromethane	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
Dibromomethane	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
1,1-Dichloroethane	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
1,1-Dichloroethene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
1,2-Dichloropropane	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
1,3-Dichloropropane	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
2,2-Dichloropropane	ND	2.0		µg/L	1	3/24/2017 11:56:39 AM	R41654

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703B96

Date Reported: 3/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC18-170322

Project: Joint Superfund Project Center, Monthly

Collection Date: 3/22/2017 9:04:00 AM

Lab ID: 1703B96-001

Matrix: DRINKING W

Received Date: 3/23/2017 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
Hexachlorobutadiene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
2-Hexanone	ND	10		µg/L	1	3/24/2017 11:56:39 AM	R41654
Isopropylbenzene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
4-Isopropyltoluene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
4-Methyl-2-pentanone	ND	10		µg/L	1	3/24/2017 11:56:39 AM	R41654
Methylene Chloride	ND	3.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
n-Butylbenzene	ND	3.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
n-Propylbenzene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
sec-Butylbenzene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
Styrene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
tert-Butylbenzene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
Tetrachloroethene (PCE)	13	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
trans-1,2-DCE	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
Trichlorofluoromethane	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
Vinyl chloride	ND	1.0		µg/L	1	3/24/2017 11:56:39 AM	R41654
Xylenes, Total	ND	1.5		µg/L	1	3/24/2017 11:56:39 AM	R41654
Surr: 1,2-Dichloroethane-d4	97.2	70-130		%Rec	1	3/24/2017 11:56:39 AM	R41654
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	3/24/2017 11:56:39 AM	R41654
Surr: Dibromofluoromethane	99.0	70-130		%Rec	1	3/24/2017 11:56:39 AM	R41654
Surr: Toluene-d8	98.2	70-130		%Rec	1	3/24/2017 11:56:39 AM	R41654

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703B96

Date Reported: 3/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC27-170322

Project: Joint Superfund Project Center, Monthly

Collection Date: 3/22/2017 9:32:00 AM

Lab ID: 1703B96-002

Matrix: DRINKING W

Received Date: 3/23/2017 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
Toluene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
Ethylbenzene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
Naphthalene	ND	2.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
1-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
2-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
Acetone	ND	10		µg/L	1	3/24/2017 12:25:29 PM	R41654
Bromobenzene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
Bromodichloromethane	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
Bromoform	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
Bromomethane	ND	3.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
2-Butanone	ND	10		µg/L	1	3/24/2017 12:25:29 PM	R41654
Carbon disulfide	ND	10		µg/L	1	3/24/2017 12:25:29 PM	R41654
Carbon Tetrachloride	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
Chlorobenzene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
Chloroethane	ND	2.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
Chloroform	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
Chloromethane	ND	3.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
2-Chlorotoluene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
4-Chlorotoluene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
cis-1,2-DCE	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
Dibromochloromethane	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
Dibromomethane	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
1,1-Dichloroethane	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
1,1-Dichloroethene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
1,2-Dichloropropane	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
1,3-Dichloropropane	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
2,2-Dichloropropane	ND	2.0		µg/L	1	3/24/2017 12:25:29 PM	R41654

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703B96

Date Reported: 3/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC27-170322

Project: Joint Superfund Project Center, Monthly

Collection Date: 3/22/2017 9:32:00 AM

Lab ID: 1703B96-002

Matrix: DRINKING W

Received Date: 3/23/2017 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
Hexachlorobutadiene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
2-Hexanone	ND	10		µg/L	1	3/24/2017 12:25:29 PM	R41654
Isopropylbenzene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
4-Isopropyltoluene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
4-Methyl-2-pentanone	ND	10		µg/L	1	3/24/2017 12:25:29 PM	R41654
Methylene Chloride	ND	3.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
n-Butylbenzene	ND	3.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
n-Propylbenzene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
sec-Butylbenzene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
Styrene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
tert-Butylbenzene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
Tetrachloroethene (PCE)	13	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
trans-1,2-DCE	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
Trichlorofluoromethane	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
Vinyl chloride	ND	1.0		µg/L	1	3/24/2017 12:25:29 PM	R41654
Xylenes, Total	ND	1.5		µg/L	1	3/24/2017 12:25:29 PM	R41654
Surr: 1,2-Dichloroethane-d4	99.2	70-130		%Rec	1	3/24/2017 12:25:29 PM	R41654
Surr: 4-Bromofluorobenzene	109	70-130		%Rec	1	3/24/2017 12:25:29 PM	R41654
Surr: Dibromofluoromethane	102	70-130		%Rec	1	3/24/2017 12:25:29 PM	R41654
Surr: Toluene-d8	97.3	70-130		%Rec	1	3/24/2017 12:25:29 PM	R41654

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703B96

Date Reported: 3/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC27-170322DUP

Project: Joint Superfund Project Center, Monthly

Collection Date: 3/22/2017 9:32:00 AM

Lab ID: 1703B96-003

Matrix: DRINKING W

Received Date: 3/23/2017 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
Toluene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
Ethylbenzene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
Naphthalene	ND	2.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
1-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
2-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
Acetone	ND	10		µg/L	1	3/24/2017 12:54:11 PM	R41654
Bromobenzene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
Bromodichloromethane	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
Bromoform	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
Bromomethane	ND	3.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
2-Butanone	ND	10		µg/L	1	3/24/2017 12:54:11 PM	R41654
Carbon disulfide	ND	10		µg/L	1	3/24/2017 12:54:11 PM	R41654
Carbon Tetrachloride	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
Chlorobenzene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
Chloroethane	ND	2.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
Chloroform	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
Chloromethane	ND	3.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
2-Chlorotoluene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
4-Chlorotoluene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
cis-1,2-DCE	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
Dibromochloromethane	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
Dibromomethane	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
1,1-Dichloroethane	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
1,1-Dichloroethene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
1,2-Dichloropropane	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
1,3-Dichloropropane	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
2,2-Dichloropropane	ND	2.0		µg/L	1	3/24/2017 12:54:11 PM	R41654

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703B96

Date Reported: 3/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC27-170322DUP

Project: Joint Superfund Project Center, Monthly

Collection Date: 3/22/2017 9:32:00 AM

Lab ID: 1703B96-003

Matrix: DRINKING W

Received Date: 3/23/2017 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
Hexachlorobutadiene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
2-Hexanone	ND	10		µg/L	1	3/24/2017 12:54:11 PM	R41654
Isopropylbenzene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
4-Isopropyltoluene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
4-Methyl-2-pentanone	ND	10		µg/L	1	3/24/2017 12:54:11 PM	R41654
Methylene Chloride	ND	3.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
n-Butylbenzene	ND	3.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
n-Propylbenzene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
sec-Butylbenzene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
Styrene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
tert-Butylbenzene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
Tetrachloroethene (PCE)	12	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
trans-1,2-DCE	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
Trichlorofluoromethane	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
Vinyl chloride	ND	1.0		µg/L	1	3/24/2017 12:54:11 PM	R41654
Xylenes, Total	ND	1.5		µg/L	1	3/24/2017 12:54:11 PM	R41654
Surr: 1,2-Dichloroethane-d4	98.7	70-130		%Rec	1	3/24/2017 12:54:11 PM	R41654
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	3/24/2017 12:54:11 PM	R41654
Surr: Dibromofluoromethane	101	70-130		%Rec	1	3/24/2017 12:54:11 PM	R41654
Surr: Toluene-d8	96.8	70-130		%Rec	1	3/24/2017 12:54:11 PM	R41654

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703B96

Date Reported: 3/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLCIS1-170322

Project: Joint Superfund Project Center, Monthly

Collection Date: 3/22/2017 9:10:00 AM

Lab ID: 1703B96-004

Matrix: DRINKING W

Received Date: 3/23/2017 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
Toluene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
Ethylbenzene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
Naphthalene	ND	2.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
1-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
2-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
Acetone	ND	10		µg/L	1	3/24/2017 1:23:15 PM	R41654
Bromobenzene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
Bromodichloromethane	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
Bromoform	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
Bromomethane	ND	3.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
2-Butanone	ND	10		µg/L	1	3/24/2017 1:23:15 PM	R41654
Carbon disulfide	ND	10		µg/L	1	3/24/2017 1:23:15 PM	R41654
Carbon Tetrachloride	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
Chlorobenzene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
Chloroethane	ND	2.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
Chloroform	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
Chloromethane	ND	3.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
2-Chlorotoluene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
4-Chlorotoluene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
cis-1,2-DCE	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
Dibromochloromethane	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
Dibromomethane	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
1,1-Dichloroethane	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
1,1-Dichloroethene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
1,2-Dichloropropane	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
1,3-Dichloropropane	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
2,2-Dichloropropane	ND	2.0		µg/L	1	3/24/2017 1:23:15 PM	R41654

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703B96

Date Reported: 3/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLCIS1-170322

Project: Joint Superfund Project Center, Monthly

Collection Date: 3/22/2017 9:10:00 AM

Lab ID: 1703B96-004

Matrix: DRINKING W

Received Date: 3/23/2017 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
Hexachlorobutadiene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
2-Hexanone	ND	10		µg/L	1	3/24/2017 1:23:15 PM	R41654
Isopropylbenzene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
4-Isopropyltoluene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
4-Methyl-2-pentanone	ND	10		µg/L	1	3/24/2017 1:23:15 PM	R41654
Methylene Chloride	ND	3.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
n-Butylbenzene	ND	3.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
n-Propylbenzene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
sec-Butylbenzene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
Styrene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
tert-Butylbenzene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
Tetrachloroethene (PCE)	11	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
trans-1,2-DCE	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
Trichlorofluoromethane	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
Vinyl chloride	ND	1.0		µg/L	1	3/24/2017 1:23:15 PM	R41654
Xylenes, Total	ND	1.5		µg/L	1	3/24/2017 1:23:15 PM	R41654
Surr: 1,2-Dichloroethane-d4	95.9	70-130		%Rec	1	3/24/2017 1:23:15 PM	R41654
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	1	3/24/2017 1:23:15 PM	R41654
Surr: Dibromofluoromethane	98.0	70-130		%Rec	1	3/24/2017 1:23:15 PM	R41654
Surr: Toluene-d8	101	70-130		%Rec	1	3/24/2017 1:23:15 PM	R41654

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703B96

Date Reported: 3/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-170322

Project: Joint Superfund Project Center, Monthly

Collection Date: 3/22/2017 9:15:00 AM

Lab ID: 1703B96-005

Matrix: DRINKING W

Received Date: 3/23/2017 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
Toluene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
Ethylbenzene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
Naphthalene	ND	2.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
1-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
2-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
Acetone	ND	10		µg/L	1	3/24/2017 1:52:40 PM	R41654
Bromobenzene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
Bromodichloromethane	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
Bromoform	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
Bromomethane	ND	3.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
2-Butanone	ND	10		µg/L	1	3/24/2017 1:52:40 PM	R41654
Carbon disulfide	ND	10		µg/L	1	3/24/2017 1:52:40 PM	R41654
Carbon Tetrachloride	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
Chlorobenzene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
Chloroethane	ND	2.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
Chloroform	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
Chloromethane	ND	3.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
2-Chlorotoluene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
4-Chlorotoluene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
cis-1,2-DCE	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
Dibromochloromethane	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
Dibromomethane	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
1,1-Dichloroethane	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
1,1-Dichloroethene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
1,2-Dichloropropane	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
1,3-Dichloropropane	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
2,2-Dichloropropane	ND	2.0		µg/L	1	3/24/2017 1:52:40 PM	R41654

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703B96

Date Reported: 3/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-170322

Project: Joint Superfund Project Center, Monthly

Collection Date: 3/22/2017 9:15:00 AM

Lab ID: 1703B96-005

Matrix: DRINKING W

Received Date: 3/23/2017 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
Hexachlorobutadiene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
2-Hexanone	ND	10		µg/L	1	3/24/2017 1:52:40 PM	R41654
Isopropylbenzene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
4-Isopropyltoluene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
4-Methyl-2-pentanone	ND	10		µg/L	1	3/24/2017 1:52:40 PM	R41654
Methylene Chloride	ND	3.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
n-Butylbenzene	ND	3.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
n-Propylbenzene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
sec-Butylbenzene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
Styrene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
tert-Butylbenzene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
trans-1,2-DCE	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
Trichlorofluoromethane	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
Vinyl chloride	ND	1.0		µg/L	1	3/24/2017 1:52:40 PM	R41654
Xylenes, Total	ND	1.5		µg/L	1	3/24/2017 1:52:40 PM	R41654
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	3/24/2017 1:52:40 PM	R41654
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	3/24/2017 1:52:40 PM	R41654
Surr: Dibromofluoromethane	105	70-130		%Rec	1	3/24/2017 1:52:40 PM	R41654
Surr: Toluene-d8	98.4	70-130		%Rec	1	3/24/2017 1:52:40 PM	R41654

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703B96

Date Reported: 3/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-170322

Project: Joint Superfund Project Center, Monthly

Collection Date: 3/22/2017 9:18:00 AM

Lab ID: 1703B96-006

Matrix: DRINKING W

Received Date: 3/23/2017 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
Toluene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
Ethylbenzene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
Naphthalene	ND	2.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
1-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
2-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
Acetone	ND	10		µg/L	1	3/24/2017 2:21:36 PM	R41654
Bromobenzene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
Bromodichloromethane	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
Bromoform	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
Bromomethane	ND	3.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
2-Butanone	ND	10		µg/L	1	3/24/2017 2:21:36 PM	R41654
Carbon disulfide	ND	10		µg/L	1	3/24/2017 2:21:36 PM	R41654
Carbon Tetrachloride	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
Chlorobenzene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
Chloroethane	ND	2.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
Chloroform	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
Chloromethane	ND	3.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
2-Chlorotoluene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
4-Chlorotoluene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
cis-1,2-DCE	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
Dibromochloromethane	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
Dibromomethane	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
1,1-Dichloroethane	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
1,1-Dichloroethene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
1,2-Dichloropropane	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
1,3-Dichloropropane	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
2,2-Dichloropropane	ND	2.0		µg/L	1	3/24/2017 2:21:36 PM	R41654

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703B96

Date Reported: 3/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-170322

Project: Joint Superfund Project Center, Monthly

Collection Date: 3/22/2017 9:18:00 AM

Lab ID: 1703B96-006

Matrix: DRINKING W

Received Date: 3/23/2017 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
Hexachlorobutadiene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
2-Hexanone	ND	10		µg/L	1	3/24/2017 2:21:36 PM	R41654
Isopropylbenzene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
4-Isopropyltoluene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
4-Methyl-2-pentanone	ND	10		µg/L	1	3/24/2017 2:21:36 PM	R41654
Methylene Chloride	ND	3.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
n-Butylbenzene	ND	3.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
n-Propylbenzene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
sec-Butylbenzene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
Styrene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
tert-Butylbenzene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
trans-1,2-DCE	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
Trichlorofluoromethane	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
Vinyl chloride	ND	1.0		µg/L	1	3/24/2017 2:21:36 PM	R41654
Xylenes, Total	ND	1.5		µg/L	1	3/24/2017 2:21:36 PM	R41654
Surr: 1,2-Dichloroethane-d4	99.3	70-130		%Rec	1	3/24/2017 2:21:36 PM	R41654
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	3/24/2017 2:21:36 PM	R41654
Surr: Dibromofluoromethane	101	70-130		%Rec	1	3/24/2017 2:21:36 PM	R41654
Surr: Toluene-d8	101	70-130		%Rec	1	3/24/2017 2:21:36 PM	R41654

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703B96

Date Reported: 3/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-17322

Project: Joint Superfund Project Center, Monthly

Collection Date: 3/22/2017 9:22:00 AM

Lab ID: 1703B96-007

Matrix: DRINKING W

Received Date: 3/23/2017 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
Toluene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
Ethylbenzene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
Naphthalene	ND	2.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
1-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
2-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
Acetone	ND	10		µg/L	1	3/24/2017 2:50:19 PM	R41654
Bromobenzene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
Bromodichloromethane	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
Bromoform	5.6	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
Bromomethane	ND	3.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
2-Butanone	ND	10		µg/L	1	3/24/2017 2:50:19 PM	R41654
Carbon disulfide	ND	10		µg/L	1	3/24/2017 2:50:19 PM	R41654
Carbon Tetrachloride	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
Chlorobenzene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
Chloroethane	ND	2.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
Chloroform	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
Chloromethane	ND	3.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
2-Chlorotoluene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
4-Chlorotoluene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
cis-1,2-DCE	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
Dibromochloromethane	1.4	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
Dibromomethane	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
1,1-Dichloroethane	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
1,1-Dichloroethene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
1,2-Dichloropropane	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
1,3-Dichloropropane	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
2,2-Dichloropropane	ND	2.0		µg/L	1	3/24/2017 2:50:19 PM	R41654

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1703B96

Date Reported: 3/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-17322

Project: Joint Superfund Project Center, Monthly

Collection Date: 3/22/2017 9:22:00 AM

Lab ID: 1703B96-007

Matrix: DRINKING W

Received Date: 3/23/2017 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
Hexachlorobutadiene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
2-Hexanone	ND	10		µg/L	1	3/24/2017 2:50:19 PM	R41654
Isopropylbenzene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
4-Isopropyltoluene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
4-Methyl-2-pentanone	ND	10		µg/L	1	3/24/2017 2:50:19 PM	R41654
Methylene Chloride	ND	3.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
n-Butylbenzene	ND	3.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
n-Propylbenzene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
sec-Butylbenzene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
Styrene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
tert-Butylbenzene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
trans-1,2-DCE	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
Trichlorofluoromethane	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
Vinyl chloride	ND	1.0		µg/L	1	3/24/2017 2:50:19 PM	R41654
Xylenes, Total	ND	1.5		µg/L	1	3/24/2017 2:50:19 PM	R41654
Surr: 1,2-Dichloroethane-d4	99.8	70-130		%Rec	1	3/24/2017 2:50:19 PM	R41654
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	3/24/2017 2:50:19 PM	R41654
Surr: Dibromofluoromethane	100	70-130		%Rec	1	3/24/2017 2:50:19 PM	R41654
Surr: Toluene-d8	103	70-130		%Rec	1	3/24/2017 2:50:19 PM	R41654

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1703B96

27-Mar-17

Client: City of Las Cruces
Project: Joint Superfund Project Center, Monthly Analysis

Sample ID: 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R41654		RunNo: 41654							
Prep Date:	Analysis Date: 3/24/2017		SeqNo: 1306680				Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.0	70	130			
Toluene	19	1.0	20.00	0	93.7	70	130			
Chlorobenzene	19	1.0	20.00	0	94.4	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	102	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	88.2	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		98.8	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	10		10.00		99.9	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID: rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R41654		RunNo: 41654							
Prep Date:	Analysis Date: 3/24/2017		SeqNo: 1306681				Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1703B96

27-Mar-17

Client: City of Las Cruces
Project: Joint Superfund Project Center, Monthly Analysis

Sample ID	rb	SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID:	R41654		RunNo:	41654				
Prep Date:		Analysis Date:	3/24/2017		SeqNo:	1306681	Units:	µg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1703B96

27-Mar-17

Client: City of Las Cruces
Project: Joint Superfund Project Center, Monthly Analysis

Sample ID	rb	SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID:	R41654		RunNo:	41654				
Prep Date:		Analysis Date:	3/24/2017		SeqNo:	1306681	Units:	µg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.1	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.5		10.00		95.4	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

Sample Log-In Check List

Client Name: City of Las Cruces Work Order Number: 1703B96 RcptNo: 1

Received by/date: EM 03/23/17

Logged By: Lindsay Mangin 3/23/2017 9:10:00 AM *[Signature]*

Completed By: Lindsay Mangin 3/23/2017 12:11:52 PM *[Signature]*

Reviewed By: as 03/23/17

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes No
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? (If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
 Mailing Address: P.O. Box 20060
Las Cruces, N.M. 88004
 Phone #: 575-528-3604
 email or Fax#: lguminales-cruces.org 575-528-3604
 OAVOC Package: Level 4 (Full Validation)
 Standard Other _____
 Accreditation
 NELAP Other _____
 EDD (Type) _____

Turn-Around Time: Standard Rush
 Project Name: Joint Superior Project
Center, Monthly Analysis
 Project #: _____
CJCJSP Grants without
 Project Manager: Luis Guzman
Luis Guzman
575-528-3604
 Sampler: Luis Guzman
 On Ice: Yes No
 Sample Temperature: 1.0°C

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
3-22-17	0904	Primary Water	CJC 18-170322	340ml Vials	HgCl ₂	1703B916
	0932	Primary Water	CJC 27-170322			-001
	0932	Primary Water	CJC 27-170322 DIF			-002
	0910	Primary Water	CJC IS1-170322			-003
	0915	Primary Water	CJC C1-170322			-004
	0918	Primary Water	CJC C2-170322			-005
3-22-17	0922	Primary Water	CJC C2-170322 ESI	340ml Vials	HgCl ₂	-006
			per YADINA			-007
			of 03/23/17			

Date: 3-22-17 Time: 1500 Relinquished by: [Signature]
 Date: 3-22-17 Time: _____ Relinquished by: _____
 Received by: [Signature] Date: 03/23/17 Time: 9:10
 Received by: _____ Date: _____ Time: _____



HALL ENVIRONMENTAL ANALYSIS LABORATORY

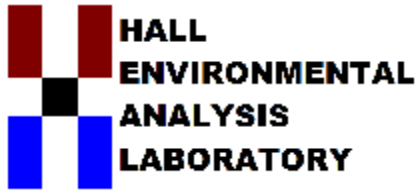
www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX + MTBE + TMB's (8021)	
BTEX + MTBE + TPH (Gas only)	
TPH 8015B (GRO / DRO / MRO)	
TPH (Method 418.1)	
EDB (Method 504.1)	
PAH's (8310 or 8270 SIMS)	
RCRA 8 Metals	
Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	
8081 Pesticides / 8082 PCB's	X
8260B (VOA) VOC	X
8270 (Semi-VOA)	X

Remarks: Send Results to:
Luis Guzman: lguminales-cruces.org
Joshua Fyanklett: jfyanklett@las-cruces.org
(Send invoice to CJC C/O Luis Guzman)

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 02, 2017

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: Joint Superfund Project Center Monthly Analysis

OrderNo.: 1704B63

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 2 sample(s) on 4/26/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1704B63

Date Reported: 5/2/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1-170425

Project: Joint Superfund Project Center Monthly

Collection Date: 4/25/2017 9:19:00 AM

Lab ID: 1704B63-001

Matrix: AIR

Received Date: 4/26/2017 9:03:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
Toluene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
Ethylbenzene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
Naphthalene	ND	0.20		µg/L	1	5/1/2017 12:36:40 PM	B42478
1-Methylnaphthalene	ND	0.40		µg/L	1	5/1/2017 12:36:40 PM	B42478
2-Methylnaphthalene	ND	0.40		µg/L	1	5/1/2017 12:36:40 PM	B42478
Acetone	ND	1.0		µg/L	1	5/1/2017 12:36:40 PM	B42478
Bromobenzene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
Bromodichloromethane	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
Bromoform	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
Bromomethane	ND	0.20		µg/L	1	5/1/2017 12:36:40 PM	B42478
2-Butanone	ND	1.0		µg/L	1	5/1/2017 12:36:40 PM	B42478
Carbon disulfide	ND	1.0		µg/L	1	5/1/2017 12:36:40 PM	B42478
Carbon tetrachloride	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
Chlorobenzene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
Chloroethane	ND	0.20		µg/L	1	5/1/2017 12:36:40 PM	B42478
Chloroform	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
Chloromethane	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
2-Chlorotoluene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
4-Chlorotoluene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
cis-1,2-DCE	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	5/1/2017 12:36:40 PM	B42478
Dibromochloromethane	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
Dibromomethane	ND	0.20		µg/L	1	5/1/2017 12:36:40 PM	B42478
1,2-Dichlorobenzene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
1,3-Dichlorobenzene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
1,4-Dichlorobenzene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
Dichlorodifluoromethane	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
1,1-Dichloroethane	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
1,1-Dichloroethene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
1,2-Dichloropropane	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
1,3-Dichloropropane	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
2,2-Dichloropropane	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 1 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1704B63

Date Reported: 5/2/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1-170425

Project: Joint Superfund Project Center Monthly

Collection Date: 4/25/2017 9:19:00 AM

Lab ID: 1704B63-001

Matrix: AIR

Received Date: 4/26/2017 9:03:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
Hexachlorobutadiene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
2-Hexanone	ND	1.0		µg/L	1	5/1/2017 12:36:40 PM	B42478
Isopropylbenzene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
4-Isopropyltoluene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
4-Methyl-2-pentanone	ND	1.0		µg/L	1	5/1/2017 12:36:40 PM	B42478
Methylene chloride	ND	0.30		µg/L	1	5/1/2017 12:36:40 PM	B42478
n-Butylbenzene	ND	0.30		µg/L	1	5/1/2017 12:36:40 PM	B42478
n-Propylbenzene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
sec-Butylbenzene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
Styrene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
tert-Butylbenzene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
trans-1,2-DCE	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
1,1,1-Trichloroethane	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
1,1,2-Trichloroethane	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
Trichloroethene (TCE)	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
Trichlorofluoromethane	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
1,2,3-Trichloropropane	ND	0.20		µg/L	1	5/1/2017 12:36:40 PM	B42478
Vinyl chloride	ND	0.10		µg/L	1	5/1/2017 12:36:40 PM	B42478
Xylenes, Total	ND	0.15		µg/L	1	5/1/2017 12:36:40 PM	B42478
Surr: Dibromofluoromethane	94.4	70-130		%Rec	1	5/1/2017 12:36:40 PM	B42478
Surr: 1,2-Dichloroethane-d4	86.1	70-130		%Rec	1	5/1/2017 12:36:40 PM	B42478
Surr: Toluene-d8	104	70-130		%Rec	1	5/1/2017 12:36:40 PM	B42478
Surr: 4-Bromofluorobenzene	99.5	70-130		%Rec	1	5/1/2017 12:36:40 PM	B42478

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 2 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1704B63

Date Reported: 5/2/2017

CLIENT: City of Las Cruces

Client Sample ID: AS2-170425

Project: Joint Superfund Project Center Monthly

Collection Date: 4/25/2017 9:27:00 AM

Lab ID: 1704B63-002

Matrix: AIR

Received Date: 4/26/2017 9:03:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
Toluene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
Ethylbenzene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
Naphthalene	ND	0.20		µg/L	1	5/1/2017 1:34:22 PM	B42478
1-Methylnaphthalene	ND	0.40		µg/L	1	5/1/2017 1:34:22 PM	B42478
2-Methylnaphthalene	ND	0.40		µg/L	1	5/1/2017 1:34:22 PM	B42478
Acetone	ND	1.0		µg/L	1	5/1/2017 1:34:22 PM	B42478
Bromobenzene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
Bromodichloromethane	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
Bromoform	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
Bromomethane	ND	0.20		µg/L	1	5/1/2017 1:34:22 PM	B42478
2-Butanone	ND	1.0		µg/L	1	5/1/2017 1:34:22 PM	B42478
Carbon disulfide	ND	1.0		µg/L	1	5/1/2017 1:34:22 PM	B42478
Carbon tetrachloride	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
Chlorobenzene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
Chloroethane	ND	0.20		µg/L	1	5/1/2017 1:34:22 PM	B42478
Chloroform	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
Chloromethane	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
2-Chlorotoluene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
4-Chlorotoluene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
cis-1,2-DCE	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	5/1/2017 1:34:22 PM	B42478
Dibromochloromethane	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
Dibromomethane	ND	0.20		µg/L	1	5/1/2017 1:34:22 PM	B42478
1,2-Dichlorobenzene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
1,3-Dichlorobenzene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
1,4-Dichlorobenzene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
Dichlorodifluoromethane	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
1,1-Dichloroethane	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
1,1-Dichloroethene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
1,2-Dichloropropane	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
1,3-Dichloropropane	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
2,2-Dichloropropane	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 3 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1704B63

Date Reported: 5/2/2017

CLIENT: City of Las Cruces

Client Sample ID: AS2-170425

Project: Joint Superfund Project Center Monthly

Collection Date: 4/25/2017 9:27:00 AM

Lab ID: 1704B63-002

Matrix: AIR

Received Date: 4/26/2017 9:03:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
Hexachlorobutadiene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
2-Hexanone	ND	1.0		µg/L	1	5/1/2017 1:34:22 PM	B42478
Isopropylbenzene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
4-Isopropyltoluene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
4-Methyl-2-pentanone	ND	1.0		µg/L	1	5/1/2017 1:34:22 PM	B42478
Methylene chloride	ND	0.30		µg/L	1	5/1/2017 1:34:22 PM	B42478
n-Butylbenzene	ND	0.30		µg/L	1	5/1/2017 1:34:22 PM	B42478
n-Propylbenzene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
sec-Butylbenzene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
Styrene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
tert-Butylbenzene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
trans-1,2-DCE	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
1,1,1-Trichloroethane	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
1,1,2-Trichloroethane	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
Trichloroethene (TCE)	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
Trichlorofluoromethane	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
1,2,3-Trichloropropane	ND	0.20		µg/L	1	5/1/2017 1:34:22 PM	B42478
Vinyl chloride	ND	0.10		µg/L	1	5/1/2017 1:34:22 PM	B42478
Xylenes, Total	ND	0.15		µg/L	1	5/1/2017 1:34:22 PM	B42478
Surr: Dibromofluoromethane	91.8	70-130		%Rec	1	5/1/2017 1:34:22 PM	B42478
Surr: 1,2-Dichloroethane-d4	84.1	70-130		%Rec	1	5/1/2017 1:34:22 PM	B42478
Surr: Toluene-d8	106	70-130		%Rec	1	5/1/2017 1:34:22 PM	B42478
Surr: 4-Bromofluorobenzene	99.4	70-130		%Rec	1	5/1/2017 1:34:22 PM	B42478

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1704B63

RcptNo: 1

Received By: Lindsay Mangin 4/26/2017 9:03:00 AM

Completed By: Ashley Gallegos 4/26/2017 10:42:45 AM

Reviewed By: SRE 04/26/17

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
 - 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 - 6. Sample(s) in proper container(s)? Yes No
 - 7. Sufficient sample volume for indicated test(s)? Yes No
 - 8. Are samples (except VOA and ONG) properly preserved? Yes No
 - 9. Was preservative added to bottles? Yes No NA
 - 10. VOA vials have zero headspace? Yes No No VOA Vials
 - 11. Were any sample containers received broken? Yes No
 - 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No
 - 13. Are matrices correctly identified on Chain of Custody? Yes No
 - 14. Is it clear what analyses were requested? Yes No
 - 15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes No
- # of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

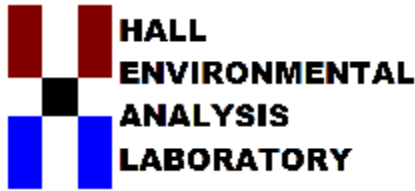
- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:		Date:	
By Whom:		Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	NA	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 02, 2017

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: Joint Superfund Project Center Monthly Analysis

OrderNo.: 1704B64

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 4/26/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1704B64

Date Reported: 5/2/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-170425

Project: Joint Superfund Project Center Monthly

Collection Date: 4/25/2017 9:04:00 AM

Lab ID: 1704B64-001

Matrix: AQUEOUS

Received Date: 4/26/2017 9:03:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: rde
Benzene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
Toluene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
Ethylbenzene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
Naphthalene	ND	2.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
1-Methylnaphthalene	ND	4.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
2-Methylnaphthalene	ND	4.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
Acetone	ND	10		µg/L	1	4/26/2017 7:00:00 PM	R42398
Bromobenzene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
Bromodichloromethane	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
Bromoform	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
Bromomethane	ND	3.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
2-Butanone	ND	10		µg/L	1	4/26/2017 7:00:00 PM	R42398
Carbon disulfide	ND	10		µg/L	1	4/26/2017 7:00:00 PM	R42398
Carbon Tetrachloride	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
Chlorobenzene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
Chloroethane	ND	2.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
Chloroform	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
Chloromethane	ND	3.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
2-Chlorotoluene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
4-Chlorotoluene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
cis-1,2-DCE	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
Dibromochloromethane	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
Dibromomethane	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
1,1-Dichloroethane	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
1,1-Dichloroethene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
1,2-Dichloropropane	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
1,3-Dichloropropane	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
2,2-Dichloropropane	ND	2.0		µg/L	1	4/26/2017 7:00:00 PM	R42398

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1704B64

Date Reported: 5/2/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-170425

Project: Joint Superfund Project Center Monthly

Collection Date: 4/25/2017 9:04:00 AM

Lab ID: 1704B64-001

Matrix: AQUEOUS

Received Date: 4/26/2017 9:03:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: rde
1,1-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
Hexachlorobutadiene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
2-Hexanone	ND	10		µg/L	1	4/26/2017 7:00:00 PM	R42398
Isopropylbenzene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
4-Isopropyltoluene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
4-Methyl-2-pentanone	ND	10		µg/L	1	4/26/2017 7:00:00 PM	R42398
Methylene Chloride	ND	3.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
n-Butylbenzene	ND	3.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
n-Propylbenzene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
sec-Butylbenzene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
Styrene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
tert-Butylbenzene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
Tetrachloroethene (PCE)	16	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
trans-1,2-DCE	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
Trichlorofluoromethane	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
Vinyl chloride	ND	1.0		µg/L	1	4/26/2017 7:00:00 PM	R42398
Xylenes, Total	ND	1.5		µg/L	1	4/26/2017 7:00:00 PM	R42398
Surr: 1,2-Dichloroethane-d4	87.5	70-130		%Rec	1	4/26/2017 7:00:00 PM	R42398
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	4/26/2017 7:00:00 PM	R42398
Surr: Dibromofluoromethane	97.9	70-130		%Rec	1	4/26/2017 7:00:00 PM	R42398
Surr: Toluene-d8	104	70-130		%Rec	1	4/26/2017 7:00:00 PM	R42398

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1704B64

Date Reported: 5/2/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-170425

Project: Joint Superfund Project Center Monthly

Collection Date: 4/25/2017 9:46:00 AM

Lab ID: 1704B64-002

Matrix: AQUEOUS

Received Date: 4/26/2017 9:03:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: rde
Benzene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
Toluene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
Ethylbenzene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
Naphthalene	ND	2.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
1-Methylnaphthalene	ND	4.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
2-Methylnaphthalene	ND	4.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
Acetone	ND	10		µg/L	1	4/26/2017 7:23:00 PM	R42398
Bromobenzene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
Bromodichloromethane	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
Bromoform	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
Bromomethane	ND	3.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
2-Butanone	ND	10		µg/L	1	4/26/2017 7:23:00 PM	R42398
Carbon disulfide	ND	10		µg/L	1	4/26/2017 7:23:00 PM	R42398
Carbon Tetrachloride	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
Chlorobenzene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
Chloroethane	ND	2.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
Chloroform	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
Chloromethane	ND	3.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
2-Chlorotoluene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
4-Chlorotoluene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
cis-1,2-DCE	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
Dibromochloromethane	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
Dibromomethane	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
1,1-Dichloroethane	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
1,1-Dichloroethene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
1,2-Dichloropropane	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
1,3-Dichloropropane	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
2,2-Dichloropropane	ND	2.0		µg/L	1	4/26/2017 7:23:00 PM	R42398

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1704B64

Date Reported: 5/2/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-170425

Project: Joint Superfund Project Center Monthly

Collection Date: 4/25/2017 9:46:00 AM

Lab ID: 1704B64-002

Matrix: AQUEOUS

Received Date: 4/26/2017 9:03:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: rde
1,1-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
Hexachlorobutadiene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
2-Hexanone	ND	10		µg/L	1	4/26/2017 7:23:00 PM	R42398
Isopropylbenzene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
4-Isopropyltoluene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
4-Methyl-2-pentanone	ND	10		µg/L	1	4/26/2017 7:23:00 PM	R42398
Methylene Chloride	ND	3.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
n-Butylbenzene	ND	3.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
n-Propylbenzene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
sec-Butylbenzene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
Styrene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
tert-Butylbenzene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
Tetrachloroethene (PCE)	16	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
trans-1,2-DCE	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
Trichlorofluoromethane	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
Vinyl chloride	ND	1.0		µg/L	1	4/26/2017 7:23:00 PM	R42398
Xylenes, Total	ND	1.5		µg/L	1	4/26/2017 7:23:00 PM	R42398
Surr: 1,2-Dichloroethane-d4	84.8	70-130		%Rec	1	4/26/2017 7:23:00 PM	R42398
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	4/26/2017 7:23:00 PM	R42398
Surr: Dibromofluoromethane	95.8	70-130		%Rec	1	4/26/2017 7:23:00 PM	R42398
Surr: Toluene-d8	102	70-130		%Rec	1	4/26/2017 7:23:00 PM	R42398

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1704B64

Date Reported: 5/2/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-170425

Project: Joint Superfund Project Center Monthly

Collection Date: 4/25/2017 9:18:00 AM

Lab ID: 1704B64-003

Matrix: AQUEOUS

Received Date: 4/26/2017 9:03:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: rde
Benzene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
Toluene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
Ethylbenzene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
Naphthalene	ND	2.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
1-Methylnaphthalene	ND	4.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
2-Methylnaphthalene	ND	4.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
Acetone	ND	10		µg/L	1	4/26/2017 7:47:00 PM	R42398
Bromobenzene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
Bromodichloromethane	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
Bromoform	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
Bromomethane	ND	3.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
2-Butanone	ND	10		µg/L	1	4/26/2017 7:47:00 PM	R42398
Carbon disulfide	ND	10		µg/L	1	4/26/2017 7:47:00 PM	R42398
Carbon Tetrachloride	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
Chlorobenzene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
Chloroethane	ND	2.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
Chloroform	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
Chloromethane	ND	3.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
2-Chlorotoluene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
4-Chlorotoluene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
cis-1,2-DCE	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
Dibromochloromethane	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
Dibromomethane	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
1,1-Dichloroethane	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
1,1-Dichloroethene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
1,2-Dichloropropane	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
1,3-Dichloropropane	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
2,2-Dichloropropane	ND	2.0		µg/L	1	4/26/2017 7:47:00 PM	R42398

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1704B64

Date Reported: 5/2/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-170425

Project: Joint Superfund Project Center Monthly

Collection Date: 4/25/2017 9:18:00 AM

Lab ID: 1704B64-003

Matrix: AQUEOUS

Received Date: 4/26/2017 9:03:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: rde
1,1-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
Hexachlorobutadiene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
2-Hexanone	ND	10		µg/L	1	4/26/2017 7:47:00 PM	R42398
Isopropylbenzene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
4-Isopropyltoluene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
4-Methyl-2-pentanone	ND	10		µg/L	1	4/26/2017 7:47:00 PM	R42398
Methylene Chloride	ND	3.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
n-Butylbenzene	ND	3.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
n-Propylbenzene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
sec-Butylbenzene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
Styrene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
tert-Butylbenzene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
Tetrachloroethene (PCE)	12	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
trans-1,2-DCE	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
Trichlorofluoromethane	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
Vinyl chloride	ND	1.0		µg/L	1	4/26/2017 7:47:00 PM	R42398
Xylenes, Total	ND	1.5		µg/L	1	4/26/2017 7:47:00 PM	R42398
Surr: 1,2-Dichloroethane-d4	87.0	70-130		%Rec	1	4/26/2017 7:47:00 PM	R42398
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	4/26/2017 7:47:00 PM	R42398
Surr: Dibromofluoromethane	101	70-130		%Rec	1	4/26/2017 7:47:00 PM	R42398
Surr: Toluene-d8	104	70-130		%Rec	1	4/26/2017 7:47:00 PM	R42398

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1704B64

Date Reported: 5/2/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-170425

Project: Joint Superfund Project Center Monthly

Collection Date: 4/25/2017 9:12:00 AM

Lab ID: 1704B64-004

Matrix: AQUEOUS

Received Date: 4/26/2017 9:03:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: rde
Benzene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
Toluene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
Ethylbenzene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
Naphthalene	ND	2.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
1-Methylnaphthalene	ND	4.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
2-Methylnaphthalene	ND	4.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
Acetone	ND	10		µg/L	1	4/26/2017 8:11:00 PM	R42398
Bromobenzene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
Bromodichloromethane	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
Bromoform	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
Bromomethane	ND	3.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
2-Butanone	ND	10		µg/L	1	4/26/2017 8:11:00 PM	R42398
Carbon disulfide	ND	10		µg/L	1	4/26/2017 8:11:00 PM	R42398
Carbon Tetrachloride	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
Chlorobenzene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
Chloroethane	ND	2.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
Chloroform	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
Chloromethane	ND	3.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
2-Chlorotoluene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
4-Chlorotoluene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
cis-1,2-DCE	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
Dibromochloromethane	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
Dibromomethane	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
1,1-Dichloroethane	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
1,1-Dichloroethene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
1,2-Dichloropropane	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
1,3-Dichloropropane	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
2,2-Dichloropropane	ND	2.0		µg/L	1	4/26/2017 8:11:00 PM	R42398

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1704B64

Date Reported: 5/2/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-170425

Project: Joint Superfund Project Center Monthly

Collection Date: 4/25/2017 9:12:00 AM

Lab ID: 1704B64-004

Matrix: AQUEOUS

Received Date: 4/26/2017 9:03:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: rde
1,1-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
Hexachlorobutadiene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
2-Hexanone	ND	10		µg/L	1	4/26/2017 8:11:00 PM	R42398
Isopropylbenzene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
4-Isopropyltoluene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
4-Methyl-2-pentanone	ND	10		µg/L	1	4/26/2017 8:11:00 PM	R42398
Methylene Chloride	ND	3.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
n-Butylbenzene	ND	3.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
n-Propylbenzene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
sec-Butylbenzene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
Styrene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
tert-Butylbenzene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
trans-1,2-DCE	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
Trichlorofluoromethane	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
Vinyl chloride	ND	1.0		µg/L	1	4/26/2017 8:11:00 PM	R42398
Xylenes, Total	ND	1.5		µg/L	1	4/26/2017 8:11:00 PM	R42398
Surr: 1,2-Dichloroethane-d4	88.0	70-130		%Rec	1	4/26/2017 8:11:00 PM	R42398
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	4/26/2017 8:11:00 PM	R42398
Surr: Dibromofluoromethane	99.5	70-130		%Rec	1	4/26/2017 8:11:00 PM	R42398
Surr: Toluene-d8	103	70-130		%Rec	1	4/26/2017 8:11:00 PM	R42398

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1704B64

Date Reported: 5/2/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-170425 DUP

Project: Joint Superfund Project Center Monthly

Collection Date: 4/25/2017 9:12:00 AM

Lab ID: 1704B64-005

Matrix: AQUEOUS

Received Date: 4/26/2017 9:03:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: rde
Benzene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
Toluene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
Ethylbenzene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
Naphthalene	ND	2.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
1-Methylnaphthalene	ND	4.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
2-Methylnaphthalene	ND	4.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
Acetone	ND	10		µg/L	1	4/26/2017 8:34:00 PM	R42398
Bromobenzene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
Bromodichloromethane	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
Bromoform	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
Bromomethane	ND	3.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
2-Butanone	ND	10		µg/L	1	4/26/2017 8:34:00 PM	R42398
Carbon disulfide	ND	10		µg/L	1	4/26/2017 8:34:00 PM	R42398
Carbon Tetrachloride	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
Chlorobenzene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
Chloroethane	ND	2.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
Chloroform	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
Chloromethane	ND	3.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
2-Chlorotoluene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
4-Chlorotoluene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
cis-1,2-DCE	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
Dibromochloromethane	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
Dibromomethane	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
1,1-Dichloroethane	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
1,1-Dichloroethene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
1,2-Dichloropropane	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
1,3-Dichloropropane	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
2,2-Dichloropropane	ND	2.0		µg/L	1	4/26/2017 8:34:00 PM	R42398

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1704B64

Date Reported: 5/2/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-170425 DUP

Project: Joint Superfund Project Center Monthly

Collection Date: 4/25/2017 9:12:00 AM

Lab ID: 1704B64-005

Matrix: AQUEOUS

Received Date: 4/26/2017 9:03:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: rde
1,1-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
Hexachlorobutadiene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
2-Hexanone	ND	10		µg/L	1	4/26/2017 8:34:00 PM	R42398
Isopropylbenzene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
4-Isopropyltoluene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
4-Methyl-2-pentanone	ND	10		µg/L	1	4/26/2017 8:34:00 PM	R42398
Methylene Chloride	ND	3.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
n-Butylbenzene	ND	3.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
n-Propylbenzene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
sec-Butylbenzene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
Styrene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
tert-Butylbenzene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
trans-1,2-DCE	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
Trichlorofluoromethane	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
Vinyl chloride	ND	1.0		µg/L	1	4/26/2017 8:34:00 PM	R42398
Xylenes, Total	ND	1.5		µg/L	1	4/26/2017 8:34:00 PM	R42398
Surr: 1,2-Dichloroethane-d4	85.6	70-130		%Rec	1	4/26/2017 8:34:00 PM	R42398
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	4/26/2017 8:34:00 PM	R42398
Surr: Dibromofluoromethane	98.3	70-130		%Rec	1	4/26/2017 8:34:00 PM	R42398
Surr: Toluene-d8	104	70-130		%Rec	1	4/26/2017 8:34:00 PM	R42398

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1704B64

Date Reported: 5/2/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-170425

Project: Joint Superfund Project Center Monthly

Collection Date: 4/25/2017 9:16:00 AM

Lab ID: 1704B64-006

Matrix: AQUEOUS

Received Date: 4/26/2017 9:03:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: rde
Benzene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
Toluene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
Ethylbenzene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
Naphthalene	ND	2.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
1-Methylnaphthalene	ND	4.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
2-Methylnaphthalene	ND	4.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
Acetone	ND	10		µg/L	1	4/26/2017 8:58:00 PM	R42398
Bromobenzene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
Bromodichloromethane	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
Bromoform	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
Bromomethane	ND	3.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
2-Butanone	ND	10		µg/L	1	4/26/2017 8:58:00 PM	R42398
Carbon disulfide	ND	10		µg/L	1	4/26/2017 8:58:00 PM	R42398
Carbon Tetrachloride	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
Chlorobenzene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
Chloroethane	ND	2.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
Chloroform	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
Chloromethane	ND	3.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
2-Chlorotoluene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
4-Chlorotoluene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
cis-1,2-DCE	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
Dibromochloromethane	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
Dibromomethane	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
1,1-Dichloroethane	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
1,1-Dichloroethene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
1,2-Dichloropropane	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
1,3-Dichloropropane	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
2,2-Dichloropropane	ND	2.0		µg/L	1	4/26/2017 8:58:00 PM	R42398

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1704B64

Date Reported: 5/2/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-170425

Project: Joint Superfund Project Center Monthly

Collection Date: 4/25/2017 9:16:00 AM

Lab ID: 1704B64-006

Matrix: AQUEOUS

Received Date: 4/26/2017 9:03:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: rde
1,1-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
Hexachlorobutadiene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
2-Hexanone	ND	10		µg/L	1	4/26/2017 8:58:00 PM	R42398
Isopropylbenzene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
4-Isopropyltoluene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
4-Methyl-2-pentanone	ND	10		µg/L	1	4/26/2017 8:58:00 PM	R42398
Methylene Chloride	ND	3.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
n-Butylbenzene	ND	3.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
n-Propylbenzene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
sec-Butylbenzene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
Styrene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
tert-Butylbenzene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
trans-1,2-DCE	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
Trichlorofluoromethane	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
Vinyl chloride	ND	1.0		µg/L	1	4/26/2017 8:58:00 PM	R42398
Xylenes, Total	ND	1.5		µg/L	1	4/26/2017 8:58:00 PM	R42398
Surr: 1,2-Dichloroethane-d4	87.9	70-130		%Rec	1	4/26/2017 8:58:00 PM	R42398
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	4/26/2017 8:58:00 PM	R42398
Surr: Dibromofluoromethane	102	70-130		%Rec	1	4/26/2017 8:58:00 PM	R42398
Surr: Toluene-d8	105	70-130		%Rec	1	4/26/2017 8:58:00 PM	R42398

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1704B64

Date Reported: 5/2/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-170425

Project: Joint Superfund Project Center Monthly

Collection Date: 4/25/2017 9:35:00 AM

Lab ID: 1704B64-007

Matrix: AQUEOUS

Received Date: 4/26/2017 9:03:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: rde
Benzene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
Toluene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
Ethylbenzene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
Naphthalene	ND	2.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
1-Methylnaphthalene	ND	4.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
2-Methylnaphthalene	ND	4.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
Acetone	ND	10		µg/L	1	4/26/2017 9:21:00 PM	R42398
Bromobenzene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
Bromodichloromethane	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
Bromoform	5.1	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
Bromomethane	ND	3.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
2-Butanone	ND	10		µg/L	1	4/26/2017 9:21:00 PM	R42398
Carbon disulfide	ND	10		µg/L	1	4/26/2017 9:21:00 PM	R42398
Carbon Tetrachloride	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
Chlorobenzene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
Chloroethane	ND	2.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
Chloroform	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
Chloromethane	ND	3.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
2-Chlorotoluene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
4-Chlorotoluene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
cis-1,2-DCE	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
Dibromochloromethane	1.7	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
Dibromomethane	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
1,1-Dichloroethane	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
1,1-Dichloroethene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
1,2-Dichloropropane	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
1,3-Dichloropropane	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
2,2-Dichloropropane	ND	2.0		µg/L	1	4/26/2017 9:21:00 PM	R42398

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1704B64

Date Reported: 5/2/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-170425

Project: Joint Superfund Project Center Monthly

Collection Date: 4/25/2017 9:35:00 AM

Lab ID: 1704B64-007

Matrix: AQUEOUS

Received Date: 4/26/2017 9:03:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: rde
1,1-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
Hexachlorobutadiene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
2-Hexanone	ND	10		µg/L	1	4/26/2017 9:21:00 PM	R42398
Isopropylbenzene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
4-Isopropyltoluene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
4-Methyl-2-pentanone	ND	10		µg/L	1	4/26/2017 9:21:00 PM	R42398
Methylene Chloride	ND	3.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
n-Butylbenzene	ND	3.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
n-Propylbenzene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
sec-Butylbenzene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
Styrene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
tert-Butylbenzene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
trans-1,2-DCE	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
Trichlorofluoromethane	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
Vinyl chloride	ND	1.0		µg/L	1	4/26/2017 9:21:00 PM	R42398
Xylenes, Total	ND	1.5		µg/L	1	4/26/2017 9:21:00 PM	R42398
Surr: 1,2-Dichloroethane-d4	88.1	70-130		%Rec	1	4/26/2017 9:21:00 PM	R42398
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	4/26/2017 9:21:00 PM	R42398
Surr: Dibromofluoromethane	102	70-130		%Rec	1	4/26/2017 9:21:00 PM	R42398
Surr: Toluene-d8	102	70-130		%Rec	1	4/26/2017 9:21:00 PM	R42398

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1704B64

02-May-17

Client: City of Las Cruces
Project: Joint Superfund Project Center Monthly Analysis

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R42398		RunNo: 42398							
Prep Date:	Analysis Date: 4/26/2017		SeqNo: 1332941		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.4	70	130			
Toluene	21	1.0	20.00	0	105	70	130			
Chlorobenzene	22	1.0	20.00	0	109	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	101	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	95.6	70	130			
Surr: 1,2-Dichloroethane-d4	8.4		10.00		84.1	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.3	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R42398		RunNo: 42398							
Prep Date:	Analysis Date: 4/26/2017		SeqNo: 1332942		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1704B64

02-May-17

Client: City of Las Cruces
Project: Joint Superfund Project Center Monthly Analysis

Sample ID	rb	SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID:	R42398		RunNo:	42398				
Prep Date:		Analysis Date:	4/26/2017		SeqNo:	1332942	Units:	µg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1704B64

02-May-17

Client: City of Las Cruces
Project: Joint Superfund Project Center Monthly Analysis

Sample ID	rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R42398		RunNo: 42398						
Prep Date:		Analysis Date: 4/26/2017		SeqNo: 1332942		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.7		10.00		86.7	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.8	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1704B64

RcptNo: 1

Received By: Lindsay Mangin

4/26/2017 9:03:00 AM

[Signature]

Completed By: Ashley Gallegos

4/26/2017 10:46:57 AM

[Signature]

Reviewed By: ENM

04/26/17

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:		Date:	
By Whom:		Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.2	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
 Mailing Address: P.O. Box 2600
Las Cruces, N.M. 87004
 Phone #: 575-528-3604
 email or Fax#: luc@wqa.com
 QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation
 NELAP Other _____
 EDD (Type) _____

Turn-Around Time:

Standard Rush

Project Name: Sanct Superioral Project

Center Monthly Analysis

Project #:

CL-508 Griggs blent

Project Manager:

Luis Guerra
575-528-3109

Sampler: Luis Guerra

On Ice: Yes No

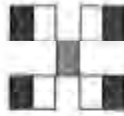
Sample Temperature: 1.2

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
1-25-19	0904	Drinking Water	CLC17-170425	30ml Vials	H ₂ O ₂	170-1B104
	0916	Drinking Water	CLC29-170425			-001
	0918	Drinking Water	CLC151-170425			-002
	0912	Drinking Water	CLC1-170425			-003
	0912	Drinking Water	CLC1-170425 Dup			-004
	0916	Drinking Water	CLC02-170425			-005
4-25-19	0935	Drinking Water	CLC.E51-170425	30ml Vials	H ₂ O ₂	-006
						-007

Date: 1-25-19 Time: 1500
 Relinquished by: [Signature]
 Date: 1-25-19 Time: 1500
 Relinquished by: [Signature]

Received by: [Signature] Date: 1-27-2019 Time: 0903
 Received by: [Signature] Date: 1-27-2019 Time: 0903

Remarks: Send Results to:
Luis Guerra lguerra@las-cruces.org
Jose A. Penabaz jpenabaz@las-cruces.org
Send invoice to: cec@luisguerra.com



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

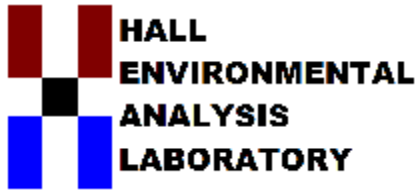
4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B-(VOA) VOA	8270 (Semi-VOA)
									X	
									X	
									X	
									X	
									X	
									X	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly related or the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 24, 2017

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: Joint Superfund Project Process Center Monthly Analysis

OrderNo.: 1705A95

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 2 sample(s) on 5/19/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705A95

Date Reported: 5/24/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1-170518

Project: Joint Superfund Project Process Center

Collection Date: 5/18/2017 9:16:00 AM

Lab ID: 1705A95-001

Matrix: AIR

Received Date: 5/19/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
Toluene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
Ethylbenzene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
Naphthalene	ND	0.20		µg/L	1	5/23/2017 10:49:25 AM	W43011
1-Methylnaphthalene	ND	0.40		µg/L	1	5/23/2017 10:49:25 AM	W43011
2-Methylnaphthalene	ND	0.40		µg/L	1	5/23/2017 10:49:25 AM	W43011
Acetone	ND	1.0		µg/L	1	5/23/2017 10:49:25 AM	W43011
Bromobenzene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
Bromodichloromethane	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
Bromoform	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
Bromomethane	ND	0.20		µg/L	1	5/23/2017 10:49:25 AM	W43011
2-Butanone	ND	1.0		µg/L	1	5/23/2017 10:49:25 AM	W43011
Carbon disulfide	ND	1.0		µg/L	1	5/23/2017 10:49:25 AM	W43011
Carbon tetrachloride	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
Chlorobenzene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
Chloroethane	ND	0.20		µg/L	1	5/23/2017 10:49:25 AM	W43011
Chloroform	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
Chloromethane	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
2-Chlorotoluene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
4-Chlorotoluene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
cis-1,2-DCE	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	5/23/2017 10:49:25 AM	W43011
Dibromochloromethane	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
Dibromomethane	ND	0.20		µg/L	1	5/23/2017 10:49:25 AM	W43011
1,2-Dichlorobenzene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
1,3-Dichlorobenzene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
1,4-Dichlorobenzene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
Dichlorodifluoromethane	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
1,1-Dichloroethane	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
1,1-Dichloroethene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
1,2-Dichloropropane	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
1,3-Dichloropropane	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
2,2-Dichloropropane	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 1 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705A95

Date Reported: 5/24/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1-170518

Project: Joint Superfund Project Process Center

Collection Date: 5/18/2017 9:16:00 AM

Lab ID: 1705A95-001

Matrix: AIR

Received Date: 5/19/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
Hexachlorobutadiene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
2-Hexanone	ND	1.0		µg/L	1	5/23/2017 10:49:25 AM	W43011
Isopropylbenzene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
4-Isopropyltoluene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
4-Methyl-2-pentanone	ND	1.0		µg/L	1	5/23/2017 10:49:25 AM	W43011
Methylene chloride	ND	0.30		µg/L	1	5/23/2017 10:49:25 AM	W43011
n-Butylbenzene	ND	0.30		µg/L	1	5/23/2017 10:49:25 AM	W43011
n-Propylbenzene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
sec-Butylbenzene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
Styrene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
tert-Butylbenzene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
trans-1,2-DCE	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
1,1,1-Trichloroethane	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
1,1,2-Trichloroethane	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
Trichloroethene (TCE)	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
Trichlorofluoromethane	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
1,2,3-Trichloropropane	ND	0.20		µg/L	1	5/23/2017 10:49:25 AM	W43011
Vinyl chloride	ND	0.10		µg/L	1	5/23/2017 10:49:25 AM	W43011
Xylenes, Total	ND	0.15		µg/L	1	5/23/2017 10:49:25 AM	W43011
Surr: Dibromofluoromethane	97.0	70-130		%Rec	1	5/23/2017 10:49:25 AM	W43011
Surr: 1,2-Dichloroethane-d4	88.8	70-130		%Rec	1	5/23/2017 10:49:25 AM	W43011
Surr: Toluene-d8	94.1	70-130		%Rec	1	5/23/2017 10:49:25 AM	W43011
Surr: 4-Bromofluorobenzene	92.9	70-130		%Rec	1	5/23/2017 10:49:25 AM	W43011

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705A95

Date Reported: 5/24/2017

CLIENT: City of Las Cruces

Client Sample ID: AS2-170518

Project: Joint Superfund Project Process Center

Collection Date: 5/18/2017 9:23:00 AM

Lab ID: 1705A95-002

Matrix: AIR

Received Date: 5/19/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
Toluene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
Ethylbenzene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
Naphthalene	ND	0.20		µg/L	1	5/23/2017 11:47:09 AM	W43011
1-Methylnaphthalene	ND	0.40		µg/L	1	5/23/2017 11:47:09 AM	W43011
2-Methylnaphthalene	ND	0.40		µg/L	1	5/23/2017 11:47:09 AM	W43011
Acetone	ND	1.0		µg/L	1	5/23/2017 11:47:09 AM	W43011
Bromobenzene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
Bromodichloromethane	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
Bromoform	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
Bromomethane	ND	0.20		µg/L	1	5/23/2017 11:47:09 AM	W43011
2-Butanone	ND	1.0		µg/L	1	5/23/2017 11:47:09 AM	W43011
Carbon disulfide	ND	1.0		µg/L	1	5/23/2017 11:47:09 AM	W43011
Carbon tetrachloride	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
Chlorobenzene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
Chloroethane	ND	0.20		µg/L	1	5/23/2017 11:47:09 AM	W43011
Chloroform	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
Chloromethane	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
2-Chlorotoluene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
4-Chlorotoluene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
cis-1,2-DCE	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	5/23/2017 11:47:09 AM	W43011
Dibromochloromethane	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
Dibromomethane	ND	0.20		µg/L	1	5/23/2017 11:47:09 AM	W43011
1,2-Dichlorobenzene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
1,3-Dichlorobenzene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
1,4-Dichlorobenzene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
Dichlorodifluoromethane	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
1,1-Dichloroethane	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
1,1-Dichloroethene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
1,2-Dichloropropane	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
1,3-Dichloropropane	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
2,2-Dichloropropane	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705A95

Date Reported: 5/24/2017

CLIENT: City of Las Cruces

Client Sample ID: AS2-170518

Project: Joint Superfund Project Process Center

Collection Date: 5/18/2017 9:23:00 AM

Lab ID: 1705A95-002

Matrix: AIR

Received Date: 5/19/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
Hexachlorobutadiene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
2-Hexanone	ND	1.0		µg/L	1	5/23/2017 11:47:09 AM	W43011
Isopropylbenzene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
4-Isopropyltoluene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
4-Methyl-2-pentanone	ND	1.0		µg/L	1	5/23/2017 11:47:09 AM	W43011
Methylene chloride	ND	0.30		µg/L	1	5/23/2017 11:47:09 AM	W43011
n-Butylbenzene	ND	0.30		µg/L	1	5/23/2017 11:47:09 AM	W43011
n-Propylbenzene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
sec-Butylbenzene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
Styrene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
tert-Butylbenzene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
trans-1,2-DCE	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
1,1,1-Trichloroethane	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
1,1,2-Trichloroethane	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
Trichloroethene (TCE)	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
Trichlorofluoromethane	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
1,2,3-Trichloropropane	ND	0.20		µg/L	1	5/23/2017 11:47:09 AM	W43011
Vinyl chloride	ND	0.10		µg/L	1	5/23/2017 11:47:09 AM	W43011
Xylenes, Total	ND	0.15		µg/L	1	5/23/2017 11:47:09 AM	W43011
Surr: Dibromofluoromethane	98.1	70-130		%Rec	1	5/23/2017 11:47:09 AM	W43011
Surr: 1,2-Dichloroethane-d4	87.1	70-130		%Rec	1	5/23/2017 11:47:09 AM	W43011
Surr: Toluene-d8	95.7	70-130		%Rec	1	5/23/2017 11:47:09 AM	W43011
Surr: 4-Bromofluorobenzene	96.3	70-130		%Rec	1	5/23/2017 11:47:09 AM	W43011

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1705A95

RcptNo: 1

Received By: Sophia Campuzano 5/19/2017 9:00:00 AM

Sophia Campuzano

Completed By: Ashley Gallegos 5/19/2017 2:27:12 PM

Ashley Gallegos

Reviewed By: *SPC 05/22/17*

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	NA	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
 Mailing Address: P.O. Box 200004
Las Cruces NM 88004
 Phone #: 575-528-3604
 email or Fax#: lgvema@las-cruces.org

QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation
 NELAP Other _____
 EDD (Type) _____

Turn-Around Time:
 Standard Rush
 Project Name: Joint Superfund Project
Process Center, Monthly Analysis
 Project #:
CLC-SSP Griggs Walnut
 Project Manager:
Luis Gvema
575-528-3609
 Sampler: Luis Gvema
 On Ice: Yes No
 Sample Temperature: _____

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEATING
5/18/17	9:16	Air	ASL-170518	Feather bag	None	-001
5/18/17	9:23	Air	AS2-170518	Feather bag	None	-002

Date: 5/18/17 Time: 12:45 Relinquished by: [Signature]
 Date: 5/19/17 Time: 0900 Received by: [Signature]

Date: _____ Time: _____ Relinquished by: _____
 Date: _____ Time: _____ Received by: _____



HALL ENVIRONMENTAL ANALYSIS LABORATORY
 www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Analysis Request	Response
BTEX + MTBE + TMBs (8021)	
BTEX + MTBE + TPH (Gas only)	
TPH 8015B (GRO / DRO / MRO)	
TPH (Method 418.1)	
EDB (Method 504.1)	
PAH's (8310 or 8270 SIMS)	
RCRA 8 Metals	
Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	
8081 Pesticides / 8082 PCBs	X
8260B (VOA) VOA <u>VOA</u>	X
8270 (Semi-VOA)	
Air Bubbles (Y or N)	

Remarks: Send Results to:
Luis Gvema: lgvema@las-cruces.org
Joshua Rosenblatt: jrosenblat@las-cruces.org
Send invoice to CLC c/o Luis Gvema

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 24, 2017

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: Joint Superfund Project Process Center Monthly Analysis

OrderNo.: 1705A96

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 5/19/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705A96

Date Reported: 5/24/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC18-170518

Project: Joint Superfund Project Process Center

Collection Date: 5/18/2017 9:05:00 AM

Lab ID: 1705A96-001

Matrix: AQUEOUS

Received Date: 5/19/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
Toluene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
Ethylbenzene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
Naphthalene	ND	2.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
1-Methylnaphthalene	ND	4.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
2-Methylnaphthalene	ND	4.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
Acetone	ND	10		µg/L	1	5/22/2017 7:19:59 PM	W42980
Bromobenzene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
Bromodichloromethane	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
Bromoform	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
Bromomethane	ND	3.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
2-Butanone	ND	10		µg/L	1	5/22/2017 7:19:59 PM	W42980
Carbon disulfide	ND	10		µg/L	1	5/22/2017 7:19:59 PM	W42980
Carbon Tetrachloride	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
Chlorobenzene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
Chloroethane	ND	2.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
Chloroform	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
Chloromethane	ND	3.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
2-Chlorotoluene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
4-Chlorotoluene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
cis-1,2-DCE	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
Dibromochloromethane	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
Dibromomethane	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
1,1-Dichloroethane	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
1,1-Dichloroethene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
1,2-Dichloropropane	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
1,3-Dichloropropane	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
2,2-Dichloropropane	ND	2.0		µg/L	1	5/22/2017 7:19:59 PM	W42980

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705A96

Date Reported: 5/24/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC18-170518

Project: Joint Superfund Project Process Center

Collection Date: 5/18/2017 9:05:00 AM

Lab ID: 1705A96-001

Matrix: AQUEOUS

Received Date: 5/19/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
Hexachlorobutadiene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
2-Hexanone	ND	10		µg/L	1	5/22/2017 7:19:59 PM	W42980
Isopropylbenzene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
4-Isopropyltoluene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
4-Methyl-2-pentanone	ND	10		µg/L	1	5/22/2017 7:19:59 PM	W42980
Methylene Chloride	ND	3.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
n-Butylbenzene	ND	3.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
n-Propylbenzene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
sec-Butylbenzene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
Styrene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
tert-Butylbenzene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
Tetrachloroethene (PCE)	15	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
trans-1,2-DCE	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
Trichlorofluoromethane	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
Vinyl chloride	ND	1.0		µg/L	1	5/22/2017 7:19:59 PM	W42980
Xylenes, Total	ND	1.5		µg/L	1	5/22/2017 7:19:59 PM	W42980
Surr: 1,2-Dichloroethane-d4	98.5	70-130		%Rec	1	5/22/2017 7:19:59 PM	W42980
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	5/22/2017 7:19:59 PM	W42980
Surr: Dibromofluoromethane	106	70-130		%Rec	1	5/22/2017 7:19:59 PM	W42980
Surr: Toluene-d8	91.8	70-130		%Rec	1	5/22/2017 7:19:59 PM	W42980

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705A96

Date Reported: 5/24/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC27-170518

Project: Joint Superfund Project Process Center

Collection Date: 5/18/2017 9:36:00 AM

Lab ID: 1705A96-002

Matrix: AQUEOUS

Received Date: 5/19/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
Toluene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
Ethylbenzene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
Naphthalene	ND	2.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
1-Methylnaphthalene	ND	4.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
2-Methylnaphthalene	ND	4.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
Acetone	ND	10		µg/L	1	5/22/2017 8:45:23 PM	W42980
Bromobenzene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
Bromodichloromethane	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
Bromoform	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
Bromomethane	ND	3.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
2-Butanone	ND	10		µg/L	1	5/22/2017 8:45:23 PM	W42980
Carbon disulfide	ND	10		µg/L	1	5/22/2017 8:45:23 PM	W42980
Carbon Tetrachloride	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
Chlorobenzene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
Chloroethane	ND	2.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
Chloroform	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
Chloromethane	ND	3.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
2-Chlorotoluene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
4-Chlorotoluene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
cis-1,2-DCE	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
Dibromochloromethane	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
Dibromomethane	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
1,1-Dichloroethane	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
1,1-Dichloroethene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
1,2-Dichloropropane	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
1,3-Dichloropropane	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
2,2-Dichloropropane	ND	2.0		µg/L	1	5/22/2017 8:45:23 PM	W42980

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705A96

Date Reported: 5/24/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC27-170518

Project: Joint Superfund Project Process Center

Collection Date: 5/18/2017 9:36:00 AM

Lab ID: 1705A96-002

Matrix: AQUEOUS

Received Date: 5/19/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
Hexachlorobutadiene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
2-Hexanone	ND	10		µg/L	1	5/22/2017 8:45:23 PM	W42980
Isopropylbenzene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
4-Isopropyltoluene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
4-Methyl-2-pentanone	ND	10		µg/L	1	5/22/2017 8:45:23 PM	W42980
Methylene Chloride	ND	3.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
n-Butylbenzene	ND	3.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
n-Propylbenzene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
sec-Butylbenzene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
Styrene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
tert-Butylbenzene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
Tetrachloroethene (PCE)	15	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
trans-1,2-DCE	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
Trichlorofluoromethane	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
Vinyl chloride	ND	1.0		µg/L	1	5/22/2017 8:45:23 PM	W42980
Xylenes, Total	ND	1.5		µg/L	1	5/22/2017 8:45:23 PM	W42980
Surr: 1,2-Dichloroethane-d4	98.5	70-130		%Rec	1	5/22/2017 8:45:23 PM	W42980
Surr: 4-Bromofluorobenzene	96.9	70-130		%Rec	1	5/22/2017 8:45:23 PM	W42980
Surr: Dibromofluoromethane	104	70-130		%Rec	1	5/22/2017 8:45:23 PM	W42980
Surr: Toluene-d8	93.2	70-130		%Rec	1	5/22/2017 8:45:23 PM	W42980

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705A96

Date Reported: 5/24/2017

CLIENT: City of Las Cruces

Client Sample ID: CLCIS1-170518

Project: Joint Superfund Project Process Center

Collection Date: 5/18/2017 9:09:00 AM

Lab ID: 1705A96-003

Matrix: AQUEOUS

Received Date: 5/19/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
Toluene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
Ethylbenzene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
Naphthalene	ND	2.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
1-Methylnaphthalene	ND	4.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
2-Methylnaphthalene	ND	4.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
Acetone	ND	10		µg/L	1	5/22/2017 9:14:05 PM	W42980
Bromobenzene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
Bromodichloromethane	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
Bromoform	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
Bromomethane	ND	3.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
2-Butanone	ND	10		µg/L	1	5/22/2017 9:14:05 PM	W42980
Carbon disulfide	ND	10		µg/L	1	5/22/2017 9:14:05 PM	W42980
Carbon Tetrachloride	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
Chlorobenzene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
Chloroethane	ND	2.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
Chloroform	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
Chloromethane	ND	3.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
2-Chlorotoluene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
4-Chlorotoluene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
cis-1,2-DCE	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
Dibromochloromethane	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
Dibromomethane	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
1,1-Dichloroethane	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
1,1-Dichloroethene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
1,2-Dichloropropane	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
1,3-Dichloropropane	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
2,2-Dichloropropane	ND	2.0		µg/L	1	5/22/2017 9:14:05 PM	W42980

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705A96

Date Reported: 5/24/2017

CLIENT: City of Las Cruces

Client Sample ID: CLCIS1-170518

Project: Joint Superfund Project Process Center

Collection Date: 5/18/2017 9:09:00 AM

Lab ID: 1705A96-003

Matrix: AQUEOUS

Received Date: 5/19/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
Hexachlorobutadiene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
2-Hexanone	ND	10		µg/L	1	5/22/2017 9:14:05 PM	W42980
Isopropylbenzene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
4-Isopropyltoluene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
4-Methyl-2-pentanone	ND	10		µg/L	1	5/22/2017 9:14:05 PM	W42980
Methylene Chloride	ND	3.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
n-Butylbenzene	ND	3.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
n-Propylbenzene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
sec-Butylbenzene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
Styrene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
tert-Butylbenzene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
Tetrachloroethene (PCE)	11	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
trans-1,2-DCE	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
Trichlorofluoromethane	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
Vinyl chloride	ND	1.0		µg/L	1	5/22/2017 9:14:05 PM	W42980
Xylenes, Total	ND	1.5		µg/L	1	5/22/2017 9:14:05 PM	W42980
Surr: 1,2-Dichloroethane-d4	97.7	70-130		%Rec	1	5/22/2017 9:14:05 PM	W42980
Surr: 4-Bromofluorobenzene	94.1	70-130		%Rec	1	5/22/2017 9:14:05 PM	W42980
Surr: Dibromofluoromethane	102	70-130		%Rec	1	5/22/2017 9:14:05 PM	W42980
Surr: Toluene-d8	94.1	70-130		%Rec	1	5/22/2017 9:14:05 PM	W42980

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705A96

Date Reported: 5/24/2017

CLIENT: City of Las Cruces

Client Sample ID: CLCC1-170518

Project: Joint Superfund Project Process Center

Collection Date: 5/18/2017 9:12:00 AM

Lab ID: 1705A96-004

Matrix: AQUEOUS

Received Date: 5/19/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
Toluene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
Ethylbenzene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
Naphthalene	ND	2.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
1-Methylnaphthalene	ND	4.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
2-Methylnaphthalene	ND	4.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
Acetone	ND	10		µg/L	1	5/22/2017 9:43:02 PM	W42980
Bromobenzene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
Bromodichloromethane	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
Bromoform	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
Bromomethane	ND	3.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
2-Butanone	ND	10		µg/L	1	5/22/2017 9:43:02 PM	W42980
Carbon disulfide	ND	10		µg/L	1	5/22/2017 9:43:02 PM	W42980
Carbon Tetrachloride	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
Chlorobenzene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
Chloroethane	ND	2.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
Chloroform	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
Chloromethane	ND	3.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
2-Chlorotoluene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
4-Chlorotoluene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
cis-1,2-DCE	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
Dibromochloromethane	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
Dibromomethane	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
1,1-Dichloroethane	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
1,1-Dichloroethene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
1,2-Dichloropropane	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
1,3-Dichloropropane	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
2,2-Dichloropropane	ND	2.0		µg/L	1	5/22/2017 9:43:02 PM	W42980

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705A96

Date Reported: 5/24/2017

CLIENT: City of Las Cruces

Client Sample ID: CLCC1-170518

Project: Joint Superfund Project Process Center

Collection Date: 5/18/2017 9:12:00 AM

Lab ID: 1705A96-004

Matrix: AQUEOUS

Received Date: 5/19/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
Hexachlorobutadiene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
2-Hexanone	ND	10		µg/L	1	5/22/2017 9:43:02 PM	W42980
Isopropylbenzene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
4-Isopropyltoluene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
4-Methyl-2-pentanone	ND	10		µg/L	1	5/22/2017 9:43:02 PM	W42980
Methylene Chloride	ND	3.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
n-Butylbenzene	ND	3.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
n-Propylbenzene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
sec-Butylbenzene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
Styrene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
tert-Butylbenzene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
trans-1,2-DCE	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
Trichlorofluoromethane	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
Vinyl chloride	ND	1.0		µg/L	1	5/22/2017 9:43:02 PM	W42980
Xylenes, Total	ND	1.5		µg/L	1	5/22/2017 9:43:02 PM	W42980
Surr: 1,2-Dichloroethane-d4	94.0	70-130		%Rec	1	5/22/2017 9:43:02 PM	W42980
Surr: 4-Bromofluorobenzene	96.0	70-130		%Rec	1	5/22/2017 9:43:02 PM	W42980
Surr: Dibromofluoromethane	105	70-130		%Rec	1	5/22/2017 9:43:02 PM	W42980
Surr: Toluene-d8	93.6	70-130		%Rec	1	5/22/2017 9:43:02 PM	W42980

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705A96

Date Reported: 5/24/2017

CLIENT: City of Las Cruces

Client Sample ID: CLCC2-170518

Project: Joint Superfund Project Process Center

Collection Date: 5/18/2017 9:15:00 AM

Lab ID: 1705A96-005

Matrix: AQUEOUS

Received Date: 5/19/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
Toluene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
Ethylbenzene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
Naphthalene	ND	2.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
1-Methylnaphthalene	ND	4.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
2-Methylnaphthalene	ND	4.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
Acetone	ND	10		µg/L	1	5/23/2017 12:15:41 PM	W43011
Bromobenzene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
Bromodichloromethane	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
Bromoform	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
Bromomethane	ND	3.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
2-Butanone	ND	10		µg/L	1	5/23/2017 12:15:41 PM	W43011
Carbon disulfide	ND	10		µg/L	1	5/23/2017 12:15:41 PM	W43011
Carbon Tetrachloride	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
Chlorobenzene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
Chloroethane	ND	2.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
Chloroform	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
Chloromethane	ND	3.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
2-Chlorotoluene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
4-Chlorotoluene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
cis-1,2-DCE	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
Dibromochloromethane	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
Dibromomethane	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
1,1-Dichloroethane	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
1,1-Dichloroethene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
1,2-Dichloropropane	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
1,3-Dichloropropane	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
2,2-Dichloropropane	ND	2.0		µg/L	1	5/23/2017 12:15:41 PM	W43011

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705A96

Date Reported: 5/24/2017

CLIENT: City of Las Cruces

Client Sample ID: CLCC2-170518

Project: Joint Superfund Project Process Center

Collection Date: 5/18/2017 9:15:00 AM

Lab ID: 1705A96-005

Matrix: AQUEOUS

Received Date: 5/19/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
Hexachlorobutadiene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
2-Hexanone	ND	10		µg/L	1	5/23/2017 12:15:41 PM	W43011
Isopropylbenzene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
4-Isopropyltoluene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
4-Methyl-2-pentanone	ND	10		µg/L	1	5/23/2017 12:15:41 PM	W43011
Methylene Chloride	ND	3.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
n-Butylbenzene	ND	3.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
n-Propylbenzene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
sec-Butylbenzene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
Styrene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
tert-Butylbenzene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
trans-1,2-DCE	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
Trichlorofluoromethane	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
Vinyl chloride	ND	1.0		µg/L	1	5/23/2017 12:15:41 PM	W43011
Xylenes, Total	ND	1.5		µg/L	1	5/23/2017 12:15:41 PM	W43011
Surr: 1,2-Dichloroethane-d4	92.7	70-130		%Rec	1	5/23/2017 12:15:41 PM	W43011
Surr: 4-Bromofluorobenzene	95.3	70-130		%Rec	1	5/23/2017 12:15:41 PM	W43011
Surr: Dibromofluoromethane	101	70-130		%Rec	1	5/23/2017 12:15:41 PM	W43011
Surr: Toluene-d8	93.0	70-130		%Rec	1	5/23/2017 12:15:41 PM	W43011

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705A96

Date Reported: 5/24/2017

CLIENT: City of Las Cruces

Client Sample ID: CLCC2-170518DUP

Project: Joint Superfund Project Process Center

Collection Date: 5/18/2017 9:15:00 AM

Lab ID: 1705A96-006

Matrix: AQUEOUS

Received Date: 5/19/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
Toluene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
Ethylbenzene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
Naphthalene	ND	2.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
1-Methylnaphthalene	ND	4.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
2-Methylnaphthalene	ND	4.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
Acetone	ND	10		µg/L	1	5/23/2017 12:05:59 AM	W42980
Bromobenzene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
Bromodichloromethane	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
Bromoform	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
Bromomethane	ND	3.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
2-Butanone	ND	10		µg/L	1	5/23/2017 12:05:59 AM	W42980
Carbon disulfide	ND	10		µg/L	1	5/23/2017 12:05:59 AM	W42980
Carbon Tetrachloride	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
Chlorobenzene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
Chloroethane	ND	2.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
Chloroform	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
Chloromethane	ND	3.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
2-Chlorotoluene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
4-Chlorotoluene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
cis-1,2-DCE	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
Dibromochloromethane	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
Dibromomethane	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
1,1-Dichloroethane	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
1,1-Dichloroethene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
1,2-Dichloropropane	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
1,3-Dichloropropane	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
2,2-Dichloropropane	ND	2.0		µg/L	1	5/23/2017 12:05:59 AM	W42980

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705A96

Date Reported: 5/24/2017

CLIENT: City of Las Cruces

Client Sample ID: CLCC2-170518DUP

Project: Joint Superfund Project Process Center

Collection Date: 5/18/2017 9:15:00 AM

Lab ID: 1705A96-006

Matrix: AQUEOUS

Received Date: 5/19/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
Hexachlorobutadiene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
2-Hexanone	ND	10		µg/L	1	5/23/2017 12:05:59 AM	W42980
Isopropylbenzene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
4-Isopropyltoluene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
4-Methyl-2-pentanone	ND	10		µg/L	1	5/23/2017 12:05:59 AM	W42980
Methylene Chloride	ND	3.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
n-Butylbenzene	ND	3.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
n-Propylbenzene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
sec-Butylbenzene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
Styrene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
tert-Butylbenzene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
trans-1,2-DCE	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
Trichlorofluoromethane	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
Vinyl chloride	ND	1.0		µg/L	1	5/23/2017 12:05:59 AM	W42980
Xylenes, Total	ND	1.5		µg/L	1	5/23/2017 12:05:59 AM	W42980
Surr: 1,2-Dichloroethane-d4	94.6	70-130		%Rec	1	5/23/2017 12:05:59 AM	W42980
Surr: 4-Bromofluorobenzene	96.5	70-130		%Rec	1	5/23/2017 12:05:59 AM	W42980
Surr: Dibromofluoromethane	102	70-130		%Rec	1	5/23/2017 12:05:59 AM	W42980
Surr: Toluene-d8	95.3	70-130		%Rec	1	5/23/2017 12:05:59 AM	W42980

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705A96

Date Reported: 5/24/2017

CLIENT: City of Las Cruces

Client Sample ID: CLCES1-170518

Project: Joint Superfund Project Process Center

Collection Date: 5/18/2017 9:18:00 AM

Lab ID: 1705A96-007

Matrix: AQUEOUS

Received Date: 5/19/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
Toluene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
Ethylbenzene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
Naphthalene	ND	2.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
1-Methylnaphthalene	ND	4.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
2-Methylnaphthalene	ND	4.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
Acetone	ND	10		µg/L	1	5/23/2017 1:42:08 PM	W43011
Bromobenzene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
Bromodichloromethane	1.4	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
Bromoform	3.1	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
Bromomethane	ND	3.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
2-Butanone	ND	10		µg/L	1	5/23/2017 1:42:08 PM	W43011
Carbon disulfide	ND	10		µg/L	1	5/23/2017 1:42:08 PM	W43011
Carbon Tetrachloride	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
Chlorobenzene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
Chloroethane	ND	2.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
Chloroform	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
Chloromethane	ND	3.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
2-Chlorotoluene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
4-Chlorotoluene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
cis-1,2-DCE	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
Dibromochloromethane	3.2	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
Dibromomethane	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
1,1-Dichloroethane	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
1,1-Dichloroethene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
1,2-Dichloropropane	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
1,3-Dichloropropane	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
2,2-Dichloropropane	ND	2.0		µg/L	1	5/23/2017 1:42:08 PM	W43011

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705A96

Date Reported: 5/24/2017

CLIENT: City of Las Cruces

Client Sample ID: CLCES1-170518

Project: Joint Superfund Project Process Center

Collection Date: 5/18/2017 9:18:00 AM

Lab ID: 1705A96-007

Matrix: AQUEOUS

Received Date: 5/19/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
Hexachlorobutadiene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
2-Hexanone	ND	10		µg/L	1	5/23/2017 1:42:08 PM	W43011
Isopropylbenzene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
4-Isopropyltoluene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
4-Methyl-2-pentanone	ND	10		µg/L	1	5/23/2017 1:42:08 PM	W43011
Methylene Chloride	ND	3.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
n-Butylbenzene	ND	3.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
n-Propylbenzene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
sec-Butylbenzene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
Styrene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
tert-Butylbenzene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
trans-1,2-DCE	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
Trichlorofluoromethane	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
Vinyl chloride	ND	1.0		µg/L	1	5/23/2017 1:42:08 PM	W43011
Xylenes, Total	ND	1.5		µg/L	1	5/23/2017 1:42:08 PM	W43011
Surr: 1,2-Dichloroethane-d4	94.5	70-130		%Rec	1	5/23/2017 1:42:08 PM	W43011
Surr: 4-Bromofluorobenzene	97.2	70-130		%Rec	1	5/23/2017 1:42:08 PM	W43011
Surr: Dibromofluoromethane	96.6	70-130		%Rec	1	5/23/2017 1:42:08 PM	W43011
Surr: Toluene-d8	93.4	70-130		%Rec	1	5/23/2017 1:42:08 PM	W43011

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705A96

24-May-17

Client: City of Las Cruces
Project: Joint Superfund Project Process Center Monthly

Sample ID	rb	SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID:	W42980		RunNo:	42980				
Prep Date:		Analysis Date:	5/22/2017		SeqNo:	1352433	Units:	µg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705A96

24-May-17

Client: City of Las Cruces
Project: Joint Superfund Project Process Center Monthly

Sample ID rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: W42980	RunNo: 42980
Prep Date:	Analysis Date: 5/22/2017	SeqNo: 1352433 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.3		10.00		92.8	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.9	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.5		10.00		95.1	70	130			

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: W42980	RunNo: 42980
Prep Date:	Analysis Date: 5/22/2017	SeqNo: 1352434 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	19	1.0	20.00	0	96.0	70	130			
Chlorobenzene	19	1.0	20.00	0	95.3	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705A96

24-May-17

Client: City of Las Cruces
Project: Joint Superfund Project Process Center Monthly

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: W42980		RunNo: 42980							
Prep Date:	Analysis Date: 5/22/2017		SeqNo: 1352434		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	113	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	94.0	70	130			
Surr: 1,2-Dichloroethane-d4	8.7		10.00		87.5	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.0	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.8	70	130			
Surr: Toluene-d8	9.6		10.00		95.6	70	130			

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: W43011		RunNo: 43011							
Prep Date:	Analysis Date: 5/23/2017		SeqNo: 1353533		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705A96

24-May-17

Client: City of Las Cruces
Project: Joint Superfund Project Process Center Monthly

Sample ID	rb	SampType:	MBLK								TestCode:	EPA Method 8260B: VOLATILES							
Client ID:	PBW	Batch ID:	W43011								RunNo:	43011							
Prep Date:		Analysis Date:	5/23/2017								SeqNo:	1353533	Units:	µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual									
1,2-Dibromo-3-chloropropane	ND	2.0																	
Dibromochloromethane	ND	1.0																	
Dibromomethane	ND	1.0																	
1,2-Dichlorobenzene	ND	1.0																	
1,3-Dichlorobenzene	ND	1.0																	
1,4-Dichlorobenzene	ND	1.0																	
Dichlorodifluoromethane	ND	1.0																	
1,1-Dichloroethane	ND	1.0																	
1,1-Dichloroethene	ND	1.0																	
1,2-Dichloropropane	ND	1.0																	
1,3-Dichloropropane	ND	1.0																	
2,2-Dichloropropane	ND	2.0																	
1,1-Dichloropropene	ND	1.0																	
Hexachlorobutadiene	ND	1.0																	
2-Hexanone	ND	10																	
Isopropylbenzene	ND	1.0																	
4-Isopropyltoluene	ND	1.0																	
4-Methyl-2-pentanone	ND	10																	
Methylene Chloride	ND	3.0																	
n-Butylbenzene	ND	3.0																	
n-Propylbenzene	ND	1.0																	
sec-Butylbenzene	ND	1.0																	
Styrene	ND	1.0																	
tert-Butylbenzene	ND	1.0																	
1,1,1,2-Tetrachloroethane	ND	1.0																	
1,1,2,2-Tetrachloroethane	ND	2.0																	
Tetrachloroethene (PCE)	ND	1.0																	
trans-1,2-DCE	ND	1.0																	
trans-1,3-Dichloropropene	ND	1.0																	
1,2,3-Trichlorobenzene	ND	1.0																	
1,2,4-Trichlorobenzene	ND	1.0																	
1,1,1-Trichloroethane	ND	1.0																	
1,1,2-Trichloroethane	ND	1.0																	
Trichloroethene (TCE)	ND	1.0																	
Trichlorofluoromethane	ND	1.0																	
1,2,3-Trichloropropane	ND	2.0																	
Vinyl chloride	ND	1.0																	
Xylenes, Total	ND	1.5																	
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.2	70	130												

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705A96

24-May-17

Client: City of Las Cruces
Project: Joint Superfund Project Process Center Monthly

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: W43011		RunNo: 43011							
Prep Date:	Analysis Date: 5/23/2017		SeqNo: 1353533		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	9.7		10.00		97.1	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.5		10.00		94.5	70	130			

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: W43011		RunNo: 43011							
Prep Date:	Analysis Date: 5/23/2017		SeqNo: 1353534		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	115	70	130			
Toluene	19	1.0	20.00	0	96.0	70	130			
Chlorobenzene	19	1.0	20.00	0	95.3	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	122	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	107	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.4	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		93.9	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	8.9		10.00		89.5	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1705A96

RcptNo: 1

Received By: Sophia Campuzano 5/19/2017 9:00:00 AM

Sophia Campuzano

Completed By: Ashley Gallegos 5/19/2017 2:59:49 PM

Ashley Gallegos

Reviewed By: *AS* 5/19/17

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.8	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
 Mailing Address: P.O. Box 20,000
Las Cruces, NM 88004
 Phone #: 575-528-3604
 email or Fax#: lguerra@las-cruces.org

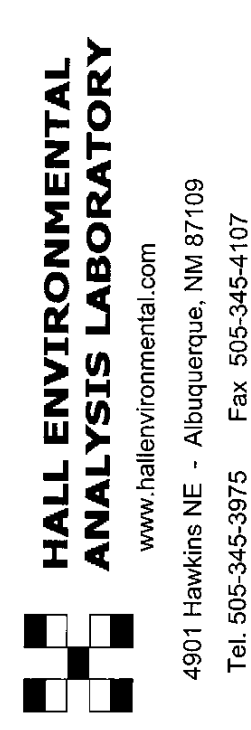
QA/QC Package: Standard Level 4 (Full Validation)
 Accreditation NELAP Other _____
 AEDD (Type) _____

Turn-Around Time: Standard Rush
 Project Name: Joint Superfund Project
Process Center Monthly Analysis
 Project #: CLC-SSP Griggs Walnut
 Project Manager: Luis Gueric
575-528-3609
 Sampler: Luis Gueric
 On Ice: Yes No
 Sample Temperature: 5.8

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAVY METALS
5/16/17	9:05	DW	CLC18-170518	3.40ml Vials	HgCl ₂	-001
5/18/17	9:36	DW	CLC27-170518			-002
5/18/17	9:09	DW	CLCE51-170518			-003
5/18/17	9:12	DW	CLCC1-170518			-004
5/18/17	9:15	DW	CLCC2-170518			-005
5/18/17	9:15	DW	CLCC2-170518 Dup			-000
5/18/17	9:18	DW	CLCE51-170518	3.40ml Vials	HgCl ₂	-007

Date: 5/18/17 Time: 12:45 Relinquished by: [Signature]
 Date: _____ Time: _____ Relinquished by: _____

Received by: [Signature] Date: 05/19/17 Time: 0900
 Received by: _____ Date: _____ Time: _____



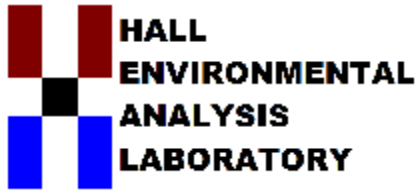
HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request	
BTEX + MTBE + TMBs (8021)	
BTEX + MTBE + TPH (Gas only)	
TPH 8015B (GRO / DRO / MRO)	
TPH (Method 418.1)	
EDB (Method 504.1)	
PAH's (8310 or 8270 SIMS)	
RCRA 8 Metals	
Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	
8081 Pesticides / 8082 PCB's	
8260B (VOA) VOC	X
8270 (Semi-VOA)	X
Air Bubbles (Y or N)	

Remarks: Send Results to:
Luis Gueric: lguerra@las-cruces.org
Joshua Rosenblatt: jrosenbl@las-cruces.org
Send invoice to: CLC c/o Luis Gueric

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 27, 2017

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: Joint Superfund Project Center Monthly Analysis

OrderNo.: 1706D41

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 6 sample(s) on 6/24/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706D41

Date Reported: 6/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-170623

Project: Joint Superfund Project Center Monthly

Collection Date: 6/23/2017 9:04:00 AM

Lab ID: 1706D41-001

Matrix: AQUEOUS

Received Date: 6/24/2017 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
Toluene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
Ethylbenzene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
Naphthalene	ND	2.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
1-Methylnaphthalene	ND	4.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
2-Methylnaphthalene	ND	4.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
Acetone	ND	10		µg/L	1	6/26/2017 3:29:10 PM	W43803
Bromobenzene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
Bromodichloromethane	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
Bromoform	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
Bromomethane	ND	3.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
2-Butanone	ND	10		µg/L	1	6/26/2017 3:29:10 PM	W43803
Carbon disulfide	ND	10		µg/L	1	6/26/2017 3:29:10 PM	W43803
Carbon Tetrachloride	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
Chlorobenzene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
Chloroethane	ND	2.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
Chloroform	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
Chloromethane	ND	3.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
2-Chlorotoluene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
4-Chlorotoluene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
cis-1,2-DCE	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
Dibromochloromethane	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
Dibromomethane	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
1,1-Dichloroethane	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
1,1-Dichloroethene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
1,2-Dichloropropane	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
1,3-Dichloropropane	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
2,2-Dichloropropane	ND	2.0		µg/L	1	6/26/2017 3:29:10 PM	W43803

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706D41

Date Reported: 6/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-170623

Project: Joint Superfund Project Center Monthly

Collection Date: 6/23/2017 9:04:00 AM

Lab ID: 1706D41-001

Matrix: AQUEOUS

Received Date: 6/24/2017 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
Hexachlorobutadiene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
2-Hexanone	ND	10		µg/L	1	6/26/2017 3:29:10 PM	W43803
Isopropylbenzene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
4-Isopropyltoluene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
4-Methyl-2-pentanone	ND	10		µg/L	1	6/26/2017 3:29:10 PM	W43803
Methylene Chloride	ND	3.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
n-Butylbenzene	ND	3.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
n-Propylbenzene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
sec-Butylbenzene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
Styrene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
tert-Butylbenzene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
Tetrachloroethene (PCE)	13	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
trans-1,2-DCE	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
Trichlorofluoromethane	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
Vinyl chloride	ND	1.0		µg/L	1	6/26/2017 3:29:10 PM	W43803
Xylenes, Total	ND	1.5		µg/L	1	6/26/2017 3:29:10 PM	W43803
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	6/26/2017 3:29:10 PM	W43803
Surr: 4-Bromofluorobenzene	95.8	70-130		%Rec	1	6/26/2017 3:29:10 PM	W43803
Surr: Dibromofluoromethane	106	70-130		%Rec	1	6/26/2017 3:29:10 PM	W43803
Surr: Toluene-d8	98.9	70-130		%Rec	1	6/26/2017 3:29:10 PM	W43803

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706D41

Date Reported: 6/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-170623

Project: Joint Superfund Project Center Monthly

Collection Date: 6/23/2017 9:42:00 AM

Lab ID: 1706D41-002

Matrix: AQUEOUS

Received Date: 6/24/2017 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
Toluene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
Ethylbenzene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
Naphthalene	ND	2.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
1-Methylnaphthalene	ND	4.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
2-Methylnaphthalene	ND	4.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
Acetone	ND	10		µg/L	1	6/26/2017 4:56:21 PM	W43803
Bromobenzene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
Bromodichloromethane	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
Bromoform	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
Bromomethane	ND	3.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
2-Butanone	ND	10		µg/L	1	6/26/2017 4:56:21 PM	W43803
Carbon disulfide	ND	10		µg/L	1	6/26/2017 4:56:21 PM	W43803
Carbon Tetrachloride	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
Chlorobenzene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
Chloroethane	ND	2.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
Chloroform	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
Chloromethane	ND	3.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
2-Chlorotoluene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
4-Chlorotoluene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
cis-1,2-DCE	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
Dibromochloromethane	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
Dibromomethane	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
1,1-Dichloroethane	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
1,1-Dichloroethene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
1,2-Dichloropropane	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
1,3-Dichloropropane	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
2,2-Dichloropropane	ND	2.0		µg/L	1	6/26/2017 4:56:21 PM	W43803

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706D41

Date Reported: 6/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-170623

Project: Joint Superfund Project Center Monthly

Collection Date: 6/23/2017 9:42:00 AM

Lab ID: 1706D41-002

Matrix: AQUEOUS

Received Date: 6/24/2017 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
Hexachlorobutadiene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
2-Hexanone	ND	10		µg/L	1	6/26/2017 4:56:21 PM	W43803
Isopropylbenzene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
4-Isopropyltoluene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
4-Methyl-2-pentanone	ND	10		µg/L	1	6/26/2017 4:56:21 PM	W43803
Methylene Chloride	ND	3.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
n-Butylbenzene	ND	3.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
n-Propylbenzene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
sec-Butylbenzene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
Styrene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
tert-Butylbenzene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
Tetrachloroethene (PCE)	13	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
trans-1,2-DCE	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
Trichlorofluoromethane	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
Vinyl chloride	ND	1.0		µg/L	1	6/26/2017 4:56:21 PM	W43803
Xylenes, Total	ND	1.5		µg/L	1	6/26/2017 4:56:21 PM	W43803
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	1	6/26/2017 4:56:21 PM	W43803
Surr: 4-Bromofluorobenzene	93.6	70-130		%Rec	1	6/26/2017 4:56:21 PM	W43803
Surr: Dibromofluoromethane	106	70-130		%Rec	1	6/26/2017 4:56:21 PM	W43803
Surr: Toluene-d8	94.0	70-130		%Rec	1	6/26/2017 4:56:21 PM	W43803

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706D41

Date Reported: 6/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-170623

Project: Joint Superfund Project Center Monthly

Collection Date: 6/23/2017 9:08:00 AM

Lab ID: 1706D41-003

Matrix: AQUEOUS

Received Date: 6/24/2017 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
Toluene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
Ethylbenzene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
Naphthalene	ND	2.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
1-Methylnaphthalene	ND	4.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
2-Methylnaphthalene	ND	4.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
Acetone	ND	10		µg/L	1	6/26/2017 5:25:24 PM	W43803
Bromobenzene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
Bromodichloromethane	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
Bromoform	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
Bromomethane	ND	3.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
2-Butanone	ND	10		µg/L	1	6/26/2017 5:25:24 PM	W43803
Carbon disulfide	ND	10		µg/L	1	6/26/2017 5:25:24 PM	W43803
Carbon Tetrachloride	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
Chlorobenzene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
Chloroethane	ND	2.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
Chloroform	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
Chloromethane	ND	3.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
2-Chlorotoluene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
4-Chlorotoluene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
cis-1,2-DCE	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
Dibromochloromethane	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
Dibromomethane	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
1,1-Dichloroethane	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
1,1-Dichloroethene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
1,2-Dichloropropane	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
1,3-Dichloropropane	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
2,2-Dichloropropane	ND	2.0		µg/L	1	6/26/2017 5:25:24 PM	W43803

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706D41

Date Reported: 6/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-170623

Project: Joint Superfund Project Center Monthly

Collection Date: 6/23/2017 9:08:00 AM

Lab ID: 1706D41-003

Matrix: AQUEOUS

Received Date: 6/24/2017 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
Hexachlorobutadiene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
2-Hexanone	ND	10		µg/L	1	6/26/2017 5:25:24 PM	W43803
Isopropylbenzene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
4-Isopropyltoluene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
4-Methyl-2-pentanone	ND	10		µg/L	1	6/26/2017 5:25:24 PM	W43803
Methylene Chloride	ND	3.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
n-Butylbenzene	ND	3.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
n-Propylbenzene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
sec-Butylbenzene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
Styrene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
tert-Butylbenzene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
Tetrachloroethene (PCE)	10	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
trans-1,2-DCE	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
Trichlorofluoromethane	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
Vinyl chloride	ND	1.0		µg/L	1	6/26/2017 5:25:24 PM	W43803
Xylenes, Total	ND	1.5		µg/L	1	6/26/2017 5:25:24 PM	W43803
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	1	6/26/2017 5:25:24 PM	W43803
Surr: 4-Bromofluorobenzene	92.0	70-130		%Rec	1	6/26/2017 5:25:24 PM	W43803
Surr: Dibromofluoromethane	106	70-130		%Rec	1	6/26/2017 5:25:24 PM	W43803
Surr: Toluene-d8	97.5	70-130		%Rec	1	6/26/2017 5:25:24 PM	W43803

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706D41

Date Reported: 6/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-170623

Project: Joint Superfund Project Center Monthly

Collection Date: 6/23/2017 9:10:00 AM

Lab ID: 1706D41-004

Matrix: AQUEOUS

Received Date: 6/24/2017 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
Toluene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
Ethylbenzene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
Naphthalene	ND	2.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
1-Methylnaphthalene	ND	4.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
2-Methylnaphthalene	ND	4.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
Acetone	ND	10		µg/L	1	6/26/2017 5:54:21 PM	W43803
Bromobenzene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
Bromodichloromethane	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
Bromoform	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
Bromomethane	ND	3.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
2-Butanone	ND	10		µg/L	1	6/26/2017 5:54:21 PM	W43803
Carbon disulfide	ND	10		µg/L	1	6/26/2017 5:54:21 PM	W43803
Carbon Tetrachloride	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
Chlorobenzene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
Chloroethane	ND	2.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
Chloroform	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
Chloromethane	ND	3.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
2-Chlorotoluene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
4-Chlorotoluene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
cis-1,2-DCE	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
Dibromochloromethane	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
Dibromomethane	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
1,1-Dichloroethane	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
1,1-Dichloroethene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
1,2-Dichloropropane	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
1,3-Dichloropropane	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
2,2-Dichloropropane	ND	2.0		µg/L	1	6/26/2017 5:54:21 PM	W43803

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706D41

Date Reported: 6/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-170623

Project: Joint Superfund Project Center Monthly

Collection Date: 6/23/2017 9:10:00 AM

Lab ID: 1706D41-004

Matrix: AQUEOUS

Received Date: 6/24/2017 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
Hexachlorobutadiene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
2-Hexanone	ND	10		µg/L	1	6/26/2017 5:54:21 PM	W43803
Isopropylbenzene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
4-Isopropyltoluene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
4-Methyl-2-pentanone	ND	10		µg/L	1	6/26/2017 5:54:21 PM	W43803
Methylene Chloride	ND	3.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
n-Butylbenzene	ND	3.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
n-Propylbenzene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
sec-Butylbenzene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
Styrene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
tert-Butylbenzene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
trans-1,2-DCE	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
Trichlorofluoromethane	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
Vinyl chloride	ND	1.0		µg/L	1	6/26/2017 5:54:21 PM	W43803
Xylenes, Total	ND	1.5		µg/L	1	6/26/2017 5:54:21 PM	W43803
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	6/26/2017 5:54:21 PM	W43803
Surr: 4-Bromofluorobenzene	92.1	70-130		%Rec	1	6/26/2017 5:54:21 PM	W43803
Surr: Dibromofluoromethane	106	70-130		%Rec	1	6/26/2017 5:54:21 PM	W43803
Surr: Toluene-d8	99.2	70-130		%Rec	1	6/26/2017 5:54:21 PM	W43803

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706D41

Date Reported: 6/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-170623

Project: Joint Superfund Project Center Monthly

Collection Date: 6/23/2017 9:12:00 AM

Lab ID: 1706D41-005

Matrix: AQUEOUS

Received Date: 6/24/2017 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
Toluene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
Ethylbenzene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
Naphthalene	ND	2.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
1-Methylnaphthalene	ND	4.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
2-Methylnaphthalene	ND	4.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
Acetone	ND	10		µg/L	1	6/26/2017 6:23:09 PM	W43803
Bromobenzene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
Bromodichloromethane	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
Bromoform	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
Bromomethane	ND	3.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
2-Butanone	ND	10		µg/L	1	6/26/2017 6:23:09 PM	W43803
Carbon disulfide	ND	10		µg/L	1	6/26/2017 6:23:09 PM	W43803
Carbon Tetrachloride	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
Chlorobenzene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
Chloroethane	ND	2.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
Chloroform	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
Chloromethane	ND	3.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
2-Chlorotoluene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
4-Chlorotoluene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
cis-1,2-DCE	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
Dibromochloromethane	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
Dibromomethane	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
1,1-Dichloroethane	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
1,1-Dichloroethene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
1,2-Dichloropropane	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
1,3-Dichloropropane	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
2,2-Dichloropropane	ND	2.0		µg/L	1	6/26/2017 6:23:09 PM	W43803

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706D41

Date Reported: 6/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-170623

Project: Joint Superfund Project Center Monthly

Collection Date: 6/23/2017 9:12:00 AM

Lab ID: 1706D41-005

Matrix: AQUEOUS

Received Date: 6/24/2017 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
Hexachlorobutadiene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
2-Hexanone	ND	10		µg/L	1	6/26/2017 6:23:09 PM	W43803
Isopropylbenzene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
4-Isopropyltoluene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
4-Methyl-2-pentanone	ND	10		µg/L	1	6/26/2017 6:23:09 PM	W43803
Methylene Chloride	ND	3.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
n-Butylbenzene	ND	3.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
n-Propylbenzene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
sec-Butylbenzene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
Styrene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
tert-Butylbenzene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
trans-1,2-DCE	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
Trichlorofluoromethane	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
Vinyl chloride	ND	1.0		µg/L	1	6/26/2017 6:23:09 PM	W43803
Xylenes, Total	ND	1.5		µg/L	1	6/26/2017 6:23:09 PM	W43803
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	1	6/26/2017 6:23:09 PM	W43803
Surr: 4-Bromofluorobenzene	93.1	70-130		%Rec	1	6/26/2017 6:23:09 PM	W43803
Surr: Dibromofluoromethane	107	70-130		%Rec	1	6/26/2017 6:23:09 PM	W43803
Surr: Toluene-d8	99.3	70-130		%Rec	1	6/26/2017 6:23:09 PM	W43803

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706D41

Date Reported: 6/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-170623

Project: Joint Superfund Project Center Monthly

Collection Date: 6/23/2017 9:14:00 AM

Lab ID: 1706D41-006

Matrix: AQUEOUS

Received Date: 6/24/2017 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
Toluene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
Ethylbenzene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
Naphthalene	ND	2.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
1-Methylnaphthalene	ND	4.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
2-Methylnaphthalene	ND	4.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
Acetone	ND	10		µg/L	1	6/26/2017 6:51:50 PM	W43803
Bromobenzene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
Bromodichloromethane	1.3	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
Bromoform	3.2	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
Bromomethane	ND	3.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
2-Butanone	ND	10		µg/L	1	6/26/2017 6:51:50 PM	W43803
Carbon disulfide	ND	10		µg/L	1	6/26/2017 6:51:50 PM	W43803
Carbon Tetrachloride	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
Chlorobenzene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
Chloroethane	ND	2.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
Chloroform	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
Chloromethane	ND	3.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
2-Chlorotoluene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
4-Chlorotoluene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
cis-1,2-DCE	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
Dibromochloromethane	2.6	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
Dibromomethane	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
1,1-Dichloroethane	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
1,1-Dichloroethene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
1,2-Dichloropropane	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
1,3-Dichloropropane	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
2,2-Dichloropropane	ND	2.0		µg/L	1	6/26/2017 6:51:50 PM	W43803

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706D41

Date Reported: 6/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-170623

Project: Joint Superfund Project Center Monthly

Collection Date: 6/23/2017 9:14:00 AM

Lab ID: 1706D41-006

Matrix: AQUEOUS

Received Date: 6/24/2017 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
Hexachlorobutadiene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
2-Hexanone	ND	10		µg/L	1	6/26/2017 6:51:50 PM	W43803
Isopropylbenzene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
4-Isopropyltoluene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
4-Methyl-2-pentanone	ND	10		µg/L	1	6/26/2017 6:51:50 PM	W43803
Methylene Chloride	ND	3.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
n-Butylbenzene	ND	3.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
n-Propylbenzene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
sec-Butylbenzene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
Styrene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
tert-Butylbenzene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
trans-1,2-DCE	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
Trichlorofluoromethane	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
Vinyl chloride	ND	1.0		µg/L	1	6/26/2017 6:51:50 PM	W43803
Xylenes, Total	ND	1.5		µg/L	1	6/26/2017 6:51:50 PM	W43803
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	6/26/2017 6:51:50 PM	W43803
Surr: 4-Bromofluorobenzene	95.6	70-130		%Rec	1	6/26/2017 6:51:50 PM	W43803
Surr: Dibromofluoromethane	109	70-130		%Rec	1	6/26/2017 6:51:50 PM	W43803
Surr: Toluene-d8	99.8	70-130		%Rec	1	6/26/2017 6:51:50 PM	W43803

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1706D41

27-Jun-17

Client: City of Las Cruces
Project: Joint Superfund Project Center Monthly Analysis

Sample ID	rb	SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID:	W43803		RunNo:	43803				
Prep Date:		Analysis Date:	6/26/2017		SeqNo:	1379947	Units:	µg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1706D41

27-Jun-17

Client: City of Las Cruces
Project: Joint Superfund Project Center Monthly Analysis

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: W43803			RunNo: 43803					
Prep Date:		Analysis Date: 6/26/2017			SeqNo: 1379947		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.9	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		93.0	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.3	70	130			
Surr: Toluene-d8	9.9		10.00		99.3	70	130			

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: W43803			RunNo: 43803					
Prep Date:		Analysis Date: 6/26/2017			SeqNo: 1379953		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	19	1.0	20.00	0	96.1	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1706D41

27-Jun-17

Client: City of Las Cruces
Project: Joint Superfund Project Center Monthly Analysis

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES								
Client ID: LCSW	Batch ID: W43803	RunNo: 43803								
Prep Date:	Analysis Date: 6/26/2017	SeqNo: 1379953			Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	109	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	91.6	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.4	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		93.7	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.8	70	130			
Surr: Toluene-d8	9.9		10.00		99.1	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1706D41

RcptNo: 1

Received By: **Andy Jansson** 6/24/2017 10:00:00 AM *andy jansson*
 Completed By: **Andy Jansson** 6/24/2017 11:06:23 AM *andy jansson*
 Reviewed By: *RC* 6/26/17

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
 # of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
- 12. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody) Adjusted? _____
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.) Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.7	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces
 Project Name: Water Quality Laboratory
 Mailing Address: P.O. Box 2000
Las Cruces, NM 87004
 Phone #: 575-528-3604
 email or Fax#: lucvrm@lucsvr.com (575) 528-3630
 QA/QC Package: Standard Level 4 (Full Validation)
 Accreditation: NELAP Other
 EDO (Type): 275M

Turn-Around Time: Standard Rush
 Project Name: Joint Superior Project Center
Monthly Analysis
 Project #: 2003P Griggs Walnut
 Project Manager: Luis Guerra
 575-528-3609
 Sampler: Luis Guerra
 On Ice: Yes No
 Sample Temperature: 17°C

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
4/23/17	0904	Drinking Water	CW 17-170623	30-40ml Vials	HgCl2	1706D41
	0912	Drinking Water	CW 17-170623			-001
	0908	Drinking Water	CW 17-170623			-002
	0910	Drinking Water	CW 17-170623			-003
	0912	Drinking Water	CW 17-170623			-004
	0914	Drinking Water	CW 17-170623			-005
4/23/17	0914	Drinking Water	CW 17-170623	30-40ml Vials	HgCl2	-006

Date: 6/24/17 Time: 1000
 Received by: [Signature]
 Date: 6/24/17 Time: 1000
 Received by: [Signature]

Analysis Request

BTEX + MTBE + TMS's (8021)	
BTEX + MTBE + TPH (Gas only)	
TPH 8015B (GRO / DRO / MRO)	
TPH (Method 418.1)	
EDB (Method 504.1)	
PAH's (8310 or 8270 SIMS)	
RCRA 8 Metals	
Anions (F, Cl, NO3, NO2, PO4, SO4)	
8081 Pesticides / 8082 PCB's	X
8260B (VQA) VOC	X
8270 (Semi-VQA)	
Air Bubbles (Y or N)	

Remarks: Send Products to:
Luis Guerra: lguerra@lucsvr.com
Joselyn Hernandez: rosbndist@lucsvr.com
Send invoice to: CECOP Luis Guerra



4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107
 www.hallenvironmental.com



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 30, 2017

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: Joint Superfund Project Center Monthly Analysis

OrderNo.: 1706D42

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 3 sample(s) on 6/24/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706D42

Date Reported: 6/30/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1-170623

Project: Joint Superfund Project Center Monthly

Collection Date: 6/23/2017 9:20:00 AM

Lab ID: 1706D42-001

Matrix: AIR

Received Date: 6/24/2017 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
Toluene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
Ethylbenzene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
Naphthalene	ND	0.20		µg/L	1	6/29/2017 11:11:47 AM	W43906
1-Methylnaphthalene	ND	0.40		µg/L	1	6/29/2017 11:11:47 AM	W43906
2-Methylnaphthalene	ND	0.40		µg/L	1	6/29/2017 11:11:47 AM	W43906
Acetone	ND	1.0		µg/L	1	6/29/2017 11:11:47 AM	W43906
Bromobenzene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
Bromodichloromethane	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
Bromoform	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
Bromomethane	ND	0.20		µg/L	1	6/29/2017 11:11:47 AM	W43906
2-Butanone	ND	1.0		µg/L	1	6/29/2017 11:11:47 AM	W43906
Carbon disulfide	ND	1.0		µg/L	1	6/29/2017 11:11:47 AM	W43906
Carbon tetrachloride	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
Chlorobenzene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
Chloroethane	ND	0.20		µg/L	1	6/29/2017 11:11:47 AM	W43906
Chloroform	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
Chloromethane	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
2-Chlorotoluene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
4-Chlorotoluene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
cis-1,2-DCE	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	6/29/2017 11:11:47 AM	W43906
Dibromochloromethane	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
Dibromomethane	ND	0.20		µg/L	1	6/29/2017 11:11:47 AM	W43906
1,2-Dichlorobenzene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
1,3-Dichlorobenzene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
1,4-Dichlorobenzene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
Dichlorodifluoromethane	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
1,1-Dichloroethane	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
1,1-Dichloroethene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
1,2-Dichloropropane	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
1,3-Dichloropropane	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
2,2-Dichloropropane	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 1 of 6
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706D42

Date Reported: 6/30/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1-170623

Project: Joint Superfund Project Center Monthly

Collection Date: 6/23/2017 9:20:00 AM

Lab ID: 1706D42-001

Matrix: AIR

Received Date: 6/24/2017 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
Hexachlorobutadiene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
2-Hexanone	ND	1.0		µg/L	1	6/29/2017 11:11:47 AM	W43906
Isopropylbenzene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
4-Isopropyltoluene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
4-Methyl-2-pentanone	ND	1.0		µg/L	1	6/29/2017 11:11:47 AM	W43906
Methylene chloride	ND	0.30		µg/L	1	6/29/2017 11:11:47 AM	W43906
n-Butylbenzene	ND	0.30		µg/L	1	6/29/2017 11:11:47 AM	W43906
n-Propylbenzene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
sec-Butylbenzene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
Styrene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
tert-Butylbenzene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
trans-1,2-DCE	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
1,1,1-Trichloroethane	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
1,1,2-Trichloroethane	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
Trichloroethene (TCE)	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
Trichlorofluoromethane	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
1,2,3-Trichloropropane	ND	0.20		µg/L	1	6/29/2017 11:11:47 AM	W43906
Vinyl chloride	ND	0.10		µg/L	1	6/29/2017 11:11:47 AM	W43906
Xylenes, Total	ND	0.15		µg/L	1	6/29/2017 11:11:47 AM	W43906
Surr: Dibromofluoromethane	102	70-130		%Rec	1	6/29/2017 11:11:47 AM	W43906
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	6/29/2017 11:11:47 AM	W43906
Surr: Toluene-d8	106	70-130		%Rec	1	6/29/2017 11:11:47 AM	W43906
Surr: 4-Bromofluorobenzene	95.4	70-130		%Rec	1	6/29/2017 11:11:47 AM	W43906

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 2 of 6
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706D42

Date Reported: 6/30/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1-170623 Dup

Project: Joint Superfund Project Center Monthly

Collection Date: 6/23/2017 9:26:00 AM

Lab ID: 1706D42-002

Matrix: AIR

Received Date: 6/24/2017 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
Toluene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
Ethylbenzene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
Naphthalene	ND	0.20		µg/L	1	6/29/2017 12:09:40 PM	W43906
1-Methylnaphthalene	ND	0.40		µg/L	1	6/29/2017 12:09:40 PM	W43906
2-Methylnaphthalene	ND	0.40		µg/L	1	6/29/2017 12:09:40 PM	W43906
Acetone	ND	1.0		µg/L	1	6/29/2017 12:09:40 PM	W43906
Bromobenzene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
Bromodichloromethane	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
Bromoform	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
Bromomethane	ND	0.20		µg/L	1	6/29/2017 12:09:40 PM	W43906
2-Butanone	ND	1.0		µg/L	1	6/29/2017 12:09:40 PM	W43906
Carbon disulfide	ND	1.0		µg/L	1	6/29/2017 12:09:40 PM	W43906
Carbon tetrachloride	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
Chlorobenzene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
Chloroethane	ND	0.20		µg/L	1	6/29/2017 12:09:40 PM	W43906
Chloroform	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
Chloromethane	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
2-Chlorotoluene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
4-Chlorotoluene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
cis-1,2-DCE	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	6/29/2017 12:09:40 PM	W43906
Dibromochloromethane	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
Dibromomethane	ND	0.20		µg/L	1	6/29/2017 12:09:40 PM	W43906
1,2-Dichlorobenzene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
1,3-Dichlorobenzene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
1,4-Dichlorobenzene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
Dichlorodifluoromethane	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
1,1-Dichloroethane	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
1,1-Dichloroethene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
1,2-Dichloropropane	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
1,3-Dichloropropane	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
2,2-Dichloropropane	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 3 of 6
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706D42

Date Reported: 6/30/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1-170623 Dup

Project: Joint Superfund Project Center Monthly

Collection Date: 6/23/2017 9:26:00 AM

Lab ID: 1706D42-002

Matrix: AIR

Received Date: 6/24/2017 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
Hexachlorobutadiene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
2-Hexanone	ND	1.0		µg/L	1	6/29/2017 12:09:40 PM	W43906
Isopropylbenzene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
4-Isopropyltoluene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
4-Methyl-2-pentanone	ND	1.0		µg/L	1	6/29/2017 12:09:40 PM	W43906
Methylene chloride	ND	0.30		µg/L	1	6/29/2017 12:09:40 PM	W43906
n-Butylbenzene	ND	0.30		µg/L	1	6/29/2017 12:09:40 PM	W43906
n-Propylbenzene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
sec-Butylbenzene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
Styrene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
tert-Butylbenzene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
trans-1,2-DCE	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
1,1,1-Trichloroethane	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
1,1,2-Trichloroethane	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
Trichloroethene (TCE)	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
Trichlorofluoromethane	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
1,2,3-Trichloropropane	ND	0.20		µg/L	1	6/29/2017 12:09:40 PM	W43906
Vinyl chloride	ND	0.10		µg/L	1	6/29/2017 12:09:40 PM	W43906
Xylenes, Total	ND	0.15		µg/L	1	6/29/2017 12:09:40 PM	W43906
Surr: Dibromofluoromethane	101	70-130		%Rec	1	6/29/2017 12:09:40 PM	W43906
Surr: 1,2-Dichloroethane-d4	92.8	70-130		%Rec	1	6/29/2017 12:09:40 PM	W43906
Surr: Toluene-d8	107	70-130		%Rec	1	6/29/2017 12:09:40 PM	W43906
Surr: 4-Bromofluorobenzene	96.1	70-130		%Rec	1	6/29/2017 12:09:40 PM	W43906

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706D42

Date Reported: 6/30/2017

CLIENT: City of Las Cruces

Client Sample ID: AS2-170623

Project: Joint Superfund Project Center Monthly

Collection Date: 6/23/2017 9:32:00 AM

Lab ID: 1706D42-003

Matrix: AIR

Received Date: 6/24/2017 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
Toluene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
Ethylbenzene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
Naphthalene	ND	0.20		µg/L	1	6/29/2017 12:38:41 PM	W43906
1-Methylnaphthalene	ND	0.40		µg/L	1	6/29/2017 12:38:41 PM	W43906
2-Methylnaphthalene	ND	0.40		µg/L	1	6/29/2017 12:38:41 PM	W43906
Acetone	ND	1.0		µg/L	1	6/29/2017 12:38:41 PM	W43906
Bromobenzene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
Bromodichloromethane	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
Bromoform	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
Bromomethane	ND	0.20		µg/L	1	6/29/2017 12:38:41 PM	W43906
2-Butanone	ND	1.0		µg/L	1	6/29/2017 12:38:41 PM	W43906
Carbon disulfide	ND	1.0		µg/L	1	6/29/2017 12:38:41 PM	W43906
Carbon tetrachloride	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
Chlorobenzene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
Chloroethane	ND	0.20		µg/L	1	6/29/2017 12:38:41 PM	W43906
Chloroform	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
Chloromethane	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
2-Chlorotoluene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
4-Chlorotoluene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
cis-1,2-DCE	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	6/29/2017 12:38:41 PM	W43906
Dibromochloromethane	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
Dibromomethane	ND	0.20		µg/L	1	6/29/2017 12:38:41 PM	W43906
1,2-Dichlorobenzene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
1,3-Dichlorobenzene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
1,4-Dichlorobenzene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
Dichlorodifluoromethane	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
1,1-Dichloroethane	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
1,1-Dichloroethene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
1,2-Dichloropropane	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
1,3-Dichloropropane	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
2,2-Dichloropropane	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 5 of 6
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1706D42

Date Reported: 6/30/2017

CLIENT: City of Las Cruces

Client Sample ID: AS2-170623

Project: Joint Superfund Project Center Monthly

Collection Date: 6/23/2017 9:32:00 AM

Lab ID: 1706D42-003

Matrix: AIR

Received Date: 6/24/2017 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
Hexachlorobutadiene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
2-Hexanone	ND	1.0		µg/L	1	6/29/2017 12:38:41 PM	W43906
Isopropylbenzene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
4-Isopropyltoluene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
4-Methyl-2-pentanone	ND	1.0		µg/L	1	6/29/2017 12:38:41 PM	W43906
Methylene chloride	ND	0.30		µg/L	1	6/29/2017 12:38:41 PM	W43906
n-Butylbenzene	ND	0.30		µg/L	1	6/29/2017 12:38:41 PM	W43906
n-Propylbenzene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
sec-Butylbenzene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
Styrene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
tert-Butylbenzene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
trans-1,2-DCE	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
1,1,1-Trichloroethane	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
1,1,2-Trichloroethane	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
Trichloroethene (TCE)	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
Trichlorofluoromethane	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
1,2,3-Trichloropropane	ND	0.20		µg/L	1	6/29/2017 12:38:41 PM	W43906
Vinyl chloride	ND	0.10		µg/L	1	6/29/2017 12:38:41 PM	W43906
Xylenes, Total	ND	0.15		µg/L	1	6/29/2017 12:38:41 PM	W43906
Surr: Dibromofluoromethane	103	70-130		%Rec	1	6/29/2017 12:38:41 PM	W43906
Surr: 1,2-Dichloroethane-d4	97.2	70-130		%Rec	1	6/29/2017 12:38:41 PM	W43906
Surr: Toluene-d8	106	70-130		%Rec	1	6/29/2017 12:38:41 PM	W43906
Surr: 4-Bromofluorobenzene	96.4	70-130		%Rec	1	6/29/2017 12:38:41 PM	W43906

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1706D42

RcptNo: 1

Received By: **Andy Jansson** 6/24/2017 10:00:00 AM *[Signature]*
 Completed By: **Andy Jansson** 6/24/2017 11:11:03 AM *[Signature]*
 Reviewed By: *[Signature]* 6/26/17

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No # of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
- 13. Are matrices correctly identified on Chain of Custody? Yes No Adjusted? _____
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No Checked by: _____

Special Handling (if applicable)

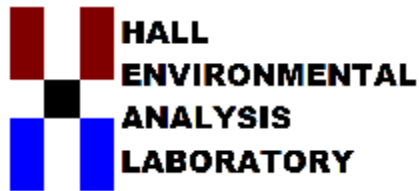
- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:		Date:	
By Whom:		Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	NA	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 26, 2017

Luis Guerra
City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3635
FAX (575) 528-3513

RE: Joint Superfund Project Center Monthly Analysis

OrderNo.: 1707A81

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 7/20/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLC18-170719**Project:** Joint Superfund Project Center Monthly**Collection Date:** 7/19/2017 9:06:00 AM**Lab ID:** 1707A81-001**Matrix:** AQUEOUS**Received Date:** 7/20/2017 9:12:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	0.062	1.0		µg/L	1	7/21/2017 11:46:03 PM
Toluene	ND	0.064	1.0		µg/L	1	7/21/2017 11:46:03 PM
Ethylbenzene	ND	0.093	1.0		µg/L	1	7/21/2017 11:46:03 PM
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	7/21/2017 11:46:03 PM
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	7/21/2017 11:46:03 PM
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	7/21/2017 11:46:03 PM
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	7/21/2017 11:46:03 PM
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	7/21/2017 11:46:03 PM
Naphthalene	ND	0.11	2.0		µg/L	1	7/21/2017 11:46:03 PM
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	7/21/2017 11:46:03 PM
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	7/21/2017 11:46:03 PM
Acetone	ND	0.82	10		µg/L	1	7/21/2017 11:46:03 PM
Bromobenzene	ND	0.14	1.0		µg/L	1	7/21/2017 11:46:03 PM
Bromodichloromethane	ND	0.18	1.0		µg/L	1	7/21/2017 11:46:03 PM
Bromoform	ND	0.21	1.0		µg/L	1	7/21/2017 11:46:03 PM
Bromomethane	ND	0.26	3.0		µg/L	1	7/21/2017 11:46:03 PM
2-Butanone	ND	1.1	10		µg/L	1	7/21/2017 11:46:03 PM
Carbon disulfide	ND	0.40	10		µg/L	1	7/21/2017 11:46:03 PM
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	7/21/2017 11:46:03 PM
Chlorobenzene	ND	0.11	1.0		µg/L	1	7/21/2017 11:46:03 PM
Chloroethane	ND	0.23	2.0		µg/L	1	7/21/2017 11:46:03 PM
Chloroform	ND	0.40	1.0		µg/L	1	7/21/2017 11:46:03 PM
Chloromethane	ND	0.29	3.0		µg/L	1	7/21/2017 11:46:03 PM
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	7/21/2017 11:46:03 PM
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	7/21/2017 11:46:03 PM
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	7/21/2017 11:46:03 PM
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	7/21/2017 11:46:03 PM
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	7/21/2017 11:46:03 PM
Dibromochloromethane	ND	0.072	1.0		µg/L	1	7/21/2017 11:46:03 PM
Dibromomethane	ND	0.091	1.0		µg/L	1	7/21/2017 11:46:03 PM
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	7/21/2017 11:46:03 PM
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	7/21/2017 11:46:03 PM
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	7/21/2017 11:46:03 PM
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	7/21/2017 11:46:03 PM
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	7/21/2017 11:46:03 PM
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	7/21/2017 11:46:03 PM
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	7/21/2017 11:46:03 PM
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	7/21/2017 11:46:03 PM
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	7/21/2017 11:46:03 PM
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	7/21/2017 11:46:03 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLC18-170719**Project:** Joint Superfund Project Center Monthly**Collection Date:** 7/19/2017 9:06:00 AM**Lab ID:** 1707A81-001**Matrix:** AQUEOUS**Received Date:** 7/20/2017 9:12:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	7/21/2017 11:46:03 PM
2-Hexanone	ND	0.66	10		µg/L	1	7/21/2017 11:46:03 PM
Isopropylbenzene	ND	0.051	1.0		µg/L	1	7/21/2017 11:46:03 PM
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	7/21/2017 11:46:03 PM
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	7/21/2017 11:46:03 PM
Methylene Chloride	ND	0.11	3.0		µg/L	1	7/21/2017 11:46:03 PM
n-Butylbenzene	ND	0.13	3.0		µg/L	1	7/21/2017 11:46:03 PM
n-Propylbenzene	ND	0.074	1.0		µg/L	1	7/21/2017 11:46:03 PM
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	7/21/2017 11:46:03 PM
Styrene	ND	0.16	1.0		µg/L	1	7/21/2017 11:46:03 PM
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	7/21/2017 11:46:03 PM
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	7/21/2017 11:46:03 PM
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	7/21/2017 11:46:03 PM
Tetrachloroethene (PCE)	12	0.13	1.0		µg/L	1	7/21/2017 11:46:03 PM
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	7/21/2017 11:46:03 PM
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	7/21/2017 11:46:03 PM
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	7/21/2017 11:46:03 PM
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	7/21/2017 11:46:03 PM
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	7/21/2017 11:46:03 PM
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	7/21/2017 11:46:03 PM
Trichloroethene (TCE)	0.44	0.11	1.0	J	µg/L	1	7/21/2017 11:46:03 PM
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	7/21/2017 11:46:03 PM
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	7/21/2017 11:46:03 PM
Vinyl chloride	ND	0.18	1.0		µg/L	1	7/21/2017 11:46:03 PM
Xylenes, Total	ND	0.32	1.5		µg/L	1	7/21/2017 11:46:03 PM
Surr: 1,2-Dichloroethane-d4	101	0	70-130		%Rec	1	7/21/2017 11:46:03 PM
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	7/21/2017 11:46:03 PM
Surr: Dibromofluoromethane	99.1	0	70-130		%Rec	1	7/21/2017 11:46:03 PM
Surr: Toluene-d8	89.7	0	70-130		%Rec	1	7/21/2017 11:46:03 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLC27-170719**Project:** Joint Superfund Project Center Monthly**Collection Date:** 7/19/2017 9:37:00 AM**Lab ID:** 1707A81-002**Matrix:** AQUEOUS**Received Date:** 7/20/2017 9:12:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	0.062	1.0		µg/L	1	7/22/2017 1:13:14 AM
Toluene	ND	0.064	1.0		µg/L	1	7/22/2017 1:13:14 AM
Ethylbenzene	ND	0.093	1.0		µg/L	1	7/22/2017 1:13:14 AM
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	7/22/2017 1:13:14 AM
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	7/22/2017 1:13:14 AM
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	7/22/2017 1:13:14 AM
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	7/22/2017 1:13:14 AM
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	7/22/2017 1:13:14 AM
Naphthalene	ND	0.11	2.0		µg/L	1	7/22/2017 1:13:14 AM
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	7/22/2017 1:13:14 AM
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	7/22/2017 1:13:14 AM
Acetone	ND	0.82	10		µg/L	1	7/22/2017 1:13:14 AM
Bromobenzene	ND	0.14	1.0		µg/L	1	7/22/2017 1:13:14 AM
Bromodichloromethane	ND	0.18	1.0		µg/L	1	7/22/2017 1:13:14 AM
Bromoform	ND	0.21	1.0		µg/L	1	7/22/2017 1:13:14 AM
Bromomethane	ND	0.26	3.0		µg/L	1	7/22/2017 1:13:14 AM
2-Butanone	ND	1.1	10		µg/L	1	7/22/2017 1:13:14 AM
Carbon disulfide	ND	0.40	10		µg/L	1	7/22/2017 1:13:14 AM
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	7/22/2017 1:13:14 AM
Chlorobenzene	ND	0.11	1.0		µg/L	1	7/22/2017 1:13:14 AM
Chloroethane	ND	0.23	2.0		µg/L	1	7/22/2017 1:13:14 AM
Chloroform	ND	0.40	1.0		µg/L	1	7/22/2017 1:13:14 AM
Chloromethane	ND	0.29	3.0		µg/L	1	7/22/2017 1:13:14 AM
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	7/22/2017 1:13:14 AM
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	7/22/2017 1:13:14 AM
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	7/22/2017 1:13:14 AM
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	7/22/2017 1:13:14 AM
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	7/22/2017 1:13:14 AM
Dibromochloromethane	ND	0.072	1.0		µg/L	1	7/22/2017 1:13:14 AM
Dibromomethane	ND	0.091	1.0		µg/L	1	7/22/2017 1:13:14 AM
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	7/22/2017 1:13:14 AM
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	7/22/2017 1:13:14 AM
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	7/22/2017 1:13:14 AM
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	7/22/2017 1:13:14 AM
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	7/22/2017 1:13:14 AM
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	7/22/2017 1:13:14 AM
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	7/22/2017 1:13:14 AM
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	7/22/2017 1:13:14 AM
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	7/22/2017 1:13:14 AM
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	7/22/2017 1:13:14 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLC27-170719**Project:** Joint Superfund Project Center Monthly**Collection Date:** 7/19/2017 9:37:00 AM**Lab ID:** 1707A81-002**Matrix:** AQUEOUS**Received Date:** 7/20/2017 9:12:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	7/22/2017 1:13:14 AM
2-Hexanone	ND	0.66	10		µg/L	1	7/22/2017 1:13:14 AM
Isopropylbenzene	ND	0.051	1.0		µg/L	1	7/22/2017 1:13:14 AM
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	7/22/2017 1:13:14 AM
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	7/22/2017 1:13:14 AM
Methylene Chloride	ND	0.11	3.0		µg/L	1	7/22/2017 1:13:14 AM
n-Butylbenzene	ND	0.13	3.0		µg/L	1	7/22/2017 1:13:14 AM
n-Propylbenzene	ND	0.074	1.0		µg/L	1	7/22/2017 1:13:14 AM
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	7/22/2017 1:13:14 AM
Styrene	ND	0.16	1.0		µg/L	1	7/22/2017 1:13:14 AM
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	7/22/2017 1:13:14 AM
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	7/22/2017 1:13:14 AM
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	7/22/2017 1:13:14 AM
Tetrachloroethene (PCE)	15	0.13	1.0		µg/L	1	7/22/2017 1:13:14 AM
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	7/22/2017 1:13:14 AM
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	7/22/2017 1:13:14 AM
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	7/22/2017 1:13:14 AM
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	7/22/2017 1:13:14 AM
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	7/22/2017 1:13:14 AM
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	7/22/2017 1:13:14 AM
Trichloroethene (TCE)	0.37	0.11	1.0	J	µg/L	1	7/22/2017 1:13:14 AM
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	7/22/2017 1:13:14 AM
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	7/22/2017 1:13:14 AM
Vinyl chloride	ND	0.18	1.0		µg/L	1	7/22/2017 1:13:14 AM
Xylenes, Total	ND	0.32	1.5		µg/L	1	7/22/2017 1:13:14 AM
Surr: 1,2-Dichloroethane-d4	96.2	0	70-130		%Rec	1	7/22/2017 1:13:14 AM
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	1	7/22/2017 1:13:14 AM
Surr: Dibromofluoromethane	98.0	0	70-130		%Rec	1	7/22/2017 1:13:14 AM
Surr: Toluene-d8	91.4	0	70-130		%Rec	1	7/22/2017 1:13:14 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLCIS1-170719**Project:** Joint Superfund Project Center Monthly**Collection Date:** 7/19/2017 9:10:00 AM**Lab ID:** 1707A81-003**Matrix:** AQUEOUS**Received Date:** 7/20/2017 9:12:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	0.062	1.0		µg/L	1	7/22/2017 1:42:25 AM
Toluene	ND	0.064	1.0		µg/L	1	7/22/2017 1:42:25 AM
Ethylbenzene	ND	0.093	1.0		µg/L	1	7/22/2017 1:42:25 AM
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	7/22/2017 1:42:25 AM
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	7/22/2017 1:42:25 AM
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	7/22/2017 1:42:25 AM
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	7/22/2017 1:42:25 AM
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	7/22/2017 1:42:25 AM
Naphthalene	ND	0.11	2.0		µg/L	1	7/22/2017 1:42:25 AM
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	7/22/2017 1:42:25 AM
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	7/22/2017 1:42:25 AM
Acetone	ND	0.82	10		µg/L	1	7/22/2017 1:42:25 AM
Bromobenzene	ND	0.14	1.0		µg/L	1	7/22/2017 1:42:25 AM
Bromodichloromethane	ND	0.18	1.0		µg/L	1	7/22/2017 1:42:25 AM
Bromoform	ND	0.21	1.0		µg/L	1	7/22/2017 1:42:25 AM
Bromomethane	ND	0.26	3.0		µg/L	1	7/22/2017 1:42:25 AM
2-Butanone	ND	1.1	10		µg/L	1	7/22/2017 1:42:25 AM
Carbon disulfide	ND	0.40	10		µg/L	1	7/22/2017 1:42:25 AM
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	7/22/2017 1:42:25 AM
Chlorobenzene	ND	0.11	1.0		µg/L	1	7/22/2017 1:42:25 AM
Chloroethane	ND	0.23	2.0		µg/L	1	7/22/2017 1:42:25 AM
Chloroform	ND	0.40	1.0		µg/L	1	7/22/2017 1:42:25 AM
Chloromethane	ND	0.29	3.0		µg/L	1	7/22/2017 1:42:25 AM
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	7/22/2017 1:42:25 AM
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	7/22/2017 1:42:25 AM
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	7/22/2017 1:42:25 AM
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	7/22/2017 1:42:25 AM
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	7/22/2017 1:42:25 AM
Dibromochloromethane	ND	0.072	1.0		µg/L	1	7/22/2017 1:42:25 AM
Dibromomethane	ND	0.091	1.0		µg/L	1	7/22/2017 1:42:25 AM
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	7/22/2017 1:42:25 AM
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	7/22/2017 1:42:25 AM
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	7/22/2017 1:42:25 AM
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	7/22/2017 1:42:25 AM
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	7/22/2017 1:42:25 AM
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	7/22/2017 1:42:25 AM
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	7/22/2017 1:42:25 AM
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	7/22/2017 1:42:25 AM
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	7/22/2017 1:42:25 AM
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	7/22/2017 1:42:25 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLCIS1-170719**Project:** Joint Superfund Project Center Monthly**Collection Date:** 7/19/2017 9:10:00 AM**Lab ID:** 1707A81-003**Matrix:** AQUEOUS**Received Date:** 7/20/2017 9:12:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	7/22/2017 1:42:25 AM
2-Hexanone	ND	0.66	10		µg/L	1	7/22/2017 1:42:25 AM
Isopropylbenzene	ND	0.051	1.0		µg/L	1	7/22/2017 1:42:25 AM
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	7/22/2017 1:42:25 AM
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	7/22/2017 1:42:25 AM
Methylene Chloride	ND	0.11	3.0		µg/L	1	7/22/2017 1:42:25 AM
n-Butylbenzene	ND	0.13	3.0		µg/L	1	7/22/2017 1:42:25 AM
n-Propylbenzene	ND	0.074	1.0		µg/L	1	7/22/2017 1:42:25 AM
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	7/22/2017 1:42:25 AM
Styrene	ND	0.16	1.0		µg/L	1	7/22/2017 1:42:25 AM
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	7/22/2017 1:42:25 AM
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	7/22/2017 1:42:25 AM
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	7/22/2017 1:42:25 AM
Tetrachloroethene (PCE)	11	0.13	1.0		µg/L	1	7/22/2017 1:42:25 AM
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	7/22/2017 1:42:25 AM
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	7/22/2017 1:42:25 AM
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	7/22/2017 1:42:25 AM
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	7/22/2017 1:42:25 AM
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	7/22/2017 1:42:25 AM
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	7/22/2017 1:42:25 AM
Trichloroethene (TCE)	0.30	0.11	1.0	J	µg/L	1	7/22/2017 1:42:25 AM
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	7/22/2017 1:42:25 AM
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	7/22/2017 1:42:25 AM
Vinyl chloride	ND	0.18	1.0		µg/L	1	7/22/2017 1:42:25 AM
Xylenes, Total	ND	0.32	1.5		µg/L	1	7/22/2017 1:42:25 AM
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	1	7/22/2017 1:42:25 AM
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	7/22/2017 1:42:25 AM
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	7/22/2017 1:42:25 AM
Surr: Toluene-d8	92.0	0	70-130		%Rec	1	7/22/2017 1:42:25 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLCC1-170719**Project:** Joint Superfund Project Center Monthly**Collection Date:** 7/19/2017 9:13:00 AM**Lab ID:** 1707A81-004**Matrix:** AQUEOUS**Received Date:** 7/20/2017 9:12:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	0.062	1.0		µg/L	1	7/22/2017 2:11:43 AM
Toluene	ND	0.064	1.0		µg/L	1	7/22/2017 2:11:43 AM
Ethylbenzene	ND	0.093	1.0		µg/L	1	7/22/2017 2:11:43 AM
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	7/22/2017 2:11:43 AM
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	7/22/2017 2:11:43 AM
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	7/22/2017 2:11:43 AM
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	7/22/2017 2:11:43 AM
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	7/22/2017 2:11:43 AM
Naphthalene	ND	0.11	2.0		µg/L	1	7/22/2017 2:11:43 AM
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	7/22/2017 2:11:43 AM
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	7/22/2017 2:11:43 AM
Acetone	ND	0.82	10		µg/L	1	7/22/2017 2:11:43 AM
Bromobenzene	ND	0.14	1.0		µg/L	1	7/22/2017 2:11:43 AM
Bromodichloromethane	ND	0.18	1.0		µg/L	1	7/22/2017 2:11:43 AM
Bromoform	ND	0.21	1.0		µg/L	1	7/22/2017 2:11:43 AM
Bromomethane	ND	0.26	3.0		µg/L	1	7/22/2017 2:11:43 AM
2-Butanone	ND	1.1	10		µg/L	1	7/22/2017 2:11:43 AM
Carbon disulfide	ND	0.40	10		µg/L	1	7/22/2017 2:11:43 AM
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	7/22/2017 2:11:43 AM
Chlorobenzene	ND	0.11	1.0		µg/L	1	7/22/2017 2:11:43 AM
Chloroethane	ND	0.23	2.0		µg/L	1	7/22/2017 2:11:43 AM
Chloroform	ND	0.40	1.0		µg/L	1	7/22/2017 2:11:43 AM
Chloromethane	ND	0.29	3.0		µg/L	1	7/22/2017 2:11:43 AM
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	7/22/2017 2:11:43 AM
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	7/22/2017 2:11:43 AM
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	7/22/2017 2:11:43 AM
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	7/22/2017 2:11:43 AM
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	7/22/2017 2:11:43 AM
Dibromochloromethane	ND	0.072	1.0		µg/L	1	7/22/2017 2:11:43 AM
Dibromomethane	ND	0.091	1.0		µg/L	1	7/22/2017 2:11:43 AM
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	7/22/2017 2:11:43 AM
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	7/22/2017 2:11:43 AM
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	7/22/2017 2:11:43 AM
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	7/22/2017 2:11:43 AM
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	7/22/2017 2:11:43 AM
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	7/22/2017 2:11:43 AM
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	7/22/2017 2:11:43 AM
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	7/22/2017 2:11:43 AM
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	7/22/2017 2:11:43 AM
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	7/22/2017 2:11:43 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLCC1-170719**Project:** Joint Superfund Project Center Monthly**Collection Date:** 7/19/2017 9:13:00 AM**Lab ID:** 1707A81-004**Matrix:** AQUEOUS**Received Date:** 7/20/2017 9:12:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	7/22/2017 2:11:43 AM
2-Hexanone	ND	0.66	10		µg/L	1	7/22/2017 2:11:43 AM
Isopropylbenzene	ND	0.051	1.0		µg/L	1	7/22/2017 2:11:43 AM
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	7/22/2017 2:11:43 AM
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	7/22/2017 2:11:43 AM
Methylene Chloride	ND	0.11	3.0		µg/L	1	7/22/2017 2:11:43 AM
n-Butylbenzene	ND	0.13	3.0		µg/L	1	7/22/2017 2:11:43 AM
n-Propylbenzene	ND	0.074	1.0		µg/L	1	7/22/2017 2:11:43 AM
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	7/22/2017 2:11:43 AM
Styrene	ND	0.16	1.0		µg/L	1	7/22/2017 2:11:43 AM
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	7/22/2017 2:11:43 AM
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	7/22/2017 2:11:43 AM
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	7/22/2017 2:11:43 AM
Tetrachloroethene (PCE)	0.16	0.13	1.0	J	µg/L	1	7/22/2017 2:11:43 AM
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	7/22/2017 2:11:43 AM
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	7/22/2017 2:11:43 AM
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	7/22/2017 2:11:43 AM
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	7/22/2017 2:11:43 AM
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	7/22/2017 2:11:43 AM
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	7/22/2017 2:11:43 AM
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	7/22/2017 2:11:43 AM
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	7/22/2017 2:11:43 AM
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	7/22/2017 2:11:43 AM
Vinyl chloride	ND	0.18	1.0		µg/L	1	7/22/2017 2:11:43 AM
Xylenes, Total	ND	0.32	1.5		µg/L	1	7/22/2017 2:11:43 AM
Surr: 1,2-Dichloroethane-d4	98.3	0	70-130		%Rec	1	7/22/2017 2:11:43 AM
Surr: 4-Bromofluorobenzene	107	0	70-130		%Rec	1	7/22/2017 2:11:43 AM
Surr: Dibromofluoromethane	96.9	0	70-130		%Rec	1	7/22/2017 2:11:43 AM
Surr: Toluene-d8	90.7	0	70-130		%Rec	1	7/22/2017 2:11:43 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLCC2-170719**Project:** Joint Superfund Project Center Monthly**Collection Date:** 7/19/2017 9:17:00 AM**Lab ID:** 1707A81-005**Matrix:** AQUEOUS**Received Date:** 7/20/2017 9:12:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	0.062	1.0		µg/L	1	7/22/2017 2:40:48 AM
Toluene	ND	0.064	1.0		µg/L	1	7/22/2017 2:40:48 AM
Ethylbenzene	ND	0.093	1.0		µg/L	1	7/22/2017 2:40:48 AM
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	7/22/2017 2:40:48 AM
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	7/22/2017 2:40:48 AM
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	7/22/2017 2:40:48 AM
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	7/22/2017 2:40:48 AM
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	7/22/2017 2:40:48 AM
Naphthalene	ND	0.11	2.0		µg/L	1	7/22/2017 2:40:48 AM
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	7/22/2017 2:40:48 AM
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	7/22/2017 2:40:48 AM
Acetone	ND	0.82	10		µg/L	1	7/22/2017 2:40:48 AM
Bromobenzene	ND	0.14	1.0		µg/L	1	7/22/2017 2:40:48 AM
Bromodichloromethane	ND	0.18	1.0		µg/L	1	7/22/2017 2:40:48 AM
Bromoform	ND	0.21	1.0		µg/L	1	7/22/2017 2:40:48 AM
Bromomethane	ND	0.26	3.0		µg/L	1	7/22/2017 2:40:48 AM
2-Butanone	ND	1.1	10		µg/L	1	7/22/2017 2:40:48 AM
Carbon disulfide	ND	0.40	10		µg/L	1	7/22/2017 2:40:48 AM
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	7/22/2017 2:40:48 AM
Chlorobenzene	ND	0.11	1.0		µg/L	1	7/22/2017 2:40:48 AM
Chloroethane	ND	0.23	2.0		µg/L	1	7/22/2017 2:40:48 AM
Chloroform	ND	0.40	1.0		µg/L	1	7/22/2017 2:40:48 AM
Chloromethane	ND	0.29	3.0		µg/L	1	7/22/2017 2:40:48 AM
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	7/22/2017 2:40:48 AM
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	7/22/2017 2:40:48 AM
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	7/22/2017 2:40:48 AM
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	7/22/2017 2:40:48 AM
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	7/22/2017 2:40:48 AM
Dibromochloromethane	ND	0.072	1.0		µg/L	1	7/22/2017 2:40:48 AM
Dibromomethane	ND	0.091	1.0		µg/L	1	7/22/2017 2:40:48 AM
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	7/22/2017 2:40:48 AM
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	7/22/2017 2:40:48 AM
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	7/22/2017 2:40:48 AM
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	7/22/2017 2:40:48 AM
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	7/22/2017 2:40:48 AM
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	7/22/2017 2:40:48 AM
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	7/22/2017 2:40:48 AM
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	7/22/2017 2:40:48 AM
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	7/22/2017 2:40:48 AM
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	7/22/2017 2:40:48 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLCC2-170719**Project:** Joint Superfund Project Center Monthly**Collection Date:** 7/19/2017 9:17:00 AM**Lab ID:** 1707A81-005**Matrix:** AQUEOUS**Received Date:** 7/20/2017 9:12:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	7/22/2017 2:40:48 AM
2-Hexanone	ND	0.66	10		µg/L	1	7/22/2017 2:40:48 AM
Isopropylbenzene	ND	0.051	1.0		µg/L	1	7/22/2017 2:40:48 AM
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	7/22/2017 2:40:48 AM
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	7/22/2017 2:40:48 AM
Methylene Chloride	ND	0.11	3.0		µg/L	1	7/22/2017 2:40:48 AM
n-Butylbenzene	ND	0.13	3.0		µg/L	1	7/22/2017 2:40:48 AM
n-Propylbenzene	ND	0.074	1.0		µg/L	1	7/22/2017 2:40:48 AM
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	7/22/2017 2:40:48 AM
Styrene	ND	0.16	1.0		µg/L	1	7/22/2017 2:40:48 AM
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	7/22/2017 2:40:48 AM
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	7/22/2017 2:40:48 AM
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	7/22/2017 2:40:48 AM
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	7/22/2017 2:40:48 AM
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	7/22/2017 2:40:48 AM
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	7/22/2017 2:40:48 AM
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	7/22/2017 2:40:48 AM
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	7/22/2017 2:40:48 AM
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	7/22/2017 2:40:48 AM
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	7/22/2017 2:40:48 AM
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	7/22/2017 2:40:48 AM
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	7/22/2017 2:40:48 AM
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	7/22/2017 2:40:48 AM
Vinyl chloride	ND	0.18	1.0		µg/L	1	7/22/2017 2:40:48 AM
Xylenes, Total	ND	0.32	1.5		µg/L	1	7/22/2017 2:40:48 AM
Surr: 1,2-Dichloroethane-d4	99.9	0	70-130		%Rec	1	7/22/2017 2:40:48 AM
Surr: 4-Bromofluorobenzene	101	0	70-130		%Rec	1	7/22/2017 2:40:48 AM
Surr: Dibromofluoromethane	98.6	0	70-130		%Rec	1	7/22/2017 2:40:48 AM
Surr: Toluene-d8	91.6	0	70-130		%Rec	1	7/22/2017 2:40:48 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLCES1-170719**Project:** Joint Superfund Project Center Monthly**Collection Date:** 7/19/2017 9:20:00 AM**Lab ID:** 1707A81-006**Matrix:** AQUEOUS**Received Date:** 7/20/2017 9:12:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	0.062	1.0		µg/L	1	7/22/2017 3:10:03 AM
Toluene	ND	0.064	1.0		µg/L	1	7/22/2017 3:10:03 AM
Ethylbenzene	ND	0.093	1.0		µg/L	1	7/22/2017 3:10:03 AM
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	7/22/2017 3:10:03 AM
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	7/22/2017 3:10:03 AM
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	7/22/2017 3:10:03 AM
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	7/22/2017 3:10:03 AM
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	7/22/2017 3:10:03 AM
Naphthalene	ND	0.11	2.0		µg/L	1	7/22/2017 3:10:03 AM
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	7/22/2017 3:10:03 AM
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	7/22/2017 3:10:03 AM
Acetone	ND	0.82	10		µg/L	1	7/22/2017 3:10:03 AM
Bromobenzene	ND	0.14	1.0		µg/L	1	7/22/2017 3:10:03 AM
Bromodichloromethane	2.9	0.18	1.0		µg/L	1	7/22/2017 3:10:03 AM
Bromoform	3.0	0.21	1.0		µg/L	1	7/22/2017 3:10:03 AM
Bromomethane	ND	0.26	3.0		µg/L	1	7/22/2017 3:10:03 AM
2-Butanone	ND	1.1	10		µg/L	1	7/22/2017 3:10:03 AM
Carbon disulfide	ND	0.40	10		µg/L	1	7/22/2017 3:10:03 AM
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	7/22/2017 3:10:03 AM
Chlorobenzene	ND	0.11	1.0		µg/L	1	7/22/2017 3:10:03 AM
Chloroethane	ND	0.23	2.0		µg/L	1	7/22/2017 3:10:03 AM
Chloroform	1.7	0.40	1.0		µg/L	1	7/22/2017 3:10:03 AM
Chloromethane	0.64	0.29	3.0	J	µg/L	1	7/22/2017 3:10:03 AM
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	7/22/2017 3:10:03 AM
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	7/22/2017 3:10:03 AM
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	7/22/2017 3:10:03 AM
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	7/22/2017 3:10:03 AM
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	7/22/2017 3:10:03 AM
Dibromochloromethane	4.3	0.072	1.0		µg/L	1	7/22/2017 3:10:03 AM
Dibromomethane	ND	0.091	1.0		µg/L	1	7/22/2017 3:10:03 AM
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	7/22/2017 3:10:03 AM
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	7/22/2017 3:10:03 AM
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	7/22/2017 3:10:03 AM
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	7/22/2017 3:10:03 AM
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	7/22/2017 3:10:03 AM
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	7/22/2017 3:10:03 AM
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	7/22/2017 3:10:03 AM
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	7/22/2017 3:10:03 AM
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	7/22/2017 3:10:03 AM
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	7/22/2017 3:10:03 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLCES1-170719**Project:** Joint Superfund Project Center Monthly**Collection Date:** 7/19/2017 9:20:00 AM**Lab ID:** 1707A81-006**Matrix:** AQUEOUS**Received Date:** 7/20/2017 9:12:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	7/22/2017 3:10:03 AM
2-Hexanone	ND	0.66	10		µg/L	1	7/22/2017 3:10:03 AM
Isopropylbenzene	ND	0.051	1.0		µg/L	1	7/22/2017 3:10:03 AM
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	7/22/2017 3:10:03 AM
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	7/22/2017 3:10:03 AM
Methylene Chloride	ND	0.11	3.0		µg/L	1	7/22/2017 3:10:03 AM
n-Butylbenzene	ND	0.13	3.0		µg/L	1	7/22/2017 3:10:03 AM
n-Propylbenzene	ND	0.074	1.0		µg/L	1	7/22/2017 3:10:03 AM
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	7/22/2017 3:10:03 AM
Styrene	ND	0.16	1.0		µg/L	1	7/22/2017 3:10:03 AM
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	7/22/2017 3:10:03 AM
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	7/22/2017 3:10:03 AM
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	7/22/2017 3:10:03 AM
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	7/22/2017 3:10:03 AM
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	7/22/2017 3:10:03 AM
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	7/22/2017 3:10:03 AM
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	7/22/2017 3:10:03 AM
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	7/22/2017 3:10:03 AM
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	7/22/2017 3:10:03 AM
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	7/22/2017 3:10:03 AM
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	7/22/2017 3:10:03 AM
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	7/22/2017 3:10:03 AM
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	7/22/2017 3:10:03 AM
Vinyl chloride	ND	0.18	1.0		µg/L	1	7/22/2017 3:10:03 AM
Xylenes, Total	ND	0.32	1.5		µg/L	1	7/22/2017 3:10:03 AM
Surr: 1,2-Dichloroethane-d4	96.2	0	70-130		%Rec	1	7/22/2017 3:10:03 AM
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	1	7/22/2017 3:10:03 AM
Surr: Dibromofluoromethane	100	0	70-130		%Rec	1	7/22/2017 3:10:03 AM
Surr: Toluene-d8	90.1	0	70-130		%Rec	1	7/22/2017 3:10:03 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLCES1-170719Dup**Project:** Joint Superfund Project Center Monthly**Collection Date:** 7/19/2017 9:20:00 AM**Lab ID:** 1707A81-007**Matrix:** AQUEOUS**Received Date:** 7/20/2017 9:12:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	0.062	1.0		µg/L	1	7/22/2017 3:39:15 AM
Toluene	ND	0.064	1.0		µg/L	1	7/22/2017 3:39:15 AM
Ethylbenzene	ND	0.093	1.0		µg/L	1	7/22/2017 3:39:15 AM
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	7/22/2017 3:39:15 AM
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	7/22/2017 3:39:15 AM
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	7/22/2017 3:39:15 AM
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	7/22/2017 3:39:15 AM
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	7/22/2017 3:39:15 AM
Naphthalene	ND	0.11	2.0		µg/L	1	7/22/2017 3:39:15 AM
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	7/22/2017 3:39:15 AM
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	7/22/2017 3:39:15 AM
Acetone	ND	0.82	10		µg/L	1	7/22/2017 3:39:15 AM
Bromobenzene	ND	0.14	1.0		µg/L	1	7/22/2017 3:39:15 AM
Bromodichloromethane	2.9	0.18	1.0		µg/L	1	7/22/2017 3:39:15 AM
Bromoform	3.4	0.21	1.0		µg/L	1	7/22/2017 3:39:15 AM
Bromomethane	ND	0.26	3.0		µg/L	1	7/22/2017 3:39:15 AM
2-Butanone	ND	1.1	10		µg/L	1	7/22/2017 3:39:15 AM
Carbon disulfide	ND	0.40	10		µg/L	1	7/22/2017 3:39:15 AM
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	7/22/2017 3:39:15 AM
Chlorobenzene	ND	0.11	1.0		µg/L	1	7/22/2017 3:39:15 AM
Chloroethane	ND	0.23	2.0		µg/L	1	7/22/2017 3:39:15 AM
Chloroform	1.4	0.40	1.0		µg/L	1	7/22/2017 3:39:15 AM
Chloromethane	0.62	0.29	3.0	J	µg/L	1	7/22/2017 3:39:15 AM
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	7/22/2017 3:39:15 AM
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	7/22/2017 3:39:15 AM
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	7/22/2017 3:39:15 AM
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	7/22/2017 3:39:15 AM
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	7/22/2017 3:39:15 AM
Dibromochloromethane	4.7	0.072	1.0		µg/L	1	7/22/2017 3:39:15 AM
Dibromomethane	ND	0.091	1.0		µg/L	1	7/22/2017 3:39:15 AM
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	7/22/2017 3:39:15 AM
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	7/22/2017 3:39:15 AM
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	7/22/2017 3:39:15 AM
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	7/22/2017 3:39:15 AM
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	7/22/2017 3:39:15 AM
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	7/22/2017 3:39:15 AM
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	7/22/2017 3:39:15 AM
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	7/22/2017 3:39:15 AM
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	7/22/2017 3:39:15 AM
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	7/22/2017 3:39:15 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLCES1-170719Dup**Project:** Joint Superfund Project Center Monthly**Collection Date:** 7/19/2017 9:20:00 AM**Lab ID:** 1707A81-007**Matrix:** AQUEOUS**Received Date:** 7/20/2017 9:12:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	7/22/2017 3:39:15 AM
2-Hexanone	ND	0.66	10		µg/L	1	7/22/2017 3:39:15 AM
Isopropylbenzene	ND	0.051	1.0		µg/L	1	7/22/2017 3:39:15 AM
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	7/22/2017 3:39:15 AM
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	7/22/2017 3:39:15 AM
Methylene Chloride	ND	0.11	3.0		µg/L	1	7/22/2017 3:39:15 AM
n-Butylbenzene	ND	0.13	3.0		µg/L	1	7/22/2017 3:39:15 AM
n-Propylbenzene	ND	0.074	1.0		µg/L	1	7/22/2017 3:39:15 AM
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	7/22/2017 3:39:15 AM
Styrene	ND	0.16	1.0		µg/L	1	7/22/2017 3:39:15 AM
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	7/22/2017 3:39:15 AM
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	7/22/2017 3:39:15 AM
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	7/22/2017 3:39:15 AM
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	7/22/2017 3:39:15 AM
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	7/22/2017 3:39:15 AM
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	7/22/2017 3:39:15 AM
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	7/22/2017 3:39:15 AM
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	7/22/2017 3:39:15 AM
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	7/22/2017 3:39:15 AM
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	7/22/2017 3:39:15 AM
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	7/22/2017 3:39:15 AM
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	7/22/2017 3:39:15 AM
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	7/22/2017 3:39:15 AM
Vinyl chloride	ND	0.18	1.0		µg/L	1	7/22/2017 3:39:15 AM
Xylenes, Total	ND	0.32	1.5		µg/L	1	7/22/2017 3:39:15 AM
Surr: 1,2-Dichloroethane-d4	100	0	70-130		%Rec	1	7/22/2017 3:39:15 AM
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	7/22/2017 3:39:15 AM
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	7/22/2017 3:39:15 AM
Surr: Toluene-d8	91.2	0	70-130		%Rec	1	7/22/2017 3:39:15 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1707A81

26-Jul-17

Client: City of Las Cruces
Project: Joint Superfund Project Center Monthly Analysis

Sample ID 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: B44421		RunNo: 44421							
Prep Date:	Analysis Date: 7/21/2017		SeqNo: 1404049		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	112	70	130			
Toluene	19	1.0	20.00	0	93.4	70	130			
Chlorobenzene	18	1.0	20.00	0	92.0	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	107	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.2	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.9	70	130			
Surr: Toluene-d8	8.9		10.00		89.3	70	130			

Sample ID rb2	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: B44421		RunNo: 44421							
Prep Date:	Analysis Date: 7/21/2017		SeqNo: 1404050		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	0.23	1.0								J
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	0.22	4.0								J
Acetone	2.1	10								J
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	1.3	10								J
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	0.40	2.0								J
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1707A81

26-Jul-17

Client: City of Las Cruces
Project: Joint Superfund Project Center Monthly Analysis

Sample ID: rb2	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: B44421	RunNo: 44421
Prep Date:	Analysis Date: 7/21/2017	SeqNo: 1404050 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1707A81

26-Jul-17

Client: City of Las Cruces
Project: Joint Superfund Project Center Monthly Analysis

Sample ID rb2	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: B44421		RunNo: 44421							
Prep Date:	Analysis Date: 7/21/2017		SeqNo: 1404050		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.5	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	9.7		10.00		97.4	70	130			
Surr: Toluene-d8	9.0		10.00		89.8	70	130			

Sample ID 1707a81-001ams	SampType: MS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: CLC18-170719	Batch ID: B44421		RunNo: 44421							
Prep Date:	Analysis Date: 7/22/2017		SeqNo: 1404052		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	117	70	130			
Toluene	19	1.0	20.00	0	93.8	70	130			
Chlorobenzene	19	1.0	20.00	0.1620	92.1	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	112	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0.4360	99.6	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.6	70	130			
Surr: Toluene-d8	8.9		10.00		89.3	70	130			

Sample ID 1707a81-001amsd	SampType: MSD		TestCode: EPA Method 8260B: VOLATILES							
Client ID: CLC18-170719	Batch ID: B44421		RunNo: 44421							
Prep Date:	Analysis Date: 7/22/2017		SeqNo: 1404053		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	109	70	130	6.87	20	
Toluene	18	1.0	20.00	0	88.7	70	130	5.53	20	
Chlorobenzene	18	1.0	20.00	0.1620	88.0	70	130	4.55	20	
1,1-Dichloroethene	20	1.0	20.00	0	100	70	130	10.9	20	
Trichloroethene (TCE)	20	1.0	20.00	0.4360	96.3	70	130	3.32	20	
Surr: 1,2-Dichloroethane-d4	10		10.00		99.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130	0	0	
Surr: Dibromofluoromethane	9.8		10.00		98.0	70	130	0	0	
Surr: Toluene-d8	8.7		10.00		87.3	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1707A81

RcptNo: 1

Received By: *Isaiah Ortiz* 7/20/2017 9:12:00 AM
 Completed By: Ashley Gallegos 7/20/2017 1:26:04 PM
 Reviewed By: *[Signature]* 7/20/17

[Signature]

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No
(Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No
(If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.2	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
 Mailing Address: P.O. Box 20000
Las Cruces, NM, 87004
 Phone #: 575-528-3604
 email or Fax#: laquero@las-cruces.nm.gov 505-830
 QA/QC Packaged
 Standard Level 4 (Full Validation)
 Accreditation
 NELAP Other _____
 EDD (Type) _____

Turn-Around Time: Standard Rush
 Project Name: Joint Superfund Project Center
Monthly Analysis
 Project #: _____
CNE JF Crigg's Walnut
 Project Manager: _____
Luis Guirra
575-528-3609
 Sampler: Luis Guirra
 On Ice: Yes No
 Sample Temperature: 17 °C

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
7-19-19	0900	Drinking Water	CNC18-170719	3-40m Vials H ₂ O ₂		1707A81
	0907	Drinking Water	CNC27-170719			-001
	0910	Drinking Water	CNC151-170719			-002
	0913	Drinking Water	CNC11-170719			-003
	0917	Drinking Water	CNC2-170719			-004
	0920	Drinking Water	CNC151-170719			-005
7-19-19	0920	Drinking Water	CNC151-170719 Dup	3-40m Vials H ₂ O ₂		-006
						-007

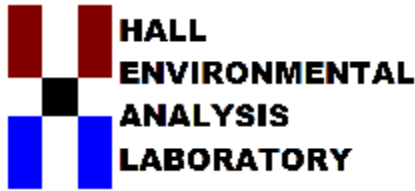
Date: 7-19-19 Time: 1500
 Relinquished by: _____
 Date: _____ Time: _____
 Received by: I. Guirra Date: 7-20-19 Time: 9:12
 Received by: _____ Date: _____ Time: _____

Analysis Request

BTEX + MTBE + TMB's (8021)	
BTEX + MTBE + TPH (Gas only)	
TPH 6015B (GRO / DRO / MRO)	
TPH (Method 418.1)	
EDB (Method 504.1)	
PAH's (8310 or 8270 SIMS)	
RCRA 8 Metals	
Anions (F ₂ , Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	
8081 Pesticides / 8082 PCB's	X
8260B (VOA) VCL	X
8270 (Semi-VOA)	X
Air Bubbles (Y or N)	

Remarks: Send Results to Luis Guirra lguirra@las-cruces.nm.gov
uscrn.kimble@rosendett@las-cruces.nm.gov
Send invoice to CNE JF Luis Guirra





Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 27, 2017

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: Joint Superfund Project Center Monthly Analysis

OrderNo.: 1707B75

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/20/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1707B75

Date Reported: 7/27/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1-170719

Project: Joint Superfund Project Center Monthly

Collection Date: 7/19/2017 9:22:00 AM

Lab ID: 1707B75-001

Matrix: AIR

Received Date: 7/20/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
Toluene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
Ethylbenzene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
Naphthalene	ND	0.20		µg/L	1	7/26/2017 10:32:42 AM	B44525
1-Methylnaphthalene	ND	0.40		µg/L	1	7/26/2017 10:32:42 AM	B44525
2-Methylnaphthalene	ND	0.40		µg/L	1	7/26/2017 10:32:42 AM	B44525
Acetone	ND	1.0		µg/L	1	7/26/2017 10:32:42 AM	B44525
Bromobenzene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
Bromodichloromethane	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
Bromoform	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
Bromomethane	ND	0.20		µg/L	1	7/26/2017 10:32:42 AM	B44525
2-Butanone	ND	1.0		µg/L	1	7/26/2017 10:32:42 AM	B44525
Carbon disulfide	ND	1.0		µg/L	1	7/26/2017 10:32:42 AM	B44525
Carbon tetrachloride	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
Chlorobenzene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
Chloroethane	ND	0.20		µg/L	1	7/26/2017 10:32:42 AM	B44525
Chloroform	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
Chloromethane	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
2-Chlorotoluene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
4-Chlorotoluene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
cis-1,2-DCE	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	7/26/2017 10:32:42 AM	B44525
Dibromochloromethane	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
Dibromomethane	ND	0.20		µg/L	1	7/26/2017 10:32:42 AM	B44525
1,2-Dichlorobenzene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
1,3-Dichlorobenzene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
1,4-Dichlorobenzene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
Dichlorodifluoromethane	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
1,1-Dichloroethane	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
1,1-Dichloroethene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
1,2-Dichloropropane	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
1,3-Dichloropropane	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
2,2-Dichloropropane	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 1 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1707B75

Date Reported: 7/27/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1-170719

Project: Joint Superfund Project Center Monthly

Collection Date: 7/19/2017 9:22:00 AM

Lab ID: 1707B75-001

Matrix: AIR

Received Date: 7/20/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
Hexachlorobutadiene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
2-Hexanone	ND	1.0		µg/L	1	7/26/2017 10:32:42 AM	B44525
Isopropylbenzene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
4-Isopropyltoluene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
4-Methyl-2-pentanone	ND	1.0		µg/L	1	7/26/2017 10:32:42 AM	B44525
Methylene chloride	ND	0.30		µg/L	1	7/26/2017 10:32:42 AM	B44525
n-Butylbenzene	ND	0.30		µg/L	1	7/26/2017 10:32:42 AM	B44525
n-Propylbenzene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
sec-Butylbenzene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
Styrene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
tert-Butylbenzene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
trans-1,2-DCE	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
1,1,1-Trichloroethane	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
1,1,2-Trichloroethane	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
Trichloroethene (TCE)	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
Trichlorofluoromethane	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
1,2,3-Trichloropropane	ND	0.20		µg/L	1	7/26/2017 10:32:42 AM	B44525
Vinyl chloride	ND	0.10		µg/L	1	7/26/2017 10:32:42 AM	B44525
Xylenes, Total	ND	0.15		µg/L	1	7/26/2017 10:32:42 AM	B44525
Surr: Dibromofluoromethane	99.1	70-130		%Rec	1	7/26/2017 10:32:42 AM	B44525
Surr: 1,2-Dichloroethane-d4	96.2	70-130		%Rec	1	7/26/2017 10:32:42 AM	B44525
Surr: Toluene-d8	99.1	70-130		%Rec	1	7/26/2017 10:32:42 AM	B44525
Surr: 4-Bromofluorobenzene	90.9	70-130		%Rec	1	7/26/2017 10:32:42 AM	B44525

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1707B75

Date Reported: 7/27/2017

CLIENT: City of Las Cruces

Client Sample ID: AS2-170719

Project: Joint Superfund Project Center Monthly

Collection Date: 7/19/2017 9:28:00 AM

Lab ID: 1707B75-002

Matrix: AIR

Received Date: 7/20/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
Toluene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
Ethylbenzene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
Naphthalene	ND	0.20		µg/L	1	7/26/2017 11:30:40 AM	B44525
1-Methylnaphthalene	ND	0.40		µg/L	1	7/26/2017 11:30:40 AM	B44525
2-Methylnaphthalene	ND	0.40		µg/L	1	7/26/2017 11:30:40 AM	B44525
Acetone	ND	1.0		µg/L	1	7/26/2017 11:30:40 AM	B44525
Bromobenzene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
Bromodichloromethane	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
Bromoform	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
Bromomethane	ND	0.20		µg/L	1	7/26/2017 11:30:40 AM	B44525
2-Butanone	ND	1.0		µg/L	1	7/26/2017 11:30:40 AM	B44525
Carbon disulfide	ND	1.0		µg/L	1	7/26/2017 11:30:40 AM	B44525
Carbon tetrachloride	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
Chlorobenzene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
Chloroethane	ND	0.20		µg/L	1	7/26/2017 11:30:40 AM	B44525
Chloroform	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
Chloromethane	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
2-Chlorotoluene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
4-Chlorotoluene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
cis-1,2-DCE	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	7/26/2017 11:30:40 AM	B44525
Dibromochloromethane	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
Dibromomethane	ND	0.20		µg/L	1	7/26/2017 11:30:40 AM	B44525
1,2-Dichlorobenzene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
1,3-Dichlorobenzene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
1,4-Dichlorobenzene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
Dichlorodifluoromethane	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
1,1-Dichloroethane	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
1,1-Dichloroethene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
1,2-Dichloropropane	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
1,3-Dichloropropane	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
2,2-Dichloropropane	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 3 of 4
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1707B75

Date Reported: 7/27/2017

CLIENT: City of Las Cruces

Client Sample ID: AS2-170719

Project: Joint Superfund Project Center Monthly

Collection Date: 7/19/2017 9:28:00 AM

Lab ID: 1707B75-002

Matrix: AIR

Received Date: 7/20/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
Hexachlorobutadiene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
2-Hexanone	ND	1.0		µg/L	1	7/26/2017 11:30:40 AM	B44525
Isopropylbenzene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
4-Isopropyltoluene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
4-Methyl-2-pentanone	ND	1.0		µg/L	1	7/26/2017 11:30:40 AM	B44525
Methylene chloride	ND	0.30		µg/L	1	7/26/2017 11:30:40 AM	B44525
n-Butylbenzene	ND	0.30		µg/L	1	7/26/2017 11:30:40 AM	B44525
n-Propylbenzene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
sec-Butylbenzene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
Styrene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
tert-Butylbenzene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
trans-1,2-DCE	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
1,1,1-Trichloroethane	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
1,1,2-Trichloroethane	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
Trichloroethene (TCE)	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
Trichlorofluoromethane	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
1,2,3-Trichloropropane	ND	0.20		µg/L	1	7/26/2017 11:30:40 AM	B44525
Vinyl chloride	ND	0.10		µg/L	1	7/26/2017 11:30:40 AM	B44525
Xylenes, Total	ND	0.15		µg/L	1	7/26/2017 11:30:40 AM	B44525
Surr: Dibromofluoromethane	101	70-130		%Rec	1	7/26/2017 11:30:40 AM	B44525
Surr: 1,2-Dichloroethane-d4	94.1	70-130		%Rec	1	7/26/2017 11:30:40 AM	B44525
Surr: Toluene-d8	98.4	70-130		%Rec	1	7/26/2017 11:30:40 AM	B44525
Surr: 4-Bromofluorobenzene	91.4	70-130		%Rec	1	7/26/2017 11:30:40 AM	B44525

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 4 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Sample Log-In Check List

Client Name: City of Las Cruces Work Order Number: 1707B75 RcptNo: 1

Received By: **Richie Eriacho** 7/20/2017 9:00:00 AM
 Completed By: **Ashley Gallegos** 7/23/2017 12:50:53 PM
 Reviewed By: **ENM** 7/24/17

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes No
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? (If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

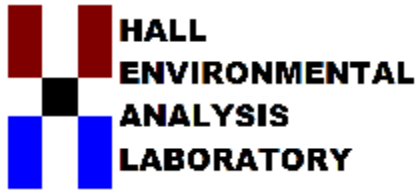
- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:		Date	
By Whom:		Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	NA	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 27, 2017

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP Joint Superfund Project Center Monthly Analysis

OrderNo.: 1708960

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 8/16/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708960

Date Reported: 8/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-170815

Project: JSP Joint Superfund Project Center Mont

Collection Date: 8/15/2017 9:04:00 AM

Lab ID: 1708960-001

Matrix: AQUEOUS

Received Date: 8/16/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
Toluene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
Ethylbenzene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
Naphthalene	ND	2.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
1-Methylnaphthalene	ND	4.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
2-Methylnaphthalene	ND	4.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
Acetone	ND	10		µg/L	1	8/23/2017 5:39:00 PM	R45152
Bromobenzene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
Bromodichloromethane	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
Bromoform	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
Bromomethane	ND	3.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
2-Butanone	ND	10		µg/L	1	8/23/2017 5:39:00 PM	R45152
Carbon disulfide	ND	10		µg/L	1	8/23/2017 5:39:00 PM	R45152
Carbon Tetrachloride	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
Chlorobenzene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
Chloroethane	ND	2.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
Chloroform	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
Chloromethane	ND	3.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
2-Chlorotoluene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
4-Chlorotoluene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
cis-1,2-DCE	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
Dibromochloromethane	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
Dibromomethane	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
1,1-Dichloroethane	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
1,1-Dichloroethene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
1,2-Dichloropropane	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
1,3-Dichloropropane	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
2,2-Dichloropropane	ND	2.0		µg/L	1	8/23/2017 5:39:00 PM	R45152

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708960

Date Reported: 8/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-170815

Project: JSP Joint Superfund Project Center Mont

Collection Date: 8/15/2017 9:04:00 AM

Lab ID: 1708960-001

Matrix: AQUEOUS

Received Date: 8/16/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
Hexachlorobutadiene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
2-Hexanone	ND	10		µg/L	1	8/23/2017 5:39:00 PM	R45152
Isopropylbenzene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
4-Isopropyltoluene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
4-Methyl-2-pentanone	ND	10		µg/L	1	8/23/2017 5:39:00 PM	R45152
Methylene Chloride	ND	3.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
n-Butylbenzene	ND	3.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
n-Propylbenzene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
sec-Butylbenzene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
Styrene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
tert-Butylbenzene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
Tetrachloroethene (PCE)	12	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
trans-1,2-DCE	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
Trichlorofluoromethane	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
Vinyl chloride	ND	1.0		µg/L	1	8/23/2017 5:39:00 PM	R45152
Xylenes, Total	ND	1.5		µg/L	1	8/23/2017 5:39:00 PM	R45152
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	8/23/2017 5:39:00 PM	R45152
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	8/23/2017 5:39:00 PM	R45152
Surr: Dibromofluoromethane	101	70-130		%Rec	1	8/23/2017 5:39:00 PM	R45152
Surr: Toluene-d8	97.0	70-130		%Rec	1	8/23/2017 5:39:00 PM	R45152

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708960

Date Reported: 8/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-170815

Project: JSP Joint Superfund Project Center Mont

Collection Date: 8/15/2017 9:52:00 AM

Lab ID: 1708960-002

Matrix: AQUEOUS

Received Date: 8/16/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
Toluene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
Ethylbenzene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
Naphthalene	ND	2.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
1-Methylnaphthalene	ND	4.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
2-Methylnaphthalene	ND	4.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
Acetone	ND	10		µg/L	1	8/23/2017 6:03:00 PM	R45152
Bromobenzene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
Bromodichloromethane	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
Bromoform	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
Bromomethane	ND	3.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
2-Butanone	ND	10		µg/L	1	8/23/2017 6:03:00 PM	R45152
Carbon disulfide	ND	10		µg/L	1	8/23/2017 6:03:00 PM	R45152
Carbon Tetrachloride	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
Chlorobenzene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
Chloroethane	ND	2.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
Chloroform	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
Chloromethane	ND	3.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
2-Chlorotoluene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
4-Chlorotoluene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
cis-1,2-DCE	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
Dibromochloromethane	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
Dibromomethane	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
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1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
1,1-Dichloroethane	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
1,1-Dichloroethene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
1,2-Dichloropropane	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
1,3-Dichloropropane	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
2,2-Dichloropropane	ND	2.0		µg/L	1	8/23/2017 6:03:00 PM	R45152

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708960

Date Reported: 8/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-170815

Project: JSP Joint Superfund Project Center Mont

Collection Date: 8/15/2017 9:52:00 AM

Lab ID: 1708960-002

Matrix: AQUEOUS

Received Date: 8/16/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
Hexachlorobutadiene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
2-Hexanone	ND	10		µg/L	1	8/23/2017 6:03:00 PM	R45152
Isopropylbenzene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
4-Isopropyltoluene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
4-Methyl-2-pentanone	ND	10		µg/L	1	8/23/2017 6:03:00 PM	R45152
Methylene Chloride	ND	3.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
n-Butylbenzene	ND	3.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
n-Propylbenzene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
sec-Butylbenzene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
Styrene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
tert-Butylbenzene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
Tetrachloroethene (PCE)	13	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
trans-1,2-DCE	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
Trichlorofluoromethane	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
Vinyl chloride	ND	1.0		µg/L	1	8/23/2017 6:03:00 PM	R45152
Xylenes, Total	ND	1.5		µg/L	1	8/23/2017 6:03:00 PM	R45152
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	8/23/2017 6:03:00 PM	R45152
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	8/23/2017 6:03:00 PM	R45152
Surr: Dibromofluoromethane	102	70-130		%Rec	1	8/23/2017 6:03:00 PM	R45152
Surr: Toluene-d8	98.8	70-130		%Rec	1	8/23/2017 6:03:00 PM	R45152

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708960

Date Reported: 8/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-170815

Project: JSP Joint Superfund Project Center Mont

Collection Date: 8/15/2017 9:26:00 AM

Lab ID: 1708960-003

Matrix: AQUEOUS

Received Date: 8/16/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
Toluene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
Ethylbenzene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
Naphthalene	ND	2.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
1-Methylnaphthalene	ND	4.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
2-Methylnaphthalene	ND	4.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
Acetone	ND	10		µg/L	1	8/23/2017 6:27:00 PM	R45152
Bromobenzene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
Bromodichloromethane	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
Bromoform	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
Bromomethane	ND	3.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
2-Butanone	ND	10		µg/L	1	8/23/2017 6:27:00 PM	R45152
Carbon disulfide	ND	10		µg/L	1	8/23/2017 6:27:00 PM	R45152
Carbon Tetrachloride	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
Chlorobenzene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
Chloroethane	ND	2.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
Chloroform	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
Chloromethane	ND	3.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
2-Chlorotoluene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
4-Chlorotoluene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
cis-1,2-DCE	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
Dibromochloromethane	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
Dibromomethane	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
1,1-Dichloroethane	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
1,1-Dichloroethene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
1,2-Dichloropropane	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
1,3-Dichloropropane	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
2,2-Dichloropropane	ND	2.0		µg/L	1	8/23/2017 6:27:00 PM	R45152

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708960

Date Reported: 8/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-170815

Project: JSP Joint Superfund Project Center Mont

Collection Date: 8/15/2017 9:26:00 AM

Lab ID: 1708960-003

Matrix: AQUEOUS

Received Date: 8/16/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
Hexachlorobutadiene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
2-Hexanone	ND	10		µg/L	1	8/23/2017 6:27:00 PM	R45152
Isopropylbenzene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
4-Isopropyltoluene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
4-Methyl-2-pentanone	ND	10		µg/L	1	8/23/2017 6:27:00 PM	R45152
Methylene Chloride	ND	3.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
n-Butylbenzene	ND	3.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
n-Propylbenzene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
sec-Butylbenzene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
Styrene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
tert-Butylbenzene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
Tetrachloroethene (PCE)	9.6	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
trans-1,2-DCE	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
Trichlorofluoromethane	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
Vinyl chloride	ND	1.0		µg/L	1	8/23/2017 6:27:00 PM	R45152
Xylenes, Total	ND	1.5		µg/L	1	8/23/2017 6:27:00 PM	R45152
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	8/23/2017 6:27:00 PM	R45152
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	8/23/2017 6:27:00 PM	R45152
Surr: Dibromofluoromethane	102	70-130		%Rec	1	8/23/2017 6:27:00 PM	R45152
Surr: Toluene-d8	98.1	70-130		%Rec	1	8/23/2017 6:27:00 PM	R45152

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708960

Date Reported: 8/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-170815DUP

Project: JSP Joint Superfund Project Center Mont

Collection Date: 8/15/2017 9:26:00 AM

Lab ID: 1708960-004

Matrix: AQUEOUS

Received Date: 8/16/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
Toluene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
Ethylbenzene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
Naphthalene	ND	2.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
1-Methylnaphthalene	ND	4.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
2-Methylnaphthalene	ND	4.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
Acetone	ND	10		µg/L	1	8/23/2017 6:51:00 PM	R45152
Bromobenzene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
Bromodichloromethane	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
Bromoform	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
Bromomethane	ND	3.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
2-Butanone	ND	10		µg/L	1	8/23/2017 6:51:00 PM	R45152
Carbon disulfide	ND	10		µg/L	1	8/23/2017 6:51:00 PM	R45152
Carbon Tetrachloride	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
Chlorobenzene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
Chloroethane	ND	2.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
Chloroform	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
Chloromethane	ND	3.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
2-Chlorotoluene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
4-Chlorotoluene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
cis-1,2-DCE	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
Dibromochloromethane	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
Dibromomethane	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
1,1-Dichloroethane	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
1,1-Dichloroethene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
1,2-Dichloropropane	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
1,3-Dichloropropane	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
2,2-Dichloropropane	ND	2.0		µg/L	1	8/23/2017 6:51:00 PM	R45152

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708960

Date Reported: 8/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-170815DUP

Project: JSP Joint Superfund Project Center Mont

Collection Date: 8/15/2017 9:26:00 AM

Lab ID: 1708960-004

Matrix: AQUEOUS

Received Date: 8/16/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
Hexachlorobutadiene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
2-Hexanone	ND	10		µg/L	1	8/23/2017 6:51:00 PM	R45152
Isopropylbenzene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
4-Isopropyltoluene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
4-Methyl-2-pentanone	ND	10		µg/L	1	8/23/2017 6:51:00 PM	R45152
Methylene Chloride	ND	3.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
n-Butylbenzene	ND	3.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
n-Propylbenzene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
sec-Butylbenzene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
Styrene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
tert-Butylbenzene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
Tetrachloroethene (PCE)	9.3	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
trans-1,2-DCE	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
Trichlorofluoromethane	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
Vinyl chloride	ND	1.0		µg/L	1	8/23/2017 6:51:00 PM	R45152
Xylenes, Total	ND	1.5		µg/L	1	8/23/2017 6:51:00 PM	R45152
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	8/23/2017 6:51:00 PM	R45152
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	8/23/2017 6:51:00 PM	R45152
Surr: Dibromofluoromethane	103	70-130		%Rec	1	8/23/2017 6:51:00 PM	R45152
Surr: Toluene-d8	97.6	70-130		%Rec	1	8/23/2017 6:51:00 PM	R45152

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708960

Date Reported: 8/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-170815

Project: JSP Joint Superfund Project Center Mont

Collection Date: 8/15/2017 9:29:00 AM

Lab ID: 1708960-005

Matrix: AQUEOUS

Received Date: 8/16/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
Toluene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
Ethylbenzene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
Naphthalene	ND	2.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
1-Methylnaphthalene	ND	4.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
2-Methylnaphthalene	ND	4.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
Acetone	ND	10		µg/L	1	8/23/2017 7:14:00 PM	R45152
Bromobenzene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
Bromodichloromethane	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
Bromoform	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
Bromomethane	ND	3.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
2-Butanone	ND	10		µg/L	1	8/23/2017 7:14:00 PM	R45152
Carbon disulfide	ND	10		µg/L	1	8/23/2017 7:14:00 PM	R45152
Carbon Tetrachloride	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
Chlorobenzene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
Chloroethane	ND	2.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
Chloroform	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
Chloromethane	ND	3.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
2-Chlorotoluene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
4-Chlorotoluene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
cis-1,2-DCE	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
Dibromochloromethane	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
Dibromomethane	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
1,1-Dichloroethane	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
1,1-Dichloroethene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
1,2-Dichloropropane	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
1,3-Dichloropropane	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
2,2-Dichloropropane	ND	2.0		µg/L	1	8/23/2017 7:14:00 PM	R45152

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708960

Date Reported: 8/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-170815

Project: JSP Joint Superfund Project Center Mont

Collection Date: 8/15/2017 9:29:00 AM

Lab ID: 1708960-005

Matrix: AQUEOUS

Received Date: 8/16/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
Hexachlorobutadiene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
2-Hexanone	ND	10		µg/L	1	8/23/2017 7:14:00 PM	R45152
Isopropylbenzene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
4-Isopropyltoluene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
4-Methyl-2-pentanone	ND	10		µg/L	1	8/23/2017 7:14:00 PM	R45152
Methylene Chloride	ND	3.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
n-Butylbenzene	ND	3.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
n-Propylbenzene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
sec-Butylbenzene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
Styrene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
tert-Butylbenzene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
trans-1,2-DCE	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
Trichlorofluoromethane	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
Vinyl chloride	ND	1.0		µg/L	1	8/23/2017 7:14:00 PM	R45152
Xylenes, Total	ND	1.5		µg/L	1	8/23/2017 7:14:00 PM	R45152
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	8/23/2017 7:14:00 PM	R45152
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	8/23/2017 7:14:00 PM	R45152
Surr: Dibromofluoromethane	101	70-130		%Rec	1	8/23/2017 7:14:00 PM	R45152
Surr: Toluene-d8	98.2	70-130		%Rec	1	8/23/2017 7:14:00 PM	R45152

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708960

Date Reported: 8/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-170815

Project: JSP Joint Superfund Project Center Mont

Collection Date: 8/15/2017 9:32:00 AM

Lab ID: 1708960-006

Matrix: AQUEOUS

Received Date: 8/16/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
Toluene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
Ethylbenzene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
Naphthalene	ND	2.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
1-Methylnaphthalene	ND	4.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
2-Methylnaphthalene	ND	4.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
Acetone	ND	10		µg/L	1	8/23/2017 7:38:00 PM	R45152
Bromobenzene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
Bromodichloromethane	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
Bromoform	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
Bromomethane	ND	3.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
2-Butanone	ND	10		µg/L	1	8/23/2017 7:38:00 PM	R45152
Carbon disulfide	ND	10		µg/L	1	8/23/2017 7:38:00 PM	R45152
Carbon Tetrachloride	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
Chlorobenzene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
Chloroethane	ND	2.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
Chloroform	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
Chloromethane	ND	3.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
2-Chlorotoluene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
4-Chlorotoluene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
cis-1,2-DCE	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
Dibromochloromethane	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
Dibromomethane	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
1,1-Dichloroethane	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
1,1-Dichloroethene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
1,2-Dichloropropane	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
1,3-Dichloropropane	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
2,2-Dichloropropane	ND	2.0		µg/L	1	8/23/2017 7:38:00 PM	R45152

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
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	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708960

Date Reported: 8/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-170815

Project: JSP Joint Superfund Project Center Mont

Collection Date: 8/15/2017 9:32:00 AM

Lab ID: 1708960-006

Matrix: AQUEOUS

Received Date: 8/16/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
Hexachlorobutadiene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
2-Hexanone	ND	10		µg/L	1	8/23/2017 7:38:00 PM	R45152
Isopropylbenzene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
4-Isopropyltoluene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
4-Methyl-2-pentanone	ND	10		µg/L	1	8/23/2017 7:38:00 PM	R45152
Methylene Chloride	ND	3.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
n-Butylbenzene	ND	3.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
n-Propylbenzene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
sec-Butylbenzene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
Styrene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
tert-Butylbenzene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
trans-1,2-DCE	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
Trichlorofluoromethane	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
Vinyl chloride	ND	1.0		µg/L	1	8/23/2017 7:38:00 PM	R45152
Xylenes, Total	ND	1.5		µg/L	1	8/23/2017 7:38:00 PM	R45152
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	8/23/2017 7:38:00 PM	R45152
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	8/23/2017 7:38:00 PM	R45152
Surr: Dibromofluoromethane	102	70-130		%Rec	1	8/23/2017 7:38:00 PM	R45152
Surr: Toluene-d8	98.2	70-130		%Rec	1	8/23/2017 7:38:00 PM	R45152

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708960

Date Reported: 8/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-170815

Project: JSP Joint Superfund Project Center Mont

Collection Date: 8/15/2017 9:35:00 AM

Lab ID: 1708960-007

Matrix: AQUEOUS

Received Date: 8/16/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
Toluene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
Ethylbenzene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
Naphthalene	ND	2.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
1-Methylnaphthalene	ND	4.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
2-Methylnaphthalene	ND	4.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
Acetone	ND	10		µg/L	1	8/23/2017 8:02:00 PM	R45152
Bromobenzene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
Bromodichloromethane	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
Bromoform	4.9	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
Bromomethane	ND	3.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
2-Butanone	ND	10		µg/L	1	8/23/2017 8:02:00 PM	R45152
Carbon disulfide	ND	10		µg/L	1	8/23/2017 8:02:00 PM	R45152
Carbon Tetrachloride	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
Chlorobenzene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
Chloroethane	ND	2.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
Chloroform	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
Chloromethane	ND	3.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
2-Chlorotoluene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
4-Chlorotoluene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
cis-1,2-DCE	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
Dibromochloromethane	2.0	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
Dibromomethane	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
1,1-Dichloroethane	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
1,1-Dichloroethene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
1,2-Dichloropropane	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
1,3-Dichloropropane	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
2,2-Dichloropropane	ND	2.0		µg/L	1	8/23/2017 8:02:00 PM	R45152

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Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708960

Date Reported: 8/27/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-170815

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Lab ID: 1708960-007

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Hexachlorobutadiene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
2-Hexanone	ND	10		µg/L	1	8/23/2017 8:02:00 PM	R45152
Isopropylbenzene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
4-Isopropyltoluene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
4-Methyl-2-pentanone	ND	10		µg/L	1	8/23/2017 8:02:00 PM	R45152
Methylene Chloride	ND	3.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
n-Butylbenzene	ND	3.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
n-Propylbenzene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
sec-Butylbenzene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
Styrene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
tert-Butylbenzene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
trans-1,2-DCE	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
Trichlorofluoromethane	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
Vinyl chloride	ND	1.0		µg/L	1	8/23/2017 8:02:00 PM	R45152
Xylenes, Total	ND	1.5		µg/L	1	8/23/2017 8:02:00 PM	R45152
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	8/23/2017 8:02:00 PM	R45152
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	8/23/2017 8:02:00 PM	R45152
Surr: Dibromofluoromethane	100	70-130		%Rec	1	8/23/2017 8:02:00 PM	R45152
Surr: Toluene-d8	97.6	70-130		%Rec	1	8/23/2017 8:02:00 PM	R45152

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	PQL Practical Quantitative Limit	RL Reporting Detection Limit
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1708960

27-Aug-17

Client: City of Las Cruces
Project: JSP Joint Superfund Project Center Monthly An

Sample ID	100ng lcs	SampType:	LCS4	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	BatchQC	Batch ID:	R45152	RunNo:	45152					
Prep Date:		Analysis Date:	8/23/2017	SeqNo:	1429504	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	19	1.0	20.00	0	96.2	70	130			
Ethylbenzene	19	1.0	20.00	0	93.8	70	130			
Methyl tert-butyl ether (MTBE)	40	1.0	40.00	0	101	70	130			
1,2,4-Trimethylbenzene	19	1.0	20.00	0	97.4	70	130			
1,3,5-Trimethylbenzene	19	1.0	20.00	0	97.0	70	130			
1,2-Dichloroethane (EDC)	21	1.0	20.00	0	104	62.2	143			
1,2-Dibromoethane (EDB)	19	1.0	20.00	0	94.1	70	130			
Naphthalene	19	2.0	20.00	0	97.3	70	130			
1-Methylnaphthalene	22	4.0	20.00	0	110	60	140			
2-Methylnaphthalene	17	4.0	20.00	0	86.6	60	140			
Acetone	38	10	40.00	0	95.2	60	140			
Bromobenzene	20	1.0	20.00	0	98.8	70	130			
Bromodichloromethane	20	1.0	20.00	0	102	70	130			
Bromoform	16	1.0	20.00	0	82.5	70	130			
Bromomethane	23	3.0	20.00	0	117	60	140			
2-Butanone	40	10	40.00	0	99.5	60	140			
Carbon disulfide	37	10	40.00	0	91.4	60	140			
Carbon Tetrachloride	19	1.0	20.00	0	94.6	70	130			
Chlorobenzene	19	1.0	20.00	0	94.4	70	130			
Chloroethane	20	2.0	20.00	0	102	60	140			
Chloroform	21	1.0	20.00	0	104	70	130			
Chloromethane	22	3.0	20.00	0	110	60	140			
2-Chlorotoluene	20	1.0	20.00	0	101	70	130			
4-Chlorotoluene	20	1.0	20.00	0	101	70	130			
cis-1,2-DCE	21	1.0	20.00	0	104	70	130			
cis-1,3-Dichloropropene	19	1.0	20.00	0	95.6	70	130			
1,2-Dibromo-3-chloropropane	18	2.0	20.00	0	89.8	70	130			
Dibromochloromethane	17	1.0	20.00	0	83.9	70	130			
Dibromomethane	21	1.0	20.00	0	105	70	130			
1,2-Dichlorobenzene	19	1.0	20.00	0	96.7	70	130			
1,3-Dichlorobenzene	19	1.0	20.00	0	96.6	70	130			
1,4-Dichlorobenzene	19	1.0	20.00	0	97.4	67.2	141			
Dichlorodifluoromethane	25	1.0	20.00	0	125	60	140			
1,1-Dichloroethane	21	1.0	20.00	0	105	52.6	157			
1,1-Dichloroethene	20	1.0	20.00	0	99.7	70	130			
1,2-Dichloropropane	21	1.0	20.00	0	106	63.7	138			
1,3-Dichloropropane	20	1.0	20.00	0	98.7	70	130			
2,2-Dichloropropane	20	2.0	20.00	0	101	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1708960

27-Aug-17

Client: City of Las Cruces
Project: JSP Joint Superfund Project Center Monthly An

Sample ID	100ng lcs	SampType:	LCS4	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	BatchQC	Batch ID:	R45152	RunNo:	45152					
Prep Date:		Analysis Date:	8/23/2017	SeqNo:	1429504	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	21	1.0	20.00	0	106	70	130			
Hexachlorobutadiene	17	1.0	20.00	0	82.6	70	130			
2-Hexanone	36	10	40.00	0	90.7	60	140			
Isopropylbenzene	19	1.0	20.00	0	94.3	70	130			
4-Isopropyltoluene	20	1.0	20.00	0	99.6	70	130			
4-Methyl-2-pentanone	41	10	40.00	0	104	60	140			
Methylene Chloride	21	3.0	20.00	0	103	70	130			
n-Butylbenzene	20	3.0	20.00	0	100	70	130			
n-Propylbenzene	21	1.0	20.00	0	103	70	130			
sec-Butylbenzene	20	1.0	20.00	0	99.1	70	130			
Styrene	19	1.0	20.00	0	93.3	70	130			
tert-Butylbenzene	20	1.0	20.00	0	97.7	70	130			
1,1,1,2-Tetrachloroethane	17	1.0	20.00	0	84.5	70	130			
1,1,2,2-Tetrachloroethane	22	2.0	20.00	0	110	65.9	133			
Tetrachloroethene (PCE)	18	1.0	20.00	0	90.2	70	130			
trans-1,2-DCE	20	1.0	20.00	0	100	70	130			
trans-1,3-Dichloropropene	18	1.0	20.00	0	87.7	70	130			
1,2,3-Trichlorobenzene	19	1.0	20.00	0	93.1	70	130			
1,2,4-Trichlorobenzene	19	1.0	20.00	0	93.6	70	130			
1,1,1-Trichloroethane	19	1.0	20.00	0	96.4	70	130			
1,1,2-Trichloroethane	19	1.0	20.00	0	95.8	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	99.9	70	130			
Trichlorofluoromethane	20	1.0	20.00	0	97.9	70	130			
1,2,3-Trichloropropane	20	2.0	20.00	0	102	69.7	129			
Vinyl chloride	25	1.0	20.00	0	126	70	130			
Xylenes, Total	57	1.5	60.00	0	95.0	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.9		10.00		98.9	70	130			

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R45152	RunNo:	45152					
Prep Date:		Analysis Date:	8/23/2017	SeqNo:	1430279	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1708960

27-Aug-17

Client: City of Las Cruces
Project: JSP Joint Superfund Project Center Monthly An

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R45152	RunNo:	45152					
Prep Date:		Analysis Date:	8/23/2017	SeqNo:	1430279	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1708960

27-Aug-17

Client: City of Las Cruces
Project: JSP Joint Superfund Project Center Monthly An

Sample ID	RB	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R45152			RunNo: 45152					
Prep Date:		Analysis Date: 8/23/2017			SeqNo: 1430279		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.9		10.00		99.0	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1708960

RcptNo: 1

Received By: Erin Melendrez 8/16/2017 8:50:00 AM
 Completed By: Ashley Gallegos 8/16/2017 11:23:26 AM
 Reviewed By: ENM 8/17/17

Handwritten signatures

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.1	Good	Yes			

Chain-of-Custody Record

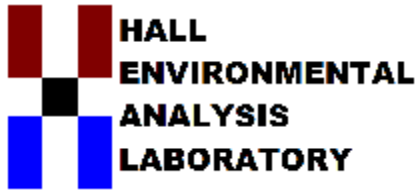
Client: City of Las Cruces
Water Quality Lab
 Mailing Address: P.O. Box 20000
Las Cruces, NM 88004
 Phone #: 505-528-3004
 email or Fax#: lguerra@las-cruces.nm.gov
 QA/QC Package: Level 4 (Full Validation)
 Standard Other _____
 Accreditation
 NELAP Other _____
 EDD (Type) _____

Turn-Around Time: Standard Rush
 Project Name: JSP - Joint Superfund Project
Monthly Analysis
 Project #: UO - JSP - Griggs Walnut
505-528-3004
 Project Manager:
Luis Guerra
 Sampler:
 On Ice: Yes No
 Sample Temperature: 2.1

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMBs (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418 1)	EDB (Method 504.1)	PAHs (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCBs	8260B (VOA) - VDL	8270 (Semi-VOA)	Air Bubbles (Y or N)
08-15-19	0900	Drinking Water	UO 18-190815	3-40ml Vials Hg Cl ₂		1708300									X			
08-15-19	0952	Drinking Water	UO 29-190815			-001									X			
08-15-19	0926	Drinking Water	UO 152-190815			-002									X			
08-15-19	0926	Drinking Water	UO 152-190815			-003									X			
08-15-19	0929	Drinking Water	UO 02-190815			-004									X			
08-15-19	0932	Drinking Water	UO 02-190815			-005									X			
08-15-19	0935	Drinking Water	UO 02-190815			-006									X			
08-15-19	0935	Drinking Water	UO 02-190815			-007									X			

Remarks: Send Results to:
Luis Guerra: lguerra@las-cruces.org
Teresa Roseblatt: jroserblatt@las-cruces.org
Send Invoice to: C/O C/O Luis Guerra

Date: 8/15/17 Time: 15:00 Relinquished by: [Signature]
 Date: 8/16/17 Time: 0850 Received by: [Signature]
 Date: _____ Time: _____ Relinquished by: _____
 Date: _____ Time: _____ Received by: _____



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 24, 2017

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP Joint Superfund Project Center Monthly Analysis

OrderNo.: 1708961

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 2 sample(s) on 8/16/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708961

Date Reported: 8/24/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1-170815

Project: JSP Joint Superfund Project Center Mont

Collection Date: 8/15/2017 9:37:00 AM

Lab ID: 1708961-001

Matrix: AIR

Received Date: 8/16/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
Toluene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
Ethylbenzene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
Naphthalene	ND	0.20		µg/L	1	8/23/2017 11:09:09 AM	A45176
1-Methylnaphthalene	ND	0.40		µg/L	1	8/23/2017 11:09:09 AM	A45176
2-Methylnaphthalene	ND	0.40		µg/L	1	8/23/2017 11:09:09 AM	A45176
Acetone	ND	1.0		µg/L	1	8/23/2017 11:09:09 AM	A45176
Bromobenzene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
Bromodichloromethane	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
Bromoform	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
Bromomethane	ND	0.20		µg/L	1	8/23/2017 11:09:09 AM	A45176
2-Butanone	ND	1.0		µg/L	1	8/23/2017 11:09:09 AM	A45176
Carbon disulfide	ND	1.0		µg/L	1	8/23/2017 11:09:09 AM	A45176
Carbon tetrachloride	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
Chlorobenzene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
Chloroethane	ND	0.20		µg/L	1	8/23/2017 11:09:09 AM	A45176
Chloroform	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
Chloromethane	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
2-Chlorotoluene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
4-Chlorotoluene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
cis-1,2-DCE	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	8/23/2017 11:09:09 AM	A45176
Dibromochloromethane	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
Dibromomethane	ND	0.20		µg/L	1	8/23/2017 11:09:09 AM	A45176
1,2-Dichlorobenzene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
1,3-Dichlorobenzene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
1,4-Dichlorobenzene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
Dichlorodifluoromethane	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
1,1-Dichloroethane	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
1,1-Dichloroethene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
1,2-Dichloropropane	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
1,3-Dichloropropane	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
2,2-Dichloropropane	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 1 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708961

Date Reported: 8/24/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1-170815

Project: JSP Joint Superfund Project Center Mont

Collection Date: 8/15/2017 9:37:00 AM

Lab ID: 1708961-001

Matrix: AIR

Received Date: 8/16/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
Hexachlorobutadiene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
2-Hexanone	ND	1.0		µg/L	1	8/23/2017 11:09:09 AM	A45176
Isopropylbenzene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
4-Isopropyltoluene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
4-Methyl-2-pentanone	ND	1.0		µg/L	1	8/23/2017 11:09:09 AM	A45176
Methylene chloride	ND	0.30		µg/L	1	8/23/2017 11:09:09 AM	A45176
n-Butylbenzene	ND	0.30		µg/L	1	8/23/2017 11:09:09 AM	A45176
n-Propylbenzene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
sec-Butylbenzene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
Styrene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
tert-Butylbenzene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
trans-1,2-DCE	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
1,1,1-Trichloroethane	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
1,1,2-Trichloroethane	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
Trichloroethene (TCE)	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
Trichlorofluoromethane	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
1,2,3-Trichloropropane	ND	0.20		µg/L	1	8/23/2017 11:09:09 AM	A45176
Vinyl chloride	ND	0.10		µg/L	1	8/23/2017 11:09:09 AM	A45176
Xylenes, Total	ND	0.15		µg/L	1	8/23/2017 11:09:09 AM	A45176
Surr: Dibromofluoromethane	95.1	70-130		%Rec	1	8/23/2017 11:09:09 AM	A45176
Surr: 1,2-Dichloroethane-d4	91.9	70-130		%Rec	1	8/23/2017 11:09:09 AM	A45176
Surr: Toluene-d8	100	70-130		%Rec	1	8/23/2017 11:09:09 AM	A45176
Surr: 4-Bromofluorobenzene	95.9	70-130		%Rec	1	8/23/2017 11:09:09 AM	A45176

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708961

Date Reported: 8/24/2017

CLIENT: City of Las Cruces

Client Sample ID: AS2-170815

Project: JSP Joint Superfund Project Center Mont

Collection Date: 8/15/2017 9:42:00 AM

Lab ID: 1708961-002

Matrix: AIR

Received Date: 8/16/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
Toluene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
Ethylbenzene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
Naphthalene	ND	0.20		µg/L	1	8/23/2017 12:06:54 PM	A45176
1-Methylnaphthalene	ND	0.40		µg/L	1	8/23/2017 12:06:54 PM	A45176
2-Methylnaphthalene	ND	0.40		µg/L	1	8/23/2017 12:06:54 PM	A45176
Acetone	ND	1.0		µg/L	1	8/23/2017 12:06:54 PM	A45176
Bromobenzene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
Bromodichloromethane	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
Bromoform	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
Bromomethane	ND	0.20		µg/L	1	8/23/2017 12:06:54 PM	A45176
2-Butanone	ND	1.0		µg/L	1	8/23/2017 12:06:54 PM	A45176
Carbon disulfide	ND	1.0		µg/L	1	8/23/2017 12:06:54 PM	A45176
Carbon tetrachloride	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
Chlorobenzene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
Chloroethane	ND	0.20		µg/L	1	8/23/2017 12:06:54 PM	A45176
Chloroform	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
Chloromethane	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
2-Chlorotoluene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
4-Chlorotoluene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
cis-1,2-DCE	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	8/23/2017 12:06:54 PM	A45176
Dibromochloromethane	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
Dibromomethane	ND	0.20		µg/L	1	8/23/2017 12:06:54 PM	A45176
1,2-Dichlorobenzene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
1,3-Dichlorobenzene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
1,4-Dichlorobenzene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
Dichlorodifluoromethane	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
1,1-Dichloroethane	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
1,1-Dichloroethene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
1,2-Dichloropropane	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
1,3-Dichloropropane	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
2,2-Dichloropropane	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 3 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1708961

Date Reported: 8/24/2017

CLIENT: City of Las Cruces

Client Sample ID: AS2-170815

Project: JSP Joint Superfund Project Center Mont

Collection Date: 8/15/2017 9:42:00 AM

Lab ID: 1708961-002

Matrix: AIR

Received Date: 8/16/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
Hexachlorobutadiene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
2-Hexanone	ND	1.0		µg/L	1	8/23/2017 12:06:54 PM	A45176
Isopropylbenzene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
4-Isopropyltoluene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
4-Methyl-2-pentanone	ND	1.0		µg/L	1	8/23/2017 12:06:54 PM	A45176
Methylene chloride	ND	0.30		µg/L	1	8/23/2017 12:06:54 PM	A45176
n-Butylbenzene	ND	0.30		µg/L	1	8/23/2017 12:06:54 PM	A45176
n-Propylbenzene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
sec-Butylbenzene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
Styrene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
tert-Butylbenzene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
trans-1,2-DCE	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
1,1,1-Trichloroethane	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
1,1,2-Trichloroethane	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
Trichloroethene (TCE)	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
Trichlorofluoromethane	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
1,2,3-Trichloropropane	ND	0.20		µg/L	1	8/23/2017 12:06:54 PM	A45176
Vinyl chloride	ND	0.10		µg/L	1	8/23/2017 12:06:54 PM	A45176
Xylenes, Total	ND	0.15		µg/L	1	8/23/2017 12:06:54 PM	A45176
Surr: Dibromofluoromethane	98.2	70-130		%Rec	1	8/23/2017 12:06:54 PM	A45176
Surr: 1,2-Dichloroethane-d4	93.7	70-130		%Rec	1	8/23/2017 12:06:54 PM	A45176
Surr: Toluene-d8	99.6	70-130		%Rec	1	8/23/2017 12:06:54 PM	A45176
Surr: 4-Bromofluorobenzene	98.7	70-130		%Rec	1	8/23/2017 12:06:54 PM	A45176

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1708961

RcptNo: 1

Received By: Erin Melendrez

8/16/2017 8:50:00 AM

EM

Completed By: Ashley Gallegos

8/16/2017 11:34:25 AM

AG

Reviewed By: ENM

8/17/17

Chain of Custody

1. Custody seals intact on sample bottles? Yes No Not Present
2. Is Chain of Custody complete? Yes No Not Present
3. How was the sample delivered? FedEx

Log In

4. Was an attempt made to cool the samples? Yes No NA
5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
6. Sample(s) in proper container(s)? Yes No
7. Sufficient sample volume for indicated test(s)? Yes No
8. Are samples (except VOA and ONG) properly preserved? Yes No
9. Was preservative added to bottles? Yes No NA
10. VOA vials have zero headspace? Yes No No VOA Vials
11. Were any sample containers received broken? Yes No
12. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes No
14. Is it clear what analyses were requested? Yes No
15. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	NA	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 29, 2017

Luis Guerra
City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3604
FAX

RE: JSP Joint Superfund Project Center Monthly Analysis

OrderNo.: 1709C16

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 9/21/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709C16

Date Reported: 9/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-170920

Project: JSP Joint Superfund Project Center Mont

Collection Date: 9/20/2017 9:04:00 AM

Lab ID: 1709C16-001

Matrix: AQUEOUS

Received Date: 9/21/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
Toluene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
Ethylbenzene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
Naphthalene	ND	2.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
1-Methylnaphthalene	ND	4.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
2-Methylnaphthalene	ND	4.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
Acetone	ND	10		µg/L	1	9/28/2017 5:43:00 AM	A45920
Bromobenzene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
Bromodichloromethane	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
Bromoform	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
Bromomethane	ND	3.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
2-Butanone	ND	10		µg/L	1	9/28/2017 5:43:00 AM	A45920
Carbon disulfide	ND	10		µg/L	1	9/28/2017 5:43:00 AM	A45920
Carbon Tetrachloride	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
Chlorobenzene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
Chloroethane	ND	2.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
Chloroform	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
Chloromethane	ND	3.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
2-Chlorotoluene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
4-Chlorotoluene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
cis-1,2-DCE	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
Dibromochloromethane	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
Dibromomethane	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
1,1-Dichloroethane	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
1,1-Dichloroethene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
1,2-Dichloropropane	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
1,3-Dichloropropane	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
2,2-Dichloropropane	ND	2.0		µg/L	1	9/28/2017 5:43:00 AM	A45920

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709C16

Date Reported: 9/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-170920

Project: JSP Joint Superfund Project Center Mont

Collection Date: 9/20/2017 9:04:00 AM

Lab ID: 1709C16-001

Matrix: AQUEOUS

Received Date: 9/21/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
Hexachlorobutadiene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
2-Hexanone	ND	10		µg/L	1	9/28/2017 5:43:00 AM	A45920
Isopropylbenzene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
4-Isopropyltoluene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
4-Methyl-2-pentanone	ND	10		µg/L	1	9/28/2017 5:43:00 AM	A45920
Methylene Chloride	ND	3.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
n-Butylbenzene	ND	3.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
n-Propylbenzene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
sec-Butylbenzene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
Styrene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
tert-Butylbenzene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
Tetrachloroethene (PCE)	12	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
trans-1,2-DCE	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
Trichlorofluoromethane	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
Vinyl chloride	ND	1.0		µg/L	1	9/28/2017 5:43:00 AM	A45920
Xylenes, Total	ND	1.5		µg/L	1	9/28/2017 5:43:00 AM	A45920
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	9/28/2017 5:43:00 AM	A45920
Surr: 4-Bromofluorobenzene	98.1	70-130		%Rec	1	9/28/2017 5:43:00 AM	A45920
Surr: Dibromofluoromethane	103	70-130		%Rec	1	9/28/2017 5:43:00 AM	A45920
Surr: Toluene-d8	99.3	70-130		%Rec	1	9/28/2017 5:43:00 AM	A45920

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709C16

Date Reported: 9/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-170920

Project: JSP Joint Superfund Project Center Mont

Collection Date: 9/20/2017 9:35:00 AM

Lab ID: 1709C16-002

Matrix: AQUEOUS

Received Date: 9/21/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
Toluene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
Ethylbenzene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
Naphthalene	ND	2.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
1-Methylnaphthalene	ND	4.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
2-Methylnaphthalene	ND	4.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
Acetone	ND	10		µg/L	1	9/28/2017 6:07:00 AM	A45920
Bromobenzene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
Bromodichloromethane	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
Bromoform	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
Bromomethane	ND	3.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
2-Butanone	ND	10		µg/L	1	9/28/2017 6:07:00 AM	A45920
Carbon disulfide	ND	10		µg/L	1	9/28/2017 6:07:00 AM	A45920
Carbon Tetrachloride	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
Chlorobenzene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
Chloroethane	ND	2.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
Chloroform	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
Chloromethane	ND	3.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
2-Chlorotoluene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
4-Chlorotoluene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
cis-1,2-DCE	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
Dibromochloromethane	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
Dibromomethane	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
1,1-Dichloroethane	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
1,1-Dichloroethene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
1,2-Dichloropropane	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
1,3-Dichloropropane	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
2,2-Dichloropropane	ND	2.0		µg/L	1	9/28/2017 6:07:00 AM	A45920

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709C16

Date Reported: 9/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-170920

Project: JSP Joint Superfund Project Center Mont

Collection Date: 9/20/2017 9:35:00 AM

Lab ID: 1709C16-002

Matrix: AQUEOUS

Received Date: 9/21/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
Hexachlorobutadiene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
2-Hexanone	ND	10		µg/L	1	9/28/2017 6:07:00 AM	A45920
Isopropylbenzene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
4-Isopropyltoluene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
4-Methyl-2-pentanone	ND	10		µg/L	1	9/28/2017 6:07:00 AM	A45920
Methylene Chloride	ND	3.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
n-Butylbenzene	ND	3.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
n-Propylbenzene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
sec-Butylbenzene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
Styrene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
tert-Butylbenzene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
Tetrachloroethene (PCE)	14	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
trans-1,2-DCE	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
Trichlorofluoromethane	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
Vinyl chloride	ND	1.0		µg/L	1	9/28/2017 6:07:00 AM	A45920
Xylenes, Total	ND	1.5		µg/L	1	9/28/2017 6:07:00 AM	A45920
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	9/28/2017 6:07:00 AM	A45920
Surr: 4-Bromofluorobenzene	99.0	70-130		%Rec	1	9/28/2017 6:07:00 AM	A45920
Surr: Dibromofluoromethane	103	70-130		%Rec	1	9/28/2017 6:07:00 AM	A45920
Surr: Toluene-d8	97.2	70-130		%Rec	1	9/28/2017 6:07:00 AM	A45920

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709C16

Date Reported: 9/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-170920

Project: JSP Joint Superfund Project Center Mont

Collection Date: 9/20/2017 9:08:00 AM

Lab ID: 1709C16-003

Matrix: AQUEOUS

Received Date: 9/21/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
Toluene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
Ethylbenzene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
Naphthalene	ND	2.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
1-Methylnaphthalene	ND	4.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
2-Methylnaphthalene	ND	4.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
Acetone	ND	10		µg/L	1	9/28/2017 6:30:00 AM	A45920
Bromobenzene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
Bromodichloromethane	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
Bromoform	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
Bromomethane	ND	3.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
2-Butanone	ND	10		µg/L	1	9/28/2017 6:30:00 AM	A45920
Carbon disulfide	ND	10		µg/L	1	9/28/2017 6:30:00 AM	A45920
Carbon Tetrachloride	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
Chlorobenzene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
Chloroethane	ND	2.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
Chloroform	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
Chloromethane	ND	3.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
2-Chlorotoluene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
4-Chlorotoluene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
cis-1,2-DCE	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
Dibromochloromethane	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
Dibromomethane	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
1,1-Dichloroethane	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
1,1-Dichloroethene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
1,2-Dichloropropane	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
1,3-Dichloropropane	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
2,2-Dichloropropane	ND	2.0		µg/L	1	9/28/2017 6:30:00 AM	A45920

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709C16

Date Reported: 9/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-170920

Project: JSP Joint Superfund Project Center Mont

Collection Date: 9/20/2017 9:08:00 AM

Lab ID: 1709C16-003

Matrix: AQUEOUS

Received Date: 9/21/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
Hexachlorobutadiene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
2-Hexanone	ND	10		µg/L	1	9/28/2017 6:30:00 AM	A45920
Isopropylbenzene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
4-Isopropyltoluene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
4-Methyl-2-pentanone	ND	10		µg/L	1	9/28/2017 6:30:00 AM	A45920
Methylene Chloride	ND	3.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
n-Butylbenzene	ND	3.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
n-Propylbenzene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
sec-Butylbenzene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
Styrene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
tert-Butylbenzene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
Tetrachloroethene (PCE)	10	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
trans-1,2-DCE	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
Trichlorofluoromethane	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
Vinyl chloride	ND	1.0		µg/L	1	9/28/2017 6:30:00 AM	A45920
Xylenes, Total	ND	1.5		µg/L	1	9/28/2017 6:30:00 AM	A45920
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	9/28/2017 6:30:00 AM	A45920
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	9/28/2017 6:30:00 AM	A45920
Surr: Dibromofluoromethane	102	70-130		%Rec	1	9/28/2017 6:30:00 AM	A45920
Surr: Toluene-d8	98.5	70-130		%Rec	1	9/28/2017 6:30:00 AM	A45920

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709C16

Date Reported: 9/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-170920

Project: JSP Joint Superfund Project Center Mont

Collection Date: 9/20/2017 9:11:00 AM

Lab ID: 1709C16-004

Matrix: AQUEOUS

Received Date: 9/21/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
Toluene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
Ethylbenzene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
Naphthalene	ND	2.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
1-Methylnaphthalene	ND	4.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
2-Methylnaphthalene	ND	4.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
Acetone	ND	10		µg/L	1	9/28/2017 6:54:00 AM	A45920
Bromobenzene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
Bromodichloromethane	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
Bromoform	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
Bromomethane	ND	3.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
2-Butanone	ND	10		µg/L	1	9/28/2017 6:54:00 AM	A45920
Carbon disulfide	ND	10		µg/L	1	9/28/2017 6:54:00 AM	A45920
Carbon Tetrachloride	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
Chlorobenzene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
Chloroethane	ND	2.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
Chloroform	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
Chloromethane	ND	3.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
2-Chlorotoluene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
4-Chlorotoluene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
cis-1,2-DCE	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
Dibromochloromethane	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
Dibromomethane	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
1,1-Dichloroethane	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
1,1-Dichloroethene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
1,2-Dichloropropane	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
1,3-Dichloropropane	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
2,2-Dichloropropane	ND	2.0		µg/L	1	9/28/2017 6:54:00 AM	A45920

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709C16

Date Reported: 9/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-170920

Project: JSP Joint Superfund Project Center Mont

Collection Date: 9/20/2017 9:11:00 AM

Lab ID: 1709C16-004

Matrix: AQUEOUS

Received Date: 9/21/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
Hexachlorobutadiene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
2-Hexanone	ND	10		µg/L	1	9/28/2017 6:54:00 AM	A45920
Isopropylbenzene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
4-Isopropyltoluene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
4-Methyl-2-pentanone	ND	10		µg/L	1	9/28/2017 6:54:00 AM	A45920
Methylene Chloride	ND	3.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
n-Butylbenzene	ND	3.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
n-Propylbenzene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
sec-Butylbenzene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
Styrene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
tert-Butylbenzene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
trans-1,2-DCE	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
Trichlorofluoromethane	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
Vinyl chloride	ND	1.0		µg/L	1	9/28/2017 6:54:00 AM	A45920
Xylenes, Total	ND	1.5		µg/L	1	9/28/2017 6:54:00 AM	A45920
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	9/28/2017 6:54:00 AM	A45920
Surr: 4-Bromofluorobenzene	99.1	70-130		%Rec	1	9/28/2017 6:54:00 AM	A45920
Surr: Dibromofluoromethane	101	70-130		%Rec	1	9/28/2017 6:54:00 AM	A45920
Surr: Toluene-d8	99.6	70-130		%Rec	1	9/28/2017 6:54:00 AM	A45920

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709C16

Date Reported: 9/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-170920

Project: JSP Joint Superfund Project Center Mont

Collection Date: 9/20/2017 9:14:00 AM

Lab ID: 1709C16-005

Matrix: AQUEOUS

Received Date: 9/21/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
Toluene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
Ethylbenzene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
Naphthalene	ND	2.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
1-Methylnaphthalene	ND	4.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
2-Methylnaphthalene	ND	4.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
Acetone	ND	10		µg/L	1	9/28/2017 7:18:00 AM	A45920
Bromobenzene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
Bromodichloromethane	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
Bromoform	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
Bromomethane	ND	3.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
2-Butanone	ND	10		µg/L	1	9/28/2017 7:18:00 AM	A45920
Carbon disulfide	ND	10		µg/L	1	9/28/2017 7:18:00 AM	A45920
Carbon Tetrachloride	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
Chlorobenzene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
Chloroethane	ND	2.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
Chloroform	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
Chloromethane	ND	3.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
2-Chlorotoluene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
4-Chlorotoluene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
cis-1,2-DCE	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
Dibromochloromethane	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
Dibromomethane	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
1,1-Dichloroethane	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
1,1-Dichloroethene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
1,2-Dichloropropane	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
1,3-Dichloropropane	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
2,2-Dichloropropane	ND	2.0		µg/L	1	9/28/2017 7:18:00 AM	A45920

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709C16

Date Reported: 9/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-170920

Project: JSP Joint Superfund Project Center Mont

Collection Date: 9/20/2017 9:14:00 AM

Lab ID: 1709C16-005

Matrix: AQUEOUS

Received Date: 9/21/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
Hexachlorobutadiene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
2-Hexanone	ND	10		µg/L	1	9/28/2017 7:18:00 AM	A45920
Isopropylbenzene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
4-Isopropyltoluene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
4-Methyl-2-pentanone	ND	10		µg/L	1	9/28/2017 7:18:00 AM	A45920
Methylene Chloride	ND	3.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
n-Butylbenzene	ND	3.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
n-Propylbenzene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
sec-Butylbenzene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
Styrene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
tert-Butylbenzene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
trans-1,2-DCE	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
Trichlorofluoromethane	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
Vinyl chloride	ND	1.0		µg/L	1	9/28/2017 7:18:00 AM	A45920
Xylenes, Total	ND	1.5		µg/L	1	9/28/2017 7:18:00 AM	A45920
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	9/28/2017 7:18:00 AM	A45920
Surr: 4-Bromofluorobenzene	99.0	70-130		%Rec	1	9/28/2017 7:18:00 AM	A45920
Surr: Dibromofluoromethane	102	70-130		%Rec	1	9/28/2017 7:18:00 AM	A45920
Surr: Toluene-d8	101	70-130		%Rec	1	9/28/2017 7:18:00 AM	A45920

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709C16

Date Reported: 9/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-170920

Project: JSP Joint Superfund Project Center Mont

Collection Date: 9/20/2017 9:16:00 AM

Lab ID: 1709C16-006

Matrix: AQUEOUS

Received Date: 9/21/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
Toluene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
Ethylbenzene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
Naphthalene	ND	2.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
1-Methylnaphthalene	ND	4.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
2-Methylnaphthalene	ND	4.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
Acetone	ND	10		µg/L	1	9/28/2017 7:41:00 AM	A45920
Bromobenzene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
Bromodichloromethane	2.2	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
Bromoform	4.3	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
Bromomethane	ND	3.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
2-Butanone	ND	10		µg/L	1	9/28/2017 7:41:00 AM	A45920
Carbon disulfide	ND	10		µg/L	1	9/28/2017 7:41:00 AM	A45920
Carbon Tetrachloride	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
Chlorobenzene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
Chloroethane	ND	2.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
Chloroform	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
Chloromethane	ND	3.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
2-Chlorotoluene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
4-Chlorotoluene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
cis-1,2-DCE	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
Dibromochloromethane	4.6	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
Dibromomethane	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
1,1-Dichloroethane	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
1,1-Dichloroethene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
1,2-Dichloropropane	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
1,3-Dichloropropane	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
2,2-Dichloropropane	ND	2.0		µg/L	1	9/28/2017 7:41:00 AM	A45920

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709C16

Date Reported: 9/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-170920

Project: JSP Joint Superfund Project Center Mont

Collection Date: 9/20/2017 9:16:00 AM

Lab ID: 1709C16-006

Matrix: AQUEOUS

Received Date: 9/21/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
Hexachlorobutadiene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
2-Hexanone	ND	10		µg/L	1	9/28/2017 7:41:00 AM	A45920
Isopropylbenzene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
4-Isopropyltoluene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
4-Methyl-2-pentanone	ND	10		µg/L	1	9/28/2017 7:41:00 AM	A45920
Methylene Chloride	ND	3.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
n-Butylbenzene	ND	3.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
n-Propylbenzene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
sec-Butylbenzene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
Styrene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
tert-Butylbenzene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
trans-1,2-DCE	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
Trichlorofluoromethane	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
Vinyl chloride	ND	1.0		µg/L	1	9/28/2017 7:41:00 AM	A45920
Xylenes, Total	ND	1.5		µg/L	1	9/28/2017 7:41:00 AM	A45920
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	9/28/2017 7:41:00 AM	A45920
Surr: 4-Bromofluorobenzene	99.6	70-130		%Rec	1	9/28/2017 7:41:00 AM	A45920
Surr: Dibromofluoromethane	101	70-130		%Rec	1	9/28/2017 7:41:00 AM	A45920
Surr: Toluene-d8	98.9	70-130		%Rec	1	9/28/2017 7:41:00 AM	A45920

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709C16

Date Reported: 9/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-170920DUP

Project: JSP Joint Superfund Project Center Mont

Collection Date: 9/20/2017 9:04:00 AM

Lab ID: 1709C16-007

Matrix: AQUEOUS

Received Date: 9/21/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
Toluene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
Ethylbenzene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
Naphthalene	ND	2.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
1-Methylnaphthalene	ND	4.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
2-Methylnaphthalene	ND	4.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
Acetone	ND	10		µg/L	1	9/28/2017 8:05:00 AM	A45920
Bromobenzene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
Bromodichloromethane	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
Bromoform	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
Bromomethane	ND	3.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
2-Butanone	ND	10		µg/L	1	9/28/2017 8:05:00 AM	A45920
Carbon disulfide	ND	10		µg/L	1	9/28/2017 8:05:00 AM	A45920
Carbon Tetrachloride	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
Chlorobenzene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
Chloroethane	ND	2.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
Chloroform	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
Chloromethane	ND	3.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
2-Chlorotoluene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
4-Chlorotoluene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
cis-1,2-DCE	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
Dibromochloromethane	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
Dibromomethane	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
1,1-Dichloroethane	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
1,1-Dichloroethene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
1,2-Dichloropropane	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
1,3-Dichloropropane	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
2,2-Dichloropropane	ND	2.0		µg/L	1	9/28/2017 8:05:00 AM	A45920

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709C16

Date Reported: 9/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-170920DUP

Project: JSP Joint Superfund Project Center Mont

Collection Date: 9/20/2017 9:04:00 AM

Lab ID: 1709C16-007

Matrix: AQUEOUS

Received Date: 9/21/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
Hexachlorobutadiene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
2-Hexanone	ND	10		µg/L	1	9/28/2017 8:05:00 AM	A45920
Isopropylbenzene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
4-Isopropyltoluene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
4-Methyl-2-pentanone	ND	10		µg/L	1	9/28/2017 8:05:00 AM	A45920
Methylene Chloride	ND	3.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
n-Butylbenzene	ND	3.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
n-Propylbenzene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
sec-Butylbenzene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
Styrene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
tert-Butylbenzene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
Tetrachloroethene (PCE)	12	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
trans-1,2-DCE	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
Trichlorofluoromethane	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
Vinyl chloride	ND	1.0		µg/L	1	9/28/2017 8:05:00 AM	A45920
Xylenes, Total	ND	1.5		µg/L	1	9/28/2017 8:05:00 AM	A45920
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	9/28/2017 8:05:00 AM	A45920
Surr: 4-Bromofluorobenzene	98.1	70-130		%Rec	1	9/28/2017 8:05:00 AM	A45920
Surr: Dibromofluoromethane	100	70-130		%Rec	1	9/28/2017 8:05:00 AM	A45920
Surr: Toluene-d8	99.6	70-130		%Rec	1	9/28/2017 8:05:00 AM	A45920

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1709C16

29-Sep-17

Client: City of Las Cruces
Project: JSP Joint Superfund Project Center Monthly An

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R45920		RunNo: 45920							
Prep Date:	Analysis Date: 9/27/2017		SeqNo: 1459384		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R45920		RunNo: 45920							
Prep Date:	Analysis Date: 9/27/2017		SeqNo: 1459385		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.6	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: A45920		RunNo: 45920							
Prep Date:	Analysis Date: 9/27/2017		SeqNo: 1460147		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.2	70	130			
Toluene	19	1.0	20.00	0	97.4	70	130			
Chlorobenzene	20	1.0	20.00	0	100	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	97.7	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	94.5	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.5	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.3	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID rb3	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: A45920		RunNo: 45920							
Prep Date:	Analysis Date: 9/27/2017		SeqNo: 1460148		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1709C16

29-Sep-17

Client: City of Las Cruces
Project: JSP Joint Superfund Project Center Monthly An

Sample ID	rb3	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	A45920	RunNo:	45920					
Prep Date:		Analysis Date:	9/27/2017	SeqNo:	1460148	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1709C16

29-Sep-17

Client: City of Las Cruces
Project: JSP Joint Superfund Project Center Monthly An

Sample ID: rb3	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: A45920	RunNo: 45920								
Prep Date:	Analysis Date: 9/27/2017	SeqNo: 1460148			Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.9		10.00		98.9	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

Client Name: City of Las Cruces

Work Order Number: 1709C16

RcptNo: 1

Received By: Isaiah Ortiz

9/21/2017 9:00:00 AM

IO

Completed By: Ashley Gallegos

9/21/2017 3:18:57 PM

AG

Reviewed By: *AC*

9/22/17

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces

Water Quality Lab

Mailing Address: P.O. Box 20000

Las Cruces, NM 88004

Phone #: 505-528-3104

email or Fax#: lguerrad@las-cruces.org/505-528-3104

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation

NELAP Other _____

EDD (Type) EXCEL

Turn-Around Time:

Standard Rush

Project Name: SP-Joint Superfund Project Center

Monthly Analysis

Project #: CLC-ISP: Griggs Walnut

Project Manager: Luis Guerra

505-528-3109

Sampler:

On Ice: Yes No

Sample Temperature: 1.0

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
9-20-19	0914	Drinking Water	CLC 18-170920	B-40ml vials	HgCl2	-001
9-20-19	0935	Drinking Water	CLC 27-170920			-002
9-20-19	0908	Drinking Water	CLC ISI-170920			-003
9-20-19	0911	Drinking Water	CLC CI-170920			-004
9-20-19	0914	Drinking Water	CLC C2-170920			-005
9-20-19	0916	Drinking Water	CLC-ESI-170920			-006
9-20-19	0904	Drinking Water	CLC 18-170920 DWA	B-40ml vials	HgCl2	-007

BTEX + MTBE + TMBs (8021)

BTEX + MTBE + TPH (Gas only)

TPH 8015B (GRO / DRO / MRO)

TPH (Method 418.1)

EDB (Method 504.1)

PAH's (8310 or 8270 SIMS)

RCRA 8 Metals

Anions (F, Cl, NO₃, NO₂, PO₄, SO₄)

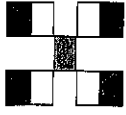
8081 Pesticides / 8082 PCBs

8260B (VOA) VOA

8270 (Semi-VOA)

Air Bubbles (V or N)

Analysis Request



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

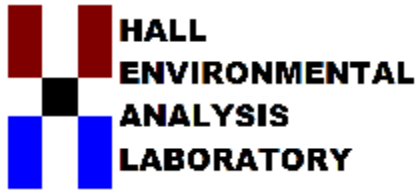
Received by: [Signature] Date: 9/21/19 Time: 09:08

Relinquished by: [Signature] Date: _____ Time: _____

Remarks:

Send Results to:

Luis Guerra: lguerrad@las-cruces.org
Joshua Rosenblatt: jrosenblatt@las-cruces.org
(Send invoice to CLC c/o Luis Guerra)



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 03, 2017

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP Joint Superfund Project Center Monthly Analysis

OrderNo.: 1709C17

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 2 sample(s) on 9/21/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709C17

Date Reported: 10/3/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1-170920

Project: JSP Joint Superfund Project Center Mont

Collection Date: 9/20/2017 9:18:00 AM

Lab ID: 1709C17-001

Matrix: AIR

Received Date: 9/21/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
Toluene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
Ethylbenzene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
Naphthalene	ND	0.20		µg/L	1	9/28/2017 11:42:40 AM	W45980
1-Methylnaphthalene	ND	0.40		µg/L	1	9/28/2017 11:42:40 AM	W45980
2-Methylnaphthalene	ND	0.40		µg/L	1	9/28/2017 11:42:40 AM	W45980
Acetone	ND	1.0		µg/L	1	9/28/2017 11:42:40 AM	W45980
Bromobenzene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
Bromodichloromethane	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
Bromoform	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
Bromomethane	ND	0.20		µg/L	1	9/28/2017 11:42:40 AM	W45980
2-Butanone	ND	1.0		µg/L	1	9/28/2017 11:42:40 AM	W45980
Carbon disulfide	ND	1.0		µg/L	1	9/28/2017 11:42:40 AM	W45980
Carbon tetrachloride	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
Chlorobenzene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
Chloroethane	ND	0.20		µg/L	1	9/28/2017 11:42:40 AM	W45980
Chloroform	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
Chloromethane	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
2-Chlorotoluene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
4-Chlorotoluene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
cis-1,2-DCE	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	9/28/2017 11:42:40 AM	W45980
Dibromochloromethane	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
Dibromomethane	ND	0.20		µg/L	1	9/28/2017 11:42:40 AM	W45980
1,2-Dichlorobenzene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
1,3-Dichlorobenzene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
1,4-Dichlorobenzene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
Dichlorodifluoromethane	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
1,1-Dichloroethane	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
1,1-Dichloroethene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
1,2-Dichloropropane	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
1,3-Dichloropropane	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
2,2-Dichloropropane	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 1 of 4
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709C17

Date Reported: 10/3/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1-170920

Project: JSP Joint Superfund Project Center Mont

Collection Date: 9/20/2017 9:18:00 AM

Lab ID: 1709C17-001

Matrix: AIR

Received Date: 9/21/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
Hexachlorobutadiene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
2-Hexanone	ND	1.0		µg/L	1	9/28/2017 11:42:40 AM	W45980
Isopropylbenzene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
4-Isopropyltoluene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
4-Methyl-2-pentanone	ND	1.0		µg/L	1	9/28/2017 11:42:40 AM	W45980
Methylene chloride	ND	0.30		µg/L	1	9/28/2017 11:42:40 AM	W45980
n-Butylbenzene	ND	0.30		µg/L	1	9/28/2017 11:42:40 AM	W45980
n-Propylbenzene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
sec-Butylbenzene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
Styrene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
tert-Butylbenzene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
trans-1,2-DCE	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
1,1,1-Trichloroethane	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
1,1,2-Trichloroethane	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
Trichloroethene (TCE)	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
Trichlorofluoromethane	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
1,2,3-Trichloropropane	ND	0.20		µg/L	1	9/28/2017 11:42:40 AM	W45980
Vinyl chloride	ND	0.10		µg/L	1	9/28/2017 11:42:40 AM	W45980
Xylenes, Total	ND	0.15		µg/L	1	9/28/2017 11:42:40 AM	W45980
Surr: Dibromofluoromethane	101	70-130		%Rec	1	9/28/2017 11:42:40 AM	W45980
Surr: 1,2-Dichloroethane-d4	88.1	70-130		%Rec	1	9/28/2017 11:42:40 AM	W45980
Surr: Toluene-d8	99.5	70-130		%Rec	1	9/28/2017 11:42:40 AM	W45980
Surr: 4-Bromofluorobenzene	95.5	70-130		%Rec	1	9/28/2017 11:42:40 AM	W45980

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709C17

Date Reported: 10/3/2017

CLIENT: City of Las Cruces

Client Sample ID: AS2-170920

Project: JSP Joint Superfund Project Center Mont

Collection Date: 9/20/2017 9:22:00 AM

Lab ID: 1709C17-002

Matrix: AIR

Received Date: 9/21/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
Toluene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
Ethylbenzene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
Naphthalene	ND	0.20		µg/L	1	9/28/2017 12:40:49 PM	W45980
1-Methylnaphthalene	ND	0.40		µg/L	1	9/28/2017 12:40:49 PM	W45980
2-Methylnaphthalene	ND	0.40		µg/L	1	9/28/2017 12:40:49 PM	W45980
Acetone	ND	1.0		µg/L	1	9/28/2017 12:40:49 PM	W45980
Bromobenzene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
Bromodichloromethane	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
Bromoform	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
Bromomethane	ND	0.20		µg/L	1	9/28/2017 12:40:49 PM	W45980
2-Butanone	ND	1.0		µg/L	1	9/28/2017 12:40:49 PM	W45980
Carbon disulfide	ND	1.0		µg/L	1	9/28/2017 12:40:49 PM	W45980
Carbon tetrachloride	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
Chlorobenzene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
Chloroethane	ND	0.20		µg/L	1	9/28/2017 12:40:49 PM	W45980
Chloroform	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
Chloromethane	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
2-Chlorotoluene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
4-Chlorotoluene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
cis-1,2-DCE	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	9/28/2017 12:40:49 PM	W45980
Dibromochloromethane	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
Dibromomethane	ND	0.20		µg/L	1	9/28/2017 12:40:49 PM	W45980
1,2-Dichlorobenzene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
1,3-Dichlorobenzene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
1,4-Dichlorobenzene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
Dichlorodifluoromethane	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
1,1-Dichloroethane	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
1,1-Dichloroethene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
1,2-Dichloropropane	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
1,3-Dichloropropane	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
2,2-Dichloropropane	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 3 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1709C17

Date Reported: 10/3/2017

CLIENT: City of Las Cruces

Client Sample ID: AS2-170920

Project: JSP Joint Superfund Project Center Mont

Collection Date: 9/20/2017 9:22:00 AM

Lab ID: 1709C17-002

Matrix: AIR

Received Date: 9/21/2017 9:08:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
Hexachlorobutadiene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
2-Hexanone	ND	1.0		µg/L	1	9/28/2017 12:40:49 PM	W45980
Isopropylbenzene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
4-Isopropyltoluene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
4-Methyl-2-pentanone	ND	1.0		µg/L	1	9/28/2017 12:40:49 PM	W45980
Methylene chloride	ND	0.30		µg/L	1	9/28/2017 12:40:49 PM	W45980
n-Butylbenzene	ND	0.30		µg/L	1	9/28/2017 12:40:49 PM	W45980
n-Propylbenzene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
sec-Butylbenzene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
Styrene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
tert-Butylbenzene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
trans-1,2-DCE	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
1,1,1-Trichloroethane	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
1,1,2-Trichloroethane	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
Trichloroethene (TCE)	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
Trichlorofluoromethane	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
1,2,3-Trichloropropane	ND	0.20		µg/L	1	9/28/2017 12:40:49 PM	W45980
Vinyl chloride	ND	0.10		µg/L	1	9/28/2017 12:40:49 PM	W45980
Xylenes, Total	ND	0.15		µg/L	1	9/28/2017 12:40:49 PM	W45980
Surr: Dibromofluoromethane	105	70-130		%Rec	1	9/28/2017 12:40:49 PM	W45980
Surr: 1,2-Dichloroethane-d4	90.5	70-130		%Rec	1	9/28/2017 12:40:49 PM	W45980
Surr: Toluene-d8	99.1	70-130		%Rec	1	9/28/2017 12:40:49 PM	W45980
Surr: 4-Bromofluorobenzene	96.4	70-130		%Rec	1	9/28/2017 12:40:49 PM	W45980

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1709C17

RcptNo: 1

Received By: **Isaiah Ortiz** 9/21/2017 9:08:00 AM

IO

Completed By: **Ashley Gallegos** 9/21/2017 3:23:26 PM

AG

Reviewed By: *[Signature]* 9/22/17

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No
(Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No
(If no, notify customer for authorization.)

of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____	Date: _____
By Whom: _____	Via: <input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding: _____	
Client Instructions: _____	

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	NA	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Lab
 Mailing Address: P.O. Box 20000
Las Cruces, NM 88004
 Phone #: 575-528-3004
 email or Fax#: lguerrero@lasCruces.org (575-528-3004)
 QA/QC Package: Standard Level 4 (Full Validation)
 Accreditation NELAP Other
 EDD (Type) EXCEL

Turn-Around Time: Standard Rush
 Project Name: JSP: Joint Superfund Project Center
Monthly Analysis
 Project #: CIC-JSP "Briggs Walnut"
 Project Manager: Luis bueria
575-528-3009
 Sampler: On Ice Yes No
 Sample Temperature: 19.1 NA

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
9-20-19	0918	Air	AS1-170920	Tedlar Bag None		1709C17 -001
9-20-19	0922	Air	AS2-170920	Tedlar Bag None		-002

Date: 9/20/19 Time: 1500 Relinquished by: [Signature]
 Date: 09/20/2017 Time: 09:08 Received by: I. Ortiz
 Date: 09/20/2017 Time: 09:08 Received by: [Signature]



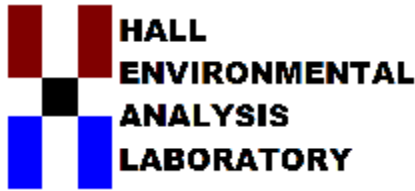
HALL ENVIRONMENTAL ANALYSIS LABORATORY
 www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX + MTBE + TMBs (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA) VOC	8270 (Semi-VOA)	Air Bubbles (Y or N)
									X		
									X		

Remarks: Send Results to:
Luis bueria: lguerrero@lasCruces.org
Joshua Ravenblatt: joshua@lasCruces.org
(send invoice to CC @ Luis Guerra)

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 18, 2017

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: Joint Superfund Project Center Monthly Analysis

OrderNo.: 1710710

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 10/12/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710710

Date Reported: 10/18/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC18_171011

Project: Joint Superfund Project Center Monthly

Collection Date: 10/11/2017 9:04:00 AM

Lab ID: 1710710-001

Matrix: AQUEOUS

Received Date: 10/12/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
Toluene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
Ethylbenzene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
Naphthalene	ND	2.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
1-Methylnaphthalene	ND	4.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
2-Methylnaphthalene	ND	4.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
Acetone	ND	10		µg/L	1	10/13/2017 10:39:00 PM	A46343
Bromobenzene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
Bromodichloromethane	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
Bromoform	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
Bromomethane	ND	3.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
2-Butanone	ND	10		µg/L	1	10/13/2017 10:39:00 PM	A46343
Carbon disulfide	ND	10		µg/L	1	10/13/2017 10:39:00 PM	A46343
Carbon Tetrachloride	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
Chlorobenzene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
Chloroethane	ND	2.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
Chloroform	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
Chloromethane	ND	3.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
2-Chlorotoluene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
4-Chlorotoluene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
cis-1,2-DCE	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
Dibromochloromethane	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
Dibromomethane	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
1,1-Dichloroethane	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
1,1-Dichloroethene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
1,2-Dichloropropane	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
1,3-Dichloropropane	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
2,2-Dichloropropane	ND	2.0		µg/L	1	10/13/2017 10:39:00 PM	A46343

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710710

Date Reported: 10/18/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC18_171011

Project: Joint Superfund Project Center Monthly

Collection Date: 10/11/2017 9:04:00 AM

Lab ID: 1710710-001

Matrix: AQUEOUS

Received Date: 10/12/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
Hexachlorobutadiene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
2-Hexanone	ND	10		µg/L	1	10/13/2017 10:39:00 PM	A46343
Isopropylbenzene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
4-Isopropyltoluene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
4-Methyl-2-pentanone	ND	10		µg/L	1	10/13/2017 10:39:00 PM	A46343
Methylene Chloride	ND	3.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
n-Butylbenzene	ND	3.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
n-Propylbenzene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
sec-Butylbenzene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
Styrene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
tert-Butylbenzene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
Tetrachloroethene (PCE)	12	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
trans-1,2-DCE	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
Trichlorofluoromethane	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
Vinyl chloride	ND	1.0		µg/L	1	10/13/2017 10:39:00 PM	A46343
Xylenes, Total	ND	1.5		µg/L	1	10/13/2017 10:39:00 PM	A46343
Surr: 1,2-Dichloroethane-d4	94.3	70-130		%Rec	1	10/13/2017 10:39:00 PM	A46343
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	10/13/2017 10:39:00 PM	A46343
Surr: Dibromofluoromethane	100	70-130		%Rec	1	10/13/2017 10:39:00 PM	A46343
Surr: Toluene-d8	94.5	70-130		%Rec	1	10/13/2017 10:39:00 PM	A46343

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710710

Date Reported: 10/18/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC27_171011

Project: Joint Superfund Project Center Monthly

Collection Date: 10/11/2017 9:38:00 AM

Lab ID: 1710710-002

Matrix: AQUEOUS

Received Date: 10/12/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
Toluene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
Ethylbenzene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
Naphthalene	ND	2.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
1-Methylnaphthalene	ND	4.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
2-Methylnaphthalene	ND	4.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
Acetone	ND	10		µg/L	1	10/13/2017 11:03:00 PM	A46343
Bromobenzene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
Bromodichloromethane	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
Bromoform	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
Bromomethane	ND	3.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
2-Butanone	ND	10		µg/L	1	10/13/2017 11:03:00 PM	A46343
Carbon disulfide	ND	10		µg/L	1	10/13/2017 11:03:00 PM	A46343
Carbon Tetrachloride	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
Chlorobenzene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
Chloroethane	ND	2.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
Chloroform	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
Chloromethane	ND	3.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
2-Chlorotoluene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
4-Chlorotoluene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
cis-1,2-DCE	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
Dibromochloromethane	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
Dibromomethane	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
1,1-Dichloroethane	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
1,1-Dichloroethene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
1,2-Dichloropropane	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
1,3-Dichloropropane	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
2,2-Dichloropropane	ND	2.0		µg/L	1	10/13/2017 11:03:00 PM	A46343

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710710

Date Reported: 10/18/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC27_171011

Project: Joint Superfund Project Center Monthly

Collection Date: 10/11/2017 9:38:00 AM

Lab ID: 1710710-002

Matrix: AQUEOUS

Received Date: 10/12/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
Hexachlorobutadiene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
2-Hexanone	ND	10		µg/L	1	10/13/2017 11:03:00 PM	A46343
Isopropylbenzene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
4-Isopropyltoluene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
4-Methyl-2-pentanone	ND	10		µg/L	1	10/13/2017 11:03:00 PM	A46343
Methylene Chloride	ND	3.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
n-Butylbenzene	ND	3.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
n-Propylbenzene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
sec-Butylbenzene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
Styrene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
tert-Butylbenzene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
Tetrachloroethene (PCE)	15	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
trans-1,2-DCE	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
Trichlorofluoromethane	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
Vinyl chloride	ND	1.0		µg/L	1	10/13/2017 11:03:00 PM	A46343
Xylenes, Total	ND	1.5		µg/L	1	10/13/2017 11:03:00 PM	A46343
Surr: 1,2-Dichloroethane-d4	95.5	70-130		%Rec	1	10/13/2017 11:03:00 PM	A46343
Surr: 4-Bromofluorobenzene	98.7	70-130		%Rec	1	10/13/2017 11:03:00 PM	A46343
Surr: Dibromofluoromethane	101	70-130		%Rec	1	10/13/2017 11:03:00 PM	A46343
Surr: Toluene-d8	96.5	70-130		%Rec	1	10/13/2017 11:03:00 PM	A46343

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710710

Date Reported: 10/18/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC27_171011 Dup

Project: Joint Superfund Project Center Monthly

Collection Date: 10/11/2017 9:38:00 AM

Lab ID: 1710710-003

Matrix: AQUEOUS

Received Date: 10/12/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
Toluene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
Ethylbenzene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
Naphthalene	ND	2.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
1-Methylnaphthalene	ND	4.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
2-Methylnaphthalene	ND	4.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
Acetone	ND	10		µg/L	1	10/13/2017 11:27:00 PM	A46343
Bromobenzene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
Bromodichloromethane	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
Bromoform	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
Bromomethane	ND	3.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
2-Butanone	ND	10		µg/L	1	10/13/2017 11:27:00 PM	A46343
Carbon disulfide	ND	10		µg/L	1	10/13/2017 11:27:00 PM	A46343
Carbon Tetrachloride	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
Chlorobenzene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
Chloroethane	ND	2.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
Chloroform	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
Chloromethane	ND	3.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
2-Chlorotoluene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
4-Chlorotoluene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
cis-1,2-DCE	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
Dibromochloromethane	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
Dibromomethane	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
1,1-Dichloroethane	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
1,1-Dichloroethene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
1,2-Dichloropropane	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
1,3-Dichloropropane	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
2,2-Dichloropropane	ND	2.0		µg/L	1	10/13/2017 11:27:00 PM	A46343

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710710

Date Reported: 10/18/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC27_171011 Dup

Project: Joint Superfund Project Center Monthly

Collection Date: 10/11/2017 9:38:00 AM

Lab ID: 1710710-003

Matrix: AQUEOUS

Received Date: 10/12/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
Hexachlorobutadiene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
2-Hexanone	ND	10		µg/L	1	10/13/2017 11:27:00 PM	A46343
Isopropylbenzene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
4-Isopropyltoluene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
4-Methyl-2-pentanone	ND	10		µg/L	1	10/13/2017 11:27:00 PM	A46343
Methylene Chloride	ND	3.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
n-Butylbenzene	ND	3.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
n-Propylbenzene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
sec-Butylbenzene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
Styrene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
tert-Butylbenzene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
Tetrachloroethene (PCE)	15	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
trans-1,2-DCE	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
Trichlorofluoromethane	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
Vinyl chloride	ND	1.0		µg/L	1	10/13/2017 11:27:00 PM	A46343
Xylenes, Total	ND	1.5		µg/L	1	10/13/2017 11:27:00 PM	A46343
Surr: 1,2-Dichloroethane-d4	94.0	70-130		%Rec	1	10/13/2017 11:27:00 PM	A46343
Surr: 4-Bromofluorobenzene	96.4	70-130		%Rec	1	10/13/2017 11:27:00 PM	A46343
Surr: Dibromofluoromethane	99.7	70-130		%Rec	1	10/13/2017 11:27:00 PM	A46343
Surr: Toluene-d8	94.8	70-130		%Rec	1	10/13/2017 11:27:00 PM	A46343

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710710

Date Reported: 10/18/2017

CLIENT: City of Las Cruces

Client Sample ID: CLCIS1_171011

Project: Joint Superfund Project Center Monthly

Collection Date: 10/11/2017 9:08:00 AM

Lab ID: 1710710-004

Matrix: AQUEOUS

Received Date: 10/12/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
Toluene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
Ethylbenzene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
Naphthalene	ND	2.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
1-Methylnaphthalene	ND	4.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
2-Methylnaphthalene	ND	4.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
Acetone	ND	10		µg/L	1	10/13/2017 11:51:00 PM	A46343
Bromobenzene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
Bromodichloromethane	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
Bromoform	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
Bromomethane	ND	3.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
2-Butanone	ND	10		µg/L	1	10/13/2017 11:51:00 PM	A46343
Carbon disulfide	ND	10		µg/L	1	10/13/2017 11:51:00 PM	A46343
Carbon Tetrachloride	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
Chlorobenzene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
Chloroethane	ND	2.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
Chloroform	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
Chloromethane	ND	3.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
2-Chlorotoluene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
4-Chlorotoluene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
cis-1,2-DCE	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
Dibromochloromethane	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
Dibromomethane	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
1,1-Dichloroethane	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
1,1-Dichloroethene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
1,2-Dichloropropane	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
1,3-Dichloropropane	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
2,2-Dichloropropane	ND	2.0		µg/L	1	10/13/2017 11:51:00 PM	A46343

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710710

Date Reported: 10/18/2017

CLIENT: City of Las Cruces

Client Sample ID: CLCIS1_171011

Project: Joint Superfund Project Center Monthly

Collection Date: 10/11/2017 9:08:00 AM

Lab ID: 1710710-004

Matrix: AQUEOUS

Received Date: 10/12/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
Hexachlorobutadiene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
2-Hexanone	ND	10		µg/L	1	10/13/2017 11:51:00 PM	A46343
Isopropylbenzene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
4-Isopropyltoluene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
4-Methyl-2-pentanone	ND	10		µg/L	1	10/13/2017 11:51:00 PM	A46343
Methylene Chloride	ND	3.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
n-Butylbenzene	ND	3.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
n-Propylbenzene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
sec-Butylbenzene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
Styrene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
tert-Butylbenzene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
Tetrachloroethene (PCE)	11	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
trans-1,2-DCE	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
Trichlorofluoromethane	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
Vinyl chloride	ND	1.0		µg/L	1	10/13/2017 11:51:00 PM	A46343
Xylenes, Total	ND	1.5		µg/L	1	10/13/2017 11:51:00 PM	A46343
Surr: 1,2-Dichloroethane-d4	97.1	70-130		%Rec	1	10/13/2017 11:51:00 PM	A46343
Surr: 4-Bromofluorobenzene	97.7	70-130		%Rec	1	10/13/2017 11:51:00 PM	A46343
Surr: Dibromofluoromethane	104	70-130		%Rec	1	10/13/2017 11:51:00 PM	A46343
Surr: Toluene-d8	95.2	70-130		%Rec	1	10/13/2017 11:51:00 PM	A46343

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710710

Date Reported: 10/18/2017

CLIENT: City of Las Cruces

Client Sample ID: CLCC1_171011

Project: Joint Superfund Project Center Monthly

Collection Date: 10/11/2017 9:11:00 AM

Lab ID: 1710710-005

Matrix: AQUEOUS

Received Date: 10/12/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
Toluene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
Ethylbenzene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
Naphthalene	ND	2.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
1-Methylnaphthalene	ND	4.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
2-Methylnaphthalene	ND	4.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
Acetone	ND	10		µg/L	1	10/14/2017 12:15:00 AM	A46343
Bromobenzene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
Bromodichloromethane	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
Bromoform	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
Bromomethane	ND	3.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
2-Butanone	ND	10		µg/L	1	10/14/2017 12:15:00 AM	A46343
Carbon disulfide	ND	10		µg/L	1	10/14/2017 12:15:00 AM	A46343
Carbon Tetrachloride	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
Chlorobenzene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
Chloroethane	ND	2.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
Chloroform	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
Chloromethane	ND	3.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
2-Chlorotoluene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
4-Chlorotoluene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
cis-1,2-DCE	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
Dibromochloromethane	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
Dibromomethane	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
1,1-Dichloroethane	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
1,1-Dichloroethene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
1,2-Dichloropropane	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
1,3-Dichloropropane	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
2,2-Dichloropropane	ND	2.0		µg/L	1	10/14/2017 12:15:00 AM	A46343

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710710

Date Reported: 10/18/2017

CLIENT: City of Las Cruces

Client Sample ID: CLCC1_171011

Project: Joint Superfund Project Center Monthly

Collection Date: 10/11/2017 9:11:00 AM

Lab ID: 1710710-005

Matrix: AQUEOUS

Received Date: 10/12/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
Hexachlorobutadiene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
2-Hexanone	ND	10		µg/L	1	10/14/2017 12:15:00 AM	A46343
Isopropylbenzene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
4-Isopropyltoluene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
4-Methyl-2-pentanone	ND	10		µg/L	1	10/14/2017 12:15:00 AM	A46343
Methylene Chloride	ND	3.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
n-Butylbenzene	ND	3.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
n-Propylbenzene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
sec-Butylbenzene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
Styrene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
tert-Butylbenzene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
trans-1,2-DCE	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
Trichlorofluoromethane	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
Vinyl chloride	ND	1.0		µg/L	1	10/14/2017 12:15:00 AM	A46343
Xylenes, Total	ND	1.5		µg/L	1	10/14/2017 12:15:00 AM	A46343
Surr: 1,2-Dichloroethane-d4	95.4	70-130		%Rec	1	10/14/2017 12:15:00 AM	A46343
Surr: 4-Bromofluorobenzene	96.6	70-130		%Rec	1	10/14/2017 12:15:00 AM	A46343
Surr: Dibromofluoromethane	100	70-130		%Rec	1	10/14/2017 12:15:00 AM	A46343
Surr: Toluene-d8	96.1	70-130		%Rec	1	10/14/2017 12:15:00 AM	A46343

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710710

Date Reported: 10/18/2017

CLIENT: City of Las Cruces

Client Sample ID: CLCC2_171011

Project: Joint Superfund Project Center Monthly

Collection Date: 10/11/2017 9:14:00 AM

Lab ID: 1710710-006

Matrix: AQUEOUS

Received Date: 10/12/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
Toluene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
Ethylbenzene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
Naphthalene	ND	2.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
1-Methylnaphthalene	ND	4.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
2-Methylnaphthalene	ND	4.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
Acetone	ND	10		µg/L	1	10/14/2017 12:39:00 AM	A46343
Bromobenzene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
Bromodichloromethane	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
Bromoform	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
Bromomethane	ND	3.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
2-Butanone	ND	10		µg/L	1	10/14/2017 12:39:00 AM	A46343
Carbon disulfide	ND	10		µg/L	1	10/14/2017 12:39:00 AM	A46343
Carbon Tetrachloride	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
Chlorobenzene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
Chloroethane	ND	2.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
Chloroform	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
Chloromethane	ND	3.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
2-Chlorotoluene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
4-Chlorotoluene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
cis-1,2-DCE	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
Dibromochloromethane	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
Dibromomethane	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
1,1-Dichloroethane	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
1,1-Dichloroethene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
1,2-Dichloropropane	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
1,3-Dichloropropane	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
2,2-Dichloropropane	ND	2.0		µg/L	1	10/14/2017 12:39:00 AM	A46343

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710710

Date Reported: 10/18/2017

CLIENT: City of Las Cruces

Client Sample ID: CLCC2_171011

Project: Joint Superfund Project Center Monthly

Collection Date: 10/11/2017 9:14:00 AM

Lab ID: 1710710-006

Matrix: AQUEOUS

Received Date: 10/12/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
Hexachlorobutadiene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
2-Hexanone	ND	10		µg/L	1	10/14/2017 12:39:00 AM	A46343
Isopropylbenzene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
4-Isopropyltoluene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
4-Methyl-2-pentanone	ND	10		µg/L	1	10/14/2017 12:39:00 AM	A46343
Methylene Chloride	ND	3.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
n-Butylbenzene	ND	3.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
n-Propylbenzene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
sec-Butylbenzene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
Styrene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
tert-Butylbenzene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
trans-1,2-DCE	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
Trichlorofluoromethane	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
Vinyl chloride	ND	1.0		µg/L	1	10/14/2017 12:39:00 AM	A46343
Xylenes, Total	ND	1.5		µg/L	1	10/14/2017 12:39:00 AM	A46343
Surr: 1,2-Dichloroethane-d4	96.5	70-130		%Rec	1	10/14/2017 12:39:00 AM	A46343
Surr: 4-Bromofluorobenzene	94.1	70-130		%Rec	1	10/14/2017 12:39:00 AM	A46343
Surr: Dibromofluoromethane	101	70-130		%Rec	1	10/14/2017 12:39:00 AM	A46343
Surr: Toluene-d8	94.3	70-130		%Rec	1	10/14/2017 12:39:00 AM	A46343

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710710

Date Reported: 10/18/2017

CLIENT: City of Las Cruces

Client Sample ID: CLCES1_171011

Project: Joint Superfund Project Center Monthly

Collection Date: 10/11/2017 9:16:00 AM

Lab ID: 1710710-007

Matrix: AQUEOUS

Received Date: 10/12/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
Toluene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
Ethylbenzene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
Naphthalene	ND	2.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
1-Methylnaphthalene	ND	4.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
2-Methylnaphthalene	ND	4.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
Acetone	ND	10		µg/L	1	10/14/2017 1:02:00 AM	A46343
Bromobenzene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
Bromodichloromethane	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
Bromoform	5.7	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
Bromomethane	ND	3.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
2-Butanone	ND	10		µg/L	1	10/14/2017 1:02:00 AM	A46343
Carbon disulfide	ND	10		µg/L	1	10/14/2017 1:02:00 AM	A46343
Carbon Tetrachloride	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
Chlorobenzene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
Chloroethane	ND	2.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
Chloroform	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
Chloromethane	ND	3.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
2-Chlorotoluene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
4-Chlorotoluene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
cis-1,2-DCE	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
Dibromochloromethane	1.8	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
Dibromomethane	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
1,1-Dichloroethane	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
1,1-Dichloroethene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
1,2-Dichloropropane	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
1,3-Dichloropropane	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
2,2-Dichloropropane	ND	2.0		µg/L	1	10/14/2017 1:02:00 AM	A46343

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710710

Date Reported: 10/18/2017

CLIENT: City of Las Cruces

Client Sample ID: CLCES1_171011

Project: Joint Superfund Project Center Monthly

Collection Date: 10/11/2017 9:16:00 AM

Lab ID: 1710710-007

Matrix: AQUEOUS

Received Date: 10/12/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
Hexachlorobutadiene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
2-Hexanone	ND	10		µg/L	1	10/14/2017 1:02:00 AM	A46343
Isopropylbenzene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
4-Isopropyltoluene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
4-Methyl-2-pentanone	ND	10		µg/L	1	10/14/2017 1:02:00 AM	A46343
Methylene Chloride	ND	3.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
n-Butylbenzene	ND	3.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
n-Propylbenzene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
sec-Butylbenzene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
Styrene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
tert-Butylbenzene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
trans-1,2-DCE	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
Trichlorofluoromethane	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
Vinyl chloride	ND	1.0		µg/L	1	10/14/2017 1:02:00 AM	A46343
Xylenes, Total	ND	1.5		µg/L	1	10/14/2017 1:02:00 AM	A46343
Surr: 1,2-Dichloroethane-d4	94.1	70-130		%Rec	1	10/14/2017 1:02:00 AM	A46343
Surr: 4-Bromofluorobenzene	95.8	70-130		%Rec	1	10/14/2017 1:02:00 AM	A46343
Surr: Dibromofluoromethane	98.1	70-130		%Rec	1	10/14/2017 1:02:00 AM	A46343
Surr: Toluene-d8	95.0	70-130		%Rec	1	10/14/2017 1:02:00 AM	A46343

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1710710

18-Oct-17

Client: City of Las Cruces
Project: Joint Superfund Project Center Monthly Analysis

Sample ID 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: A46343		RunNo: 46343							
Prep Date:	Analysis Date: 10/13/2017		SeqNo: 1476126		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	20	1.0	20.00	0	99.2	70	130			
Chlorobenzene	21	1.0	20.00	0	103	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	113	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.2	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.7	70	130			
Surr: Dibromofluoromethane	10		10.00		99.9	70	130			
Surr: Toluene-d8	9.6		10.00		96.2	70	130			

Sample ID rb2	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: A46343		RunNo: 46343							
Prep Date:	Analysis Date: 10/13/2017		SeqNo: 1476127		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1710710

18-Oct-17

Client: City of Las Cruces
Project: Joint Superfund Project Center Monthly Analysis

Sample ID: rb2	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: A46343	RunNo: 46343
Prep Date:	Analysis Date: 10/13/2017	SeqNo: 1476127 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1710710

18-Oct-17

Client: City of Las Cruces
Project: Joint Superfund Project Center Monthly Analysis

Sample ID: rb2	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: A46343		RunNo: 46343							
Prep Date:	Analysis Date: 10/13/2017		SeqNo: 1476127		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.9	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.8	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.5		10.00		94.8	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1710710

RcptNo: 1

Received By: **Richie Eriacho** 10/12/2017 8:50:00 AM

Completed By: **Ashley Gallegos** 10/12/2017 1:22:03 PM

Reviewed By: *[Signature]* 10/13/17

[Handwritten initials]

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0° C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.7	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces
 Water Quality Laboratory
 Mailing Address: P.O. Box 26000
Las Cruces, N.M. 88004
 Phone #: 575-528-3404
 email or Fax#: lguerra@las-cruces.org (575) 528-3400
 QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation
 NELAP Other _____
 EDD (Type) _____

Turn-Around Time:
 Standard Rush
 Project Name:
Joint Superfund Project Center
Monthly Analyses
 Project #:
CRC JSP: Griggs Walnut
 Project Manager:
Luis Guerra
575-528-3409
 Sampler: Luis Guerra
 On Ice: Yes No
 Sample Temperature: 7



HALL ENVIRONMENTAL ANALYSIS LABORATORY
 www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

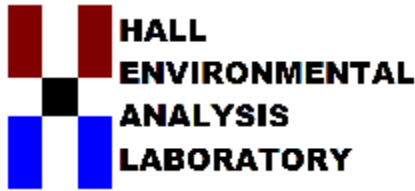
Analysis Request

BTEX + MTBE + TMBs (8021)									
BTEX + MTBE + TPH (Gas only)									
TPH 8015B (GRO / DRO / MRO)									
TPH (Method 418.1)									
EDB (Method 504.1)									
PAH's (8310 or 8270 SIMS)									
RCRA 8 Metals									
Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)									
8081 Pesticides / 8082 PCB's									
8260B (VOA)									
8270 (Semi-VOA) VOC									

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
10-11-17	0904	Drinking water	CRC 17-171011	3-40ml Vials	HgCl ₂	1710110-001
	0938	Drinking water	CRC 27-171011			-002
	0938	Drinking water	CRC 27-171011 Dup			-003
	0908	Drinking water	CRC 151-171011			-004
	0911	Drinking water	CRC C1-171011			-005
	0914	Drinking water	CRC C2-171011			-006
10-11-17	0916	Drinking water	CRC ES1-171011	3-40ml Vials	HgCl ₂	-007

Date: 10-11-17 Time: 1500 Relinquished by: [Signature]
 Date: 10-12-17 Time: 0850 Received by: [Signature]
 Remarks: Sent Results to:
Luis Guerra, lguerra@las-cruces.org
Joshua Rosenblatt, rosenblatt@las-cruces.org
Sad invoice to Ole of Luis Guerra

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly noted on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 23, 2017

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: Joint Superfund Project Monthly Analysis

OrderNo.: 1710711

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 2 sample(s) on 10/12/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710711

Date Reported: 10/23/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1-171011

Project: Joint Superfund Project Monthly Analysis

Collection Date: 10/11/2017 9:23:00 AM

Lab ID: 1710711-001

Matrix: AIR

Received Date: 10/12/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
Toluene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
Ethylbenzene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
Naphthalene	ND	0.20		µg/L	1	10/20/2017 12:04:00 PM	A46526
1-Methylnaphthalene	ND	0.40		µg/L	1	10/20/2017 12:04:00 PM	A46526
2-Methylnaphthalene	ND	0.40		µg/L	1	10/20/2017 12:04:00 PM	A46526
Acetone	ND	1.0		µg/L	1	10/20/2017 12:04:00 PM	A46526
Bromobenzene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
Bromodichloromethane	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
Bromoform	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
Bromomethane	ND	0.20		µg/L	1	10/20/2017 12:04:00 PM	A46526
2-Butanone	ND	1.0		µg/L	1	10/20/2017 12:04:00 PM	A46526
Carbon disulfide	ND	1.0		µg/L	1	10/20/2017 12:04:00 PM	A46526
Carbon tetrachloride	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
Chlorobenzene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
Chloroethane	ND	0.20		µg/L	1	10/20/2017 12:04:00 PM	A46526
Chloroform	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
Chloromethane	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
2-Chlorotoluene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
4-Chlorotoluene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
cis-1,2-DCE	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	10/20/2017 12:04:00 PM	A46526
Dibromochloromethane	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
Dibromomethane	ND	0.20		µg/L	1	10/20/2017 12:04:00 PM	A46526
1,2-Dichlorobenzene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
1,3-Dichlorobenzene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
1,4-Dichlorobenzene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
Dichlorodifluoromethane	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
1,1-Dichloroethane	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
1,1-Dichloroethene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
1,2-Dichloropropane	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
1,3-Dichloropropane	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
2,2-Dichloropropane	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 1 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710711

Date Reported: 10/23/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1-171011

Project: Joint Superfund Project Monthly Analysis

Collection Date: 10/11/2017 9:23:00 AM

Lab ID: 1710711-001

Matrix: AIR

Received Date: 10/12/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
Hexachlorobutadiene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
2-Hexanone	ND	1.0		µg/L	1	10/20/2017 12:04:00 PM	A46526
Isopropylbenzene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
4-Isopropyltoluene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
4-Methyl-2-pentanone	ND	1.0		µg/L	1	10/20/2017 12:04:00 PM	A46526
Methylene chloride	ND	0.30		µg/L	1	10/20/2017 12:04:00 PM	A46526
n-Butylbenzene	ND	0.30		µg/L	1	10/20/2017 12:04:00 PM	A46526
n-Propylbenzene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
sec-Butylbenzene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
Styrene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
tert-Butylbenzene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
trans-1,2-DCE	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
1,1,1-Trichloroethane	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
1,1,2-Trichloroethane	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
Trichloroethene (TCE)	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
Trichlorofluoromethane	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
1,2,3-Trichloropropane	ND	0.20		µg/L	1	10/20/2017 12:04:00 PM	A46526
Vinyl chloride	ND	0.10		µg/L	1	10/20/2017 12:04:00 PM	A46526
Xylenes, Total	ND	0.15		µg/L	1	10/20/2017 12:04:00 PM	A46526
Surr: Dibromofluoromethane	98.8	70-130		%Rec	1	10/20/2017 12:04:00 PM	A46526
Surr: 1,2-Dichloroethane-d4	92.1	70-130		%Rec	1	10/20/2017 12:04:00 PM	A46526
Surr: Toluene-d8	101	70-130		%Rec	1	10/20/2017 12:04:00 PM	A46526
Surr: 4-Bromofluorobenzene	95.4	70-130		%Rec	1	10/20/2017 12:04:00 PM	A46526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710711

Date Reported: 10/23/2017

CLIENT: City of Las Cruces

Client Sample ID: AS2-171011

Project: Joint Superfund Project Monthly Analysis

Collection Date: 10/11/2017 9:26:00 AM

Lab ID: 1710711-002

Matrix: AIR

Received Date: 10/12/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
Toluene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
Ethylbenzene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
Naphthalene	ND	0.20		µg/L	1	10/20/2017 12:52:00 PM	A46526
1-Methylnaphthalene	ND	0.40		µg/L	1	10/20/2017 12:52:00 PM	A46526
2-Methylnaphthalene	ND	0.40		µg/L	1	10/20/2017 12:52:00 PM	A46526
Acetone	ND	1.0		µg/L	1	10/20/2017 12:52:00 PM	A46526
Bromobenzene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
Bromodichloromethane	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
Bromoform	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
Bromomethane	ND	0.20		µg/L	1	10/20/2017 12:52:00 PM	A46526
2-Butanone	ND	1.0		µg/L	1	10/20/2017 12:52:00 PM	A46526
Carbon disulfide	ND	1.0		µg/L	1	10/20/2017 12:52:00 PM	A46526
Carbon tetrachloride	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
Chlorobenzene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
Chloroethane	ND	0.20		µg/L	1	10/20/2017 12:52:00 PM	A46526
Chloroform	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
Chloromethane	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
2-Chlorotoluene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
4-Chlorotoluene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
cis-1,2-DCE	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	10/20/2017 12:52:00 PM	A46526
Dibromochloromethane	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
Dibromomethane	ND	0.20		µg/L	1	10/20/2017 12:52:00 PM	A46526
1,2-Dichlorobenzene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
1,3-Dichlorobenzene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
1,4-Dichlorobenzene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
Dichlorodifluoromethane	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
1,1-Dichloroethane	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
1,1-Dichloroethene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
1,2-Dichloropropane	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
1,3-Dichloropropane	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
2,2-Dichloropropane	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 3 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1710711

Date Reported: 10/23/2017

CLIENT: City of Las Cruces

Client Sample ID: AS2-171011

Project: Joint Superfund Project Monthly Analysis

Collection Date: 10/11/2017 9:26:00 AM

Lab ID: 1710711-002

Matrix: AIR

Received Date: 10/12/2017 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
Hexachlorobutadiene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
2-Hexanone	ND	1.0		µg/L	1	10/20/2017 12:52:00 PM	A46526
Isopropylbenzene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
4-Isopropyltoluene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
4-Methyl-2-pentanone	ND	1.0		µg/L	1	10/20/2017 12:52:00 PM	A46526
Methylene chloride	ND	0.30		µg/L	1	10/20/2017 12:52:00 PM	A46526
n-Butylbenzene	ND	0.30		µg/L	1	10/20/2017 12:52:00 PM	A46526
n-Propylbenzene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
sec-Butylbenzene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
Styrene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
tert-Butylbenzene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
trans-1,2-DCE	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
1,1,1-Trichloroethane	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
1,1,2-Trichloroethane	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
Trichloroethene (TCE)	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
Trichlorofluoromethane	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
1,2,3-Trichloropropane	ND	0.20		µg/L	1	10/20/2017 12:52:00 PM	A46526
Vinyl chloride	ND	0.10		µg/L	1	10/20/2017 12:52:00 PM	A46526
Xylenes, Total	ND	0.15		µg/L	1	10/20/2017 12:52:00 PM	A46526
Surr: Dibromofluoromethane	97.1	70-130		%Rec	1	10/20/2017 12:52:00 PM	A46526
Surr: 1,2-Dichloroethane-d4	92.3	70-130		%Rec	1	10/20/2017 12:52:00 PM	A46526
Surr: Toluene-d8	100	70-130		%Rec	1	10/20/2017 12:52:00 PM	A46526
Surr: 4-Bromofluorobenzene	93.3	70-130		%Rec	1	10/20/2017 12:52:00 PM	A46526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Client Name: City of Las Cruces Work Order Number: 1710711 RcptNo: 1

Received By: Richie Eriacho 10/12/2017 8:50:00 AM

Completed By: Ashley Gallegos 10/12/2017 1:43:27 PM

Reviewed By: *[Signature]* 10/13/17

[Handwritten initials]

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____ (<2 or >12 unless noted) Adjusted? _____ Checked by: _____

Special Handling (if applicable)

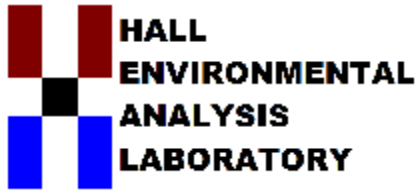
- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____	Date: _____
By Whom: _____	Via: <input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding: _____	
Client Instructions: _____	

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	NA	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

November 22, 2017

Luis Guerra
City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3604
FAX

RE: JSP Joint Superfund Project Center Monthly Analysis

OrderNo.: 1711922

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 11/17/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711922

Date Reported: 11/22/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-171116

Project: JSP Joint Superfund Project Center Mont

Collection Date: 11/16/2017 9:07:00 AM

Lab ID: 1711922-001

Matrix: DRINKING W

Received Date: 11/17/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
Toluene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
Ethylbenzene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
Naphthalene	ND	2.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
1-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
2-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
Acetone	ND	10		µg/L	1	11/21/2017 7:39:00 AM	B47249
Bromobenzene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
Bromodichloromethane	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
Bromoform	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
Bromomethane	ND	3.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
2-Butanone	ND	10		µg/L	1	11/21/2017 7:39:00 AM	B47249
Carbon disulfide	ND	10		µg/L	1	11/21/2017 7:39:00 AM	B47249
Carbon Tetrachloride	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
Chlorobenzene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
Chloroethane	ND	2.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
Chloroform	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
Chloromethane	ND	3.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
2-Chlorotoluene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
4-Chlorotoluene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
cis-1,2-DCE	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
Dibromochloromethane	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
Dibromomethane	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
1,1-Dichloroethane	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
1,1-Dichloroethene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
1,2-Dichloropropane	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
1,3-Dichloropropane	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
2,2-Dichloropropane	ND	2.0		µg/L	1	11/21/2017 7:39:00 AM	B47249

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711922

Date Reported: 11/22/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-171116

Project: JSP Joint Superfund Project Center Mont

Collection Date: 11/16/2017 9:07:00 AM

Lab ID: 1711922-001

Matrix: DRINKING W

Received Date: 11/17/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
Hexachlorobutadiene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
2-Hexanone	ND	10		µg/L	1	11/21/2017 7:39:00 AM	B47249
Isopropylbenzene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
4-Isopropyltoluene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
4-Methyl-2-pentanone	ND	10		µg/L	1	11/21/2017 7:39:00 AM	B47249
Methylene Chloride	ND	3.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
n-Butylbenzene	ND	3.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
n-Propylbenzene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
sec-Butylbenzene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
Styrene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
tert-Butylbenzene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
Tetrachloroethene (PCE)	11	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
trans-1,2-DCE	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
Trichlorofluoromethane	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
Vinyl chloride	ND	1.0		µg/L	1	11/21/2017 7:39:00 AM	B47249
Xylenes, Total	ND	1.5		µg/L	1	11/21/2017 7:39:00 AM	B47249
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	11/21/2017 7:39:00 AM	B47249
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	11/21/2017 7:39:00 AM	B47249
Surr: Dibromofluoromethane	106	70-130		%Rec	1	11/21/2017 7:39:00 AM	B47249
Surr: Toluene-d8	98.7	70-130		%Rec	1	11/21/2017 7:39:00 AM	B47249

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711922

Date Reported: 11/22/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-171116

Project: JSP Joint Superfund Project Center Mont

Collection Date: 11/16/2017 10:06:00 AM

Lab ID: 1711922-002

Matrix: DRINKING W

Received Date: 11/17/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
Toluene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
Ethylbenzene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
Naphthalene	ND	2.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
1-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
2-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
Acetone	ND	10		µg/L	1	11/21/2017 8:02:00 AM	B47249
Bromobenzene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
Bromodichloromethane	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
Bromoform	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
Bromomethane	ND	3.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
2-Butanone	ND	10		µg/L	1	11/21/2017 8:02:00 AM	B47249
Carbon disulfide	ND	10		µg/L	1	11/21/2017 8:02:00 AM	B47249
Carbon Tetrachloride	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
Chlorobenzene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
Chloroethane	ND	2.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
Chloroform	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
Chloromethane	ND	3.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
2-Chlorotoluene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
4-Chlorotoluene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
cis-1,2-DCE	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
Dibromochloromethane	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
Dibromomethane	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
1,1-Dichloroethane	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
1,1-Dichloroethene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
1,2-Dichloropropane	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
1,3-Dichloropropane	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
2,2-Dichloropropane	ND	2.0		µg/L	1	11/21/2017 8:02:00 AM	B47249

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711922

Date Reported: 11/22/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-171116

Project: JSP Joint Superfund Project Center Mont

Collection Date: 11/16/2017 10:06:00 AM

Lab ID: 1711922-002

Matrix: DRINKING W

Received Date: 11/17/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
Hexachlorobutadiene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
2-Hexanone	ND	10		µg/L	1	11/21/2017 8:02:00 AM	B47249
Isopropylbenzene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
4-Isopropyltoluene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
4-Methyl-2-pentanone	ND	10		µg/L	1	11/21/2017 8:02:00 AM	B47249
Methylene Chloride	ND	3.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
n-Butylbenzene	ND	3.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
n-Propylbenzene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
sec-Butylbenzene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
Styrene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
tert-Butylbenzene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
Tetrachloroethene (PCE)	14	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
trans-1,2-DCE	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
Trichlorofluoromethane	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
Vinyl chloride	ND	1.0		µg/L	1	11/21/2017 8:02:00 AM	B47249
Xylenes, Total	ND	1.5		µg/L	1	11/21/2017 8:02:00 AM	B47249
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	11/21/2017 8:02:00 AM	B47249
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	11/21/2017 8:02:00 AM	B47249
Surr: Dibromofluoromethane	108	70-130		%Rec	1	11/21/2017 8:02:00 AM	B47249
Surr: Toluene-d8	97.9	70-130		%Rec	1	11/21/2017 8:02:00 AM	B47249

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711922

Date Reported: 11/22/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-171116

Project: JSP Joint Superfund Project Center Mont

Collection Date: 11/16/2017 9:40:00 AM

Lab ID: 1711922-003

Matrix: DRINKING W

Received Date: 11/17/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
Toluene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
Ethylbenzene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
Naphthalene	ND	2.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
1-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
2-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
Acetone	ND	10		µg/L	1	11/21/2017 8:26:00 AM	B47249
Bromobenzene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
Bromodichloromethane	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
Bromoform	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
Bromomethane	ND	3.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
2-Butanone	ND	10		µg/L	1	11/21/2017 8:26:00 AM	B47249
Carbon disulfide	ND	10		µg/L	1	11/21/2017 8:26:00 AM	B47249
Carbon Tetrachloride	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
Chlorobenzene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
Chloroethane	ND	2.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
Chloroform	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
Chloromethane	ND	3.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
2-Chlorotoluene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
4-Chlorotoluene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
cis-1,2-DCE	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
Dibromochloromethane	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
Dibromomethane	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
1,1-Dichloroethane	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
1,1-Dichloroethene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
1,2-Dichloropropane	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
1,3-Dichloropropane	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
2,2-Dichloropropane	ND	2.0		µg/L	1	11/21/2017 8:26:00 AM	B47249

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711922

Date Reported: 11/22/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-171116

Project: JSP Joint Superfund Project Center Mont

Collection Date: 11/16/2017 9:40:00 AM

Lab ID: 1711922-003

Matrix: DRINKING W

Received Date: 11/17/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
Hexachlorobutadiene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
2-Hexanone	ND	10		µg/L	1	11/21/2017 8:26:00 AM	B47249
Isopropylbenzene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
4-Isopropyltoluene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
4-Methyl-2-pentanone	ND	10		µg/L	1	11/21/2017 8:26:00 AM	B47249
Methylene Chloride	ND	3.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
n-Butylbenzene	ND	3.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
n-Propylbenzene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
sec-Butylbenzene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
Styrene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
tert-Butylbenzene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
Tetrachloroethene (PCE)	9.6	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
trans-1,2-DCE	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
Trichlorofluoromethane	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
Vinyl chloride	ND	1.0		µg/L	1	11/21/2017 8:26:00 AM	B47249
Xylenes, Total	ND	1.5		µg/L	1	11/21/2017 8:26:00 AM	B47249
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	11/21/2017 8:26:00 AM	B47249
Surr: 4-Bromofluorobenzene	99.5	70-130		%Rec	1	11/21/2017 8:26:00 AM	B47249
Surr: Dibromofluoromethane	108	70-130		%Rec	1	11/21/2017 8:26:00 AM	B47249
Surr: Toluene-d8	97.3	70-130		%Rec	1	11/21/2017 8:26:00 AM	B47249

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711922

Date Reported: 11/22/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-171116

Project: JSP Joint Superfund Project Center Mont

Collection Date: 11/16/2017 9:43:00 AM

Lab ID: 1711922-004

Matrix: DRINKING W

Received Date: 11/17/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
Toluene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
Ethylbenzene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
Naphthalene	ND	2.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
1-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
2-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
Acetone	ND	10		µg/L	1	11/21/2017 8:50:00 AM	B47249
Bromobenzene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
Bromodichloromethane	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
Bromoform	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
Bromomethane	ND	3.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
2-Butanone	ND	10		µg/L	1	11/21/2017 8:50:00 AM	B47249
Carbon disulfide	ND	10		µg/L	1	11/21/2017 8:50:00 AM	B47249
Carbon Tetrachloride	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
Chlorobenzene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
Chloroethane	ND	2.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
Chloroform	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
Chloromethane	ND	3.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
2-Chlorotoluene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
4-Chlorotoluene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
cis-1,2-DCE	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
Dibromochloromethane	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
Dibromomethane	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
1,1-Dichloroethane	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
1,1-Dichloroethene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
1,2-Dichloropropane	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
1,3-Dichloropropane	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
2,2-Dichloropropane	ND	2.0		µg/L	1	11/21/2017 8:50:00 AM	B47249

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-171116

Project: JSP Joint Superfund Project Center Mont

Collection Date: 11/16/2017 9:43:00 AM

Lab ID: 1711922-004

Matrix: DRINKING W

Received Date: 11/17/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
Hexachlorobutadiene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
2-Hexanone	ND	10		µg/L	1	11/21/2017 8:50:00 AM	B47249
Isopropylbenzene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
4-Isopropyltoluene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
4-Methyl-2-pentanone	ND	10		µg/L	1	11/21/2017 8:50:00 AM	B47249
Methylene Chloride	ND	3.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
n-Butylbenzene	ND	3.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
n-Propylbenzene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
sec-Butylbenzene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
Styrene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
tert-Butylbenzene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
trans-1,2-DCE	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
Trichlorofluoromethane	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
Vinyl chloride	ND	1.0		µg/L	1	11/21/2017 8:50:00 AM	B47249
Xylenes, Total	ND	1.5		µg/L	1	11/21/2017 8:50:00 AM	B47249
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	11/21/2017 8:50:00 AM	B47249
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	11/21/2017 8:50:00 AM	B47249
Surr: Dibromofluoromethane	107	70-130		%Rec	1	11/21/2017 8:50:00 AM	B47249
Surr: Toluene-d8	97.7	70-130		%Rec	1	11/21/2017 8:50:00 AM	B47249

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711922

Date Reported: 11/22/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-171116 Dupe

Project: JSP Joint Superfund Project Center Mont

Collection Date: 11/16/2017 9:44:00 AM

Lab ID: 1711922-005

Matrix: DRINKING W

Received Date: 11/17/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
Toluene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
Ethylbenzene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
Naphthalene	ND	2.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
1-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
2-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
Acetone	ND	10		µg/L	1	11/21/2017 9:13:00 AM	B47249
Bromobenzene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
Bromodichloromethane	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
Bromoform	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
Bromomethane	ND	3.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
2-Butanone	ND	10		µg/L	1	11/21/2017 9:13:00 AM	B47249
Carbon disulfide	ND	10		µg/L	1	11/21/2017 9:13:00 AM	B47249
Carbon Tetrachloride	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
Chlorobenzene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
Chloroethane	ND	2.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
Chloroform	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
Chloromethane	ND	3.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
2-Chlorotoluene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
4-Chlorotoluene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
cis-1,2-DCE	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
Dibromochloromethane	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
Dibromomethane	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
1,1-Dichloroethane	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
1,1-Dichloroethene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
1,2-Dichloropropane	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
1,3-Dichloropropane	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
2,2-Dichloropropane	ND	2.0		µg/L	1	11/21/2017 9:13:00 AM	B47249

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-171116 Dupe

Project: JSP Joint Superfund Project Center Mont

Collection Date: 11/16/2017 9:44:00 AM

Lab ID: 1711922-005

Matrix: DRINKING W

Received Date: 11/17/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
Hexachlorobutadiene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
2-Hexanone	ND	10		µg/L	1	11/21/2017 9:13:00 AM	B47249
Isopropylbenzene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
4-Isopropyltoluene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
4-Methyl-2-pentanone	ND	10		µg/L	1	11/21/2017 9:13:00 AM	B47249
Methylene Chloride	ND	3.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
n-Butylbenzene	ND	3.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
n-Propylbenzene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
sec-Butylbenzene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
Styrene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
tert-Butylbenzene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
trans-1,2-DCE	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
Trichlorofluoromethane	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
Vinyl chloride	ND	1.0		µg/L	1	11/21/2017 9:13:00 AM	B47249
Xylenes, Total	ND	1.5		µg/L	1	11/21/2017 9:13:00 AM	B47249
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	11/21/2017 9:13:00 AM	B47249
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	11/21/2017 9:13:00 AM	B47249
Surr: Dibromofluoromethane	107	70-130		%Rec	1	11/21/2017 9:13:00 AM	B47249
Surr: Toluene-d8	97.4	70-130		%Rec	1	11/21/2017 9:13:00 AM	B47249

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-171116

Project: JSP Joint Superfund Project Center Mont

Collection Date: 11/16/2017 9:48:00 AM

Lab ID: 1711922-006

Matrix: DRINKING W

Received Date: 11/17/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
Toluene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
Ethylbenzene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
Naphthalene	ND	2.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
1-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
2-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
Acetone	ND	10		µg/L	1	11/21/2017 9:37:00 AM	B47249
Bromobenzene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
Bromodichloromethane	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
Bromoform	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
Bromomethane	ND	3.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
2-Butanone	ND	10		µg/L	1	11/21/2017 9:37:00 AM	B47249
Carbon disulfide	ND	10		µg/L	1	11/21/2017 9:37:00 AM	B47249
Carbon Tetrachloride	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
Chlorobenzene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
Chloroethane	ND	2.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
Chloroform	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
Chloromethane	ND	3.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
2-Chlorotoluene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
4-Chlorotoluene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
cis-1,2-DCE	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
Dibromochloromethane	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
Dibromomethane	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
1,1-Dichloroethane	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
1,1-Dichloroethene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
1,2-Dichloropropane	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
1,3-Dichloropropane	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
2,2-Dichloropropane	ND	2.0		µg/L	1	11/21/2017 9:37:00 AM	B47249

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711922

Date Reported: 11/22/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-171116

Project: JSP Joint Superfund Project Center Mont

Collection Date: 11/16/2017 9:48:00 AM

Lab ID: 1711922-006

Matrix: DRINKING W

Received Date: 11/17/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
Hexachlorobutadiene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
2-Hexanone	ND	10		µg/L	1	11/21/2017 9:37:00 AM	B47249
Isopropylbenzene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
4-Isopropyltoluene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
4-Methyl-2-pentanone	ND	10		µg/L	1	11/21/2017 9:37:00 AM	B47249
Methylene Chloride	ND	3.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
n-Butylbenzene	ND	3.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
n-Propylbenzene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
sec-Butylbenzene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
Styrene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
tert-Butylbenzene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
trans-1,2-DCE	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
Trichlorofluoromethane	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
Vinyl chloride	ND	1.0		µg/L	1	11/21/2017 9:37:00 AM	B47249
Xylenes, Total	ND	1.5		µg/L	1	11/21/2017 9:37:00 AM	B47249
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	11/21/2017 9:37:00 AM	B47249
Surr: 4-Bromofluorobenzene	99.4	70-130		%Rec	1	11/21/2017 9:37:00 AM	B47249
Surr: Dibromofluoromethane	109	70-130		%Rec	1	11/21/2017 9:37:00 AM	B47249
Surr: Toluene-d8	96.0	70-130		%Rec	1	11/21/2017 9:37:00 AM	B47249

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711922

Date Reported: 11/22/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-171116

Project: JSP Joint Superfund Project Center Mont

Collection Date: 11/16/2017 9:50:00 AM

Lab ID: 1711922-007

Matrix: DRINKING W

Received Date: 11/17/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
Toluene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
Ethylbenzene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
Naphthalene	ND	2.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
1-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
2-Methylnaphthalene	ND	4.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
Acetone	ND	10		µg/L	1	11/21/2017 10:01:00 AM	B47249
Bromobenzene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
Bromodichloromethane	2.6	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
Bromoform	3.4	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
Bromomethane	ND	3.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
2-Butanone	ND	10		µg/L	1	11/21/2017 10:01:00 AM	B47249
Carbon disulfide	ND	10		µg/L	1	11/21/2017 10:01:00 AM	B47249
Carbon Tetrachloride	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
Chlorobenzene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
Chloroethane	ND	2.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
Chloroform	1.4	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
Chloromethane	ND	3.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
2-Chlorotoluene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
4-Chlorotoluene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
cis-1,2-DCE	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
Dibromochloromethane	3.8	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
Dibromomethane	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
1,1-Dichloroethane	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
1,1-Dichloroethene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
1,2-Dichloropropane	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
1,3-Dichloropropane	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
2,2-Dichloropropane	ND	2.0		µg/L	1	11/21/2017 10:01:00 AM	B47249

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711922

Date Reported: 11/22/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-171116

Project: JSP Joint Superfund Project Center Mont

Collection Date: 11/16/2017 9:50:00 AM

Lab ID: 1711922-007

Matrix: DRINKING W

Received Date: 11/17/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
Hexachlorobutadiene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
2-Hexanone	ND	10		µg/L	1	11/21/2017 10:01:00 AM	B47249
Isopropylbenzene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
4-Isopropyltoluene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
4-Methyl-2-pentanone	ND	10		µg/L	1	11/21/2017 10:01:00 AM	B47249
Methylene Chloride	ND	3.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
n-Butylbenzene	ND	3.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
n-Propylbenzene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
sec-Butylbenzene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
Styrene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
tert-Butylbenzene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
trans-1,2-DCE	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
Trichlorofluoromethane	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
Vinyl chloride	ND	1.0		µg/L	1	11/21/2017 10:01:00 AM	B47249
Xylenes, Total	ND	1.5		µg/L	1	11/21/2017 10:01:00 AM	B47249
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	11/21/2017 10:01:00 AM	B47249
Surr: 4-Bromofluorobenzene	98.9	70-130		%Rec	1	11/21/2017 10:01:00 AM	B47249
Surr: Dibromofluoromethane	107	70-130		%Rec	1	11/21/2017 10:01:00 AM	B47249
Surr: Toluene-d8	97.6	70-130		%Rec	1	11/21/2017 10:01:00 AM	B47249

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1711922

22-Nov-17

Client: City of Las Cruces
Project: JSP Joint Superfund Project Center Monthly An

Sample ID 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: B47249		RunNo: 47249							
Prep Date:	Analysis Date: 11/20/2017		SeqNo: 1506984		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	112	70	130			
Toluene	20	1.0	20.00	0	99.9	70	130			
Chlorobenzene	20	1.0	20.00	0	99.6	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	120	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	110	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		112	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	9.7		10.00		97.5	70	130			

Sample ID rb2	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: B47249		RunNo: 47249							
Prep Date:	Analysis Date: 11/21/2017		SeqNo: 1506985		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1711922

22-Nov-17

Client: City of Las Cruces
Project: JSP Joint Superfund Project Center Monthly An

Sample ID: rb2	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: B47249	RunNo: 47249
Prep Date:	Analysis Date: 11/21/2017	SeqNo: 1506985 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1711922

22-Nov-17

Client: City of Las Cruces
Project: JSP Joint Superfund Project Center Monthly An

Sample ID: rb2	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: B47249		RunNo: 47249							
Prep Date:	Analysis Date: 11/21/2017		SeqNo: 1506985		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		112	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.7	70	130			
Surr: Dibromofluoromethane	11		10.00		113	70	130			
Surr: Toluene-d8	9.8		10.00		97.6	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1711922

RcptNo: 1

Received By: Dennis Suazo 11/17/2017 9:00:00 AM

Completed By: Isaiah Ortiz 11/17/2017 9:41:37 AM

IOA

Reviewed By: *Sree 11/17/17*

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No # of preserved bottles checked for pH: _____
 (Note discrepancies on chain of custody) (<2 or >12 unless noted)
- 13. Are matrices correctly identified on Chain of Custody? Yes No Adjusted? _____
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No Checked by: _____
 (If no, notify customer for authorization.)

Special Handling (if applicable)

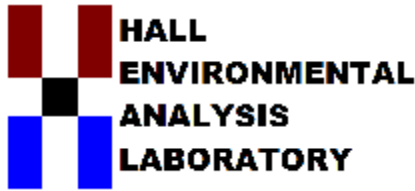
- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.4	Good	Not Present			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

November 22, 2017

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP Joint Superfund Project Center Monthly Analysis

OrderNo.: 1711923

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 2 sample(s) on 11/17/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711923

Date Reported: 11/22/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1- 171116

Project: JSP Joint Superfund Project Center Mont

Collection Date: 11/16/2017 9:46:00 AM

Lab ID: 1711923-001

Matrix: AIR

Received Date: 11/17/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
Toluene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
Ethylbenzene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
Naphthalene	ND	0.20		µg/L	1	11/21/2017 10:25:00 AM	B47249
1-Methylnaphthalene	ND	0.40		µg/L	1	11/21/2017 10:25:00 AM	B47249
2-Methylnaphthalene	ND	0.40		µg/L	1	11/21/2017 10:25:00 AM	B47249
Acetone	ND	1.0		µg/L	1	11/21/2017 10:25:00 AM	B47249
Bromobenzene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
Bromodichloromethane	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
Bromoform	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
Bromomethane	ND	0.20		µg/L	1	11/21/2017 10:25:00 AM	B47249
2-Butanone	ND	1.0		µg/L	1	11/21/2017 10:25:00 AM	B47249
Carbon disulfide	ND	1.0		µg/L	1	11/21/2017 10:25:00 AM	B47249
Carbon tetrachloride	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
Chlorobenzene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
Chloroethane	ND	0.20		µg/L	1	11/21/2017 10:25:00 AM	B47249
Chloroform	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
Chloromethane	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
2-Chlorotoluene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
4-Chlorotoluene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
cis-1,2-DCE	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	11/21/2017 10:25:00 AM	B47249
Dibromochloromethane	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
Dibromomethane	ND	0.20		µg/L	1	11/21/2017 10:25:00 AM	B47249
1,2-Dichlorobenzene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
1,3-Dichlorobenzene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
1,4-Dichlorobenzene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
Dichlorodifluoromethane	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
1,1-Dichloroethane	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
1,1-Dichloroethene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
1,2-Dichloropropane	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
1,3-Dichloropropane	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
2,2-Dichloropropane	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 1 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711923

Date Reported: 11/22/2017

CLIENT: City of Las Cruces

Client Sample ID: AS1- 171116

Project: JSP Joint Superfund Project Center Mont

Collection Date: 11/16/2017 9:46:00 AM

Lab ID: 1711923-001

Matrix: AIR

Received Date: 11/17/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
Hexachlorobutadiene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
2-Hexanone	ND	1.0		µg/L	1	11/21/2017 10:25:00 AM	B47249
Isopropylbenzene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
4-Isopropyltoluene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
4-Methyl-2-pentanone	ND	1.0		µg/L	1	11/21/2017 10:25:00 AM	B47249
Methylene chloride	ND	0.30		µg/L	1	11/21/2017 10:25:00 AM	B47249
n-Butylbenzene	ND	0.30		µg/L	1	11/21/2017 10:25:00 AM	B47249
n-Propylbenzene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
sec-Butylbenzene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
Styrene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
tert-Butylbenzene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
trans-1,2-DCE	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
1,1,1-Trichloroethane	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
1,1,2-Trichloroethane	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
Trichloroethene (TCE)	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
Trichlorofluoromethane	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
1,2,3-Trichloropropane	ND	0.20		µg/L	1	11/21/2017 10:25:00 AM	B47249
Vinyl chloride	ND	0.10		µg/L	1	11/21/2017 10:25:00 AM	B47249
Xylenes, Total	ND	0.15		µg/L	1	11/21/2017 10:25:00 AM	B47249
Surr: Dibromofluoromethane	105	70-130		%Rec	1	11/21/2017 10:25:00 AM	B47249
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	11/21/2017 10:25:00 AM	B47249
Surr: Toluene-d8	97.6	70-130		%Rec	1	11/21/2017 10:25:00 AM	B47249
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	11/21/2017 10:25:00 AM	B47249

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711923

Date Reported: 11/22/2017

CLIENT: City of Las Cruces

Client Sample ID: AS2- 171116

Project: JSP Joint Superfund Project Center Mont

Collection Date: 11/16/2017 9:51:00 AM

Lab ID: 1711923-002

Matrix: AIR

Received Date: 11/17/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
Toluene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
Ethylbenzene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
Naphthalene	ND	0.20		µg/L	1	11/21/2017 11:13:00 AM	B47249
1-Methylnaphthalene	ND	0.40		µg/L	1	11/21/2017 11:13:00 AM	B47249
2-Methylnaphthalene	ND	0.40		µg/L	1	11/21/2017 11:13:00 AM	B47249
Acetone	ND	1.0		µg/L	1	11/21/2017 11:13:00 AM	B47249
Bromobenzene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
Bromodichloromethane	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
Bromoform	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
Bromomethane	ND	0.20		µg/L	1	11/21/2017 11:13:00 AM	B47249
2-Butanone	ND	1.0		µg/L	1	11/21/2017 11:13:00 AM	B47249
Carbon disulfide	ND	1.0		µg/L	1	11/21/2017 11:13:00 AM	B47249
Carbon tetrachloride	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
Chlorobenzene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
Chloroethane	ND	0.20		µg/L	1	11/21/2017 11:13:00 AM	B47249
Chloroform	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
Chloromethane	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
2-Chlorotoluene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
4-Chlorotoluene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
cis-1,2-DCE	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	11/21/2017 11:13:00 AM	B47249
Dibromochloromethane	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
Dibromomethane	ND	0.20		µg/L	1	11/21/2017 11:13:00 AM	B47249
1,2-Dichlorobenzene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
1,3-Dichlorobenzene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
1,4-Dichlorobenzene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
Dichlorodifluoromethane	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
1,1-Dichloroethane	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
1,1-Dichloroethene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
1,2-Dichloropropane	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
1,3-Dichloropropane	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
2,2-Dichloropropane	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 3 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1711923

Date Reported: 11/22/2017

CLIENT: City of Las Cruces

Client Sample ID: AS2- 171116

Project: JSP Joint Superfund Project Center Mont

Collection Date: 11/16/2017 9:51:00 AM

Lab ID: 1711923-002

Matrix: AIR

Received Date: 11/17/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
Hexachlorobutadiene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
2-Hexanone	ND	1.0		µg/L	1	11/21/2017 11:13:00 AM	B47249
Isopropylbenzene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
4-Isopropyltoluene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
4-Methyl-2-pentanone	ND	1.0		µg/L	1	11/21/2017 11:13:00 AM	B47249
Methylene chloride	ND	0.30		µg/L	1	11/21/2017 11:13:00 AM	B47249
n-Butylbenzene	ND	0.30		µg/L	1	11/21/2017 11:13:00 AM	B47249
n-Propylbenzene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
sec-Butylbenzene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
Styrene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
tert-Butylbenzene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
trans-1,2-DCE	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
1,1,1-Trichloroethane	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
1,1,2-Trichloroethane	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
Trichloroethene (TCE)	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
Trichlorofluoromethane	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
1,2,3-Trichloropropane	ND	0.20		µg/L	1	11/21/2017 11:13:00 AM	B47249
Vinyl chloride	ND	0.10		µg/L	1	11/21/2017 11:13:00 AM	B47249
Xylenes, Total	ND	0.15		µg/L	1	11/21/2017 11:13:00 AM	B47249
Surr: Dibromofluoromethane	106	70-130		%Rec	1	11/21/2017 11:13:00 AM	B47249
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	11/21/2017 11:13:00 AM	B47249
Surr: Toluene-d8	96.7	70-130		%Rec	1	11/21/2017 11:13:00 AM	B47249
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	11/21/2017 11:13:00 AM	B47249

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1711923

RcptNo: 1

Received By: Dennis Suazo 11/17/2017 9:00:00 AM

Completed By: Isaiah Ortiz 11/17/2017 9:49:50 AM

IO

Reviewed By: *Sze 11/17/17*

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No # of preserved bottles checked for pH: _____
(<2 or >12 unless noted)
- 13. Are matrices correctly identified on Chain of Custody? Yes No Adjusted? _____
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes No Checked by: _____

Special Handling (if applicable)

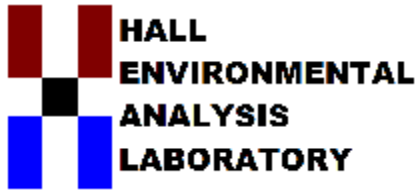
- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:		Date:	
By Whom:		Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1		Good	Not Present			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 29, 2017

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: CLC Joint Superfund Project: Center Monthly Analysis

OrderNo.: 1712C98

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 12/21/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1712C98

Date Reported: 12/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-171220

Project: CLC Joint Superfund Project: Center Mo

Collection Date: 12/20/2017 9:06:00 AM

Lab ID: 1712C98-001

Matrix: AQUEOUS

Received Date: 12/21/2017 10:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
Toluene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
Ethylbenzene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
Naphthalene	ND	2.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
1-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
2-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
Acetone	ND	10		µg/L	1	12/28/2017 12:48:00 AM	B48055
Bromobenzene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
Bromodichloromethane	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
Bromoform	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
Bromomethane	ND	3.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
2-Butanone	ND	10		µg/L	1	12/28/2017 12:48:00 AM	B48055
Carbon disulfide	ND	10		µg/L	1	12/28/2017 12:48:00 AM	B48055
Carbon Tetrachloride	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
Chlorobenzene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
Chloroethane	ND	2.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
Chloroform	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
Chloromethane	ND	3.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
2-Chlorotoluene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
4-Chlorotoluene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
cis-1,2-DCE	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
Dibromochloromethane	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
Dibromomethane	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
1,1-Dichloroethane	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
1,1-Dichloroethene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
1,2-Dichloropropane	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
1,3-Dichloropropane	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
2,2-Dichloropropane	ND	2.0		µg/L	1	12/28/2017 12:48:00 AM	B48055

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1712C98

Date Reported: 12/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-171220

Project: CLC Joint Superfund Project: Center Mo

Collection Date: 12/20/2017 9:06:00 AM

Lab ID: 1712C98-001

Matrix: AQUEOUS

Received Date: 12/21/2017 10:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
Hexachlorobutadiene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
2-Hexanone	ND	10		µg/L	1	12/28/2017 12:48:00 AM	B48055
Isopropylbenzene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
4-Isopropyltoluene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
4-Methyl-2-pentanone	ND	10		µg/L	1	12/28/2017 12:48:00 AM	B48055
Methylene Chloride	ND	3.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
n-Butylbenzene	ND	3.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
n-Propylbenzene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
sec-Butylbenzene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
Styrene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
tert-Butylbenzene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
Tetrachloroethene (PCE)	12	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
trans-1,2-DCE	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
Trichlorofluoromethane	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
Vinyl chloride	ND	1.0		µg/L	1	12/28/2017 12:48:00 AM	B48055
Xylenes, Total	ND	1.5		µg/L	1	12/28/2017 12:48:00 AM	B48055
Surr: 1,2-Dichloroethane-d4	91.5	70-130		%Rec	1	12/28/2017 12:48:00 AM	B48055
Surr: 4-Bromofluorobenzene	95.5	70-130		%Rec	1	12/28/2017 12:48:00 AM	B48055
Surr: Dibromofluoromethane	95.5	70-130		%Rec	1	12/28/2017 12:48:00 AM	B48055
Surr: Toluene-d8	94.8	70-130		%Rec	1	12/28/2017 12:48:00 AM	B48055

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1712C98

Date Reported: 12/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-171220

Project: CLC Joint Superfund Project: Center Mo

Collection Date: 12/20/2017 9:36:00 AM

Lab ID: 1712C98-002

Matrix: AQUEOUS

Received Date: 12/21/2017 10:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
Toluene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
Ethylbenzene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
Naphthalene	ND	2.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
1-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
2-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
Acetone	ND	10		µg/L	1	12/28/2017 1:56:00 AM	B48055
Bromobenzene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
Bromodichloromethane	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
Bromoform	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
Bromomethane	ND	3.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
2-Butanone	ND	10		µg/L	1	12/28/2017 1:56:00 AM	B48055
Carbon disulfide	ND	10		µg/L	1	12/28/2017 1:56:00 AM	B48055
Carbon Tetrachloride	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
Chlorobenzene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
Chloroethane	ND	2.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
Chloroform	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
Chloromethane	ND	3.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
2-Chlorotoluene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
4-Chlorotoluene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
cis-1,2-DCE	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
Dibromochloromethane	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
Dibromomethane	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
1,1-Dichloroethane	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
1,1-Dichloroethene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
1,2-Dichloropropane	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
1,3-Dichloropropane	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
2,2-Dichloropropane	ND	2.0		µg/L	1	12/28/2017 1:56:00 AM	B48055

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1712C98

Date Reported: 12/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-171220

Project: CLC Joint Superfund Project: Center Mo

Collection Date: 12/20/2017 9:36:00 AM

Lab ID: 1712C98-002

Matrix: AQUEOUS

Received Date: 12/21/2017 10:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
Hexachlorobutadiene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
2-Hexanone	ND	10		µg/L	1	12/28/2017 1:56:00 AM	B48055
Isopropylbenzene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
4-Isopropyltoluene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
4-Methyl-2-pentanone	ND	10		µg/L	1	12/28/2017 1:56:00 AM	B48055
Methylene Chloride	ND	3.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
n-Butylbenzene	ND	3.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
n-Propylbenzene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
sec-Butylbenzene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
Styrene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
tert-Butylbenzene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
Tetrachloroethene (PCE)	16	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
trans-1,2-DCE	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
Trichlorofluoromethane	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
Vinyl chloride	ND	1.0		µg/L	1	12/28/2017 1:56:00 AM	B48055
Xylenes, Total	ND	1.5		µg/L	1	12/28/2017 1:56:00 AM	B48055
Surr: 1,2-Dichloroethane-d4	91.2	70-130		%Rec	1	12/28/2017 1:56:00 AM	B48055
Surr: 4-Bromofluorobenzene	96.7	70-130		%Rec	1	12/28/2017 1:56:00 AM	B48055
Surr: Dibromofluoromethane	97.1	70-130		%Rec	1	12/28/2017 1:56:00 AM	B48055
Surr: Toluene-d8	94.4	70-130		%Rec	1	12/28/2017 1:56:00 AM	B48055

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1712C98

Date Reported: 12/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-171220

Project: CLC Joint Superfund Project: Center Mo

Collection Date: 12/20/2017 9:13:00 AM

Lab ID: 1712C98-003

Matrix: AQUEOUS

Received Date: 12/21/2017 10:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
Toluene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
Ethylbenzene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
Naphthalene	ND	2.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
1-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
2-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
Acetone	ND	10		µg/L	1	12/28/2017 2:19:00 AM	B48055
Bromobenzene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
Bromodichloromethane	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
Bromoform	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
Bromomethane	ND	3.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
2-Butanone	ND	10		µg/L	1	12/28/2017 2:19:00 AM	B48055
Carbon disulfide	ND	10		µg/L	1	12/28/2017 2:19:00 AM	B48055
Carbon Tetrachloride	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
Chlorobenzene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
Chloroethane	ND	2.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
Chloroform	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
Chloromethane	ND	3.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
2-Chlorotoluene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
4-Chlorotoluene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
cis-1,2-DCE	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
Dibromochloromethane	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
Dibromomethane	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
1,1-Dichloroethane	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
1,1-Dichloroethene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
1,2-Dichloropropane	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
1,3-Dichloropropane	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
2,2-Dichloropropane	ND	2.0		µg/L	1	12/28/2017 2:19:00 AM	B48055

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1712C98

Date Reported: 12/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-171220

Project: CLC Joint Superfund Project: Center Mo

Collection Date: 12/20/2017 9:13:00 AM

Lab ID: 1712C98-003

Matrix: AQUEOUS

Received Date: 12/21/2017 10:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
Hexachlorobutadiene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
2-Hexanone	ND	10		µg/L	1	12/28/2017 2:19:00 AM	B48055
Isopropylbenzene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
4-Isopropyltoluene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
4-Methyl-2-pentanone	ND	10		µg/L	1	12/28/2017 2:19:00 AM	B48055
Methylene Chloride	ND	3.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
n-Butylbenzene	ND	3.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
n-Propylbenzene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
sec-Butylbenzene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
Styrene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
tert-Butylbenzene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
Tetrachloroethene (PCE)	10	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
trans-1,2-DCE	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
Trichlorofluoromethane	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
Vinyl chloride	ND	1.0		µg/L	1	12/28/2017 2:19:00 AM	B48055
Xylenes, Total	ND	1.5		µg/L	1	12/28/2017 2:19:00 AM	B48055
Surr: 1,2-Dichloroethane-d4	91.5	70-130		%Rec	1	12/28/2017 2:19:00 AM	B48055
Surr: 4-Bromofluorobenzene	96.6	70-130		%Rec	1	12/28/2017 2:19:00 AM	B48055
Surr: Dibromofluoromethane	96.6	70-130		%Rec	1	12/28/2017 2:19:00 AM	B48055
Surr: Toluene-d8	94.5	70-130		%Rec	1	12/28/2017 2:19:00 AM	B48055

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1712C98

Date Reported: 12/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-171220

Project: CLC Joint Superfund Project: Center Mo

Collection Date: 12/20/2017 9:17:00 AM

Lab ID: 1712C98-004

Matrix: AQUEOUS

Received Date: 12/21/2017 10:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
Toluene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
Ethylbenzene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
Naphthalene	ND	2.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
1-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
2-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
Acetone	ND	10		µg/L	1	12/28/2017 2:42:00 AM	B48055
Bromobenzene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
Bromodichloromethane	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
Bromoform	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
Bromomethane	ND	3.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
2-Butanone	ND	10		µg/L	1	12/28/2017 2:42:00 AM	B48055
Carbon disulfide	ND	10		µg/L	1	12/28/2017 2:42:00 AM	B48055
Carbon Tetrachloride	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
Chlorobenzene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
Chloroethane	ND	2.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
Chloroform	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
Chloromethane	ND	3.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
2-Chlorotoluene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
4-Chlorotoluene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
cis-1,2-DCE	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
Dibromochloromethane	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
Dibromomethane	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
1,1-Dichloroethane	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
1,1-Dichloroethene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
1,2-Dichloropropane	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
1,3-Dichloropropane	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
2,2-Dichloropropane	ND	2.0		µg/L	1	12/28/2017 2:42:00 AM	B48055

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1712C98

Date Reported: 12/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-171220

Project: CLC Joint Superfund Project: Center Mo

Collection Date: 12/20/2017 9:17:00 AM

Lab ID: 1712C98-004

Matrix: AQUEOUS

Received Date: 12/21/2017 10:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
Hexachlorobutadiene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
2-Hexanone	ND	10		µg/L	1	12/28/2017 2:42:00 AM	B48055
Isopropylbenzene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
4-Isopropyltoluene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
4-Methyl-2-pentanone	ND	10		µg/L	1	12/28/2017 2:42:00 AM	B48055
Methylene Chloride	ND	3.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
n-Butylbenzene	ND	3.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
n-Propylbenzene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
sec-Butylbenzene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
Styrene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
tert-Butylbenzene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
trans-1,2-DCE	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
Trichlorofluoromethane	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
Vinyl chloride	ND	1.0		µg/L	1	12/28/2017 2:42:00 AM	B48055
Xylenes, Total	ND	1.5		µg/L	1	12/28/2017 2:42:00 AM	B48055
Surr: 1,2-Dichloroethane-d4	92.0	70-130		%Rec	1	12/28/2017 2:42:00 AM	B48055
Surr: 4-Bromofluorobenzene	96.0	70-130		%Rec	1	12/28/2017 2:42:00 AM	B48055
Surr: Dibromofluoromethane	97.3	70-130		%Rec	1	12/28/2017 2:42:00 AM	B48055
Surr: Toluene-d8	93.7	70-130		%Rec	1	12/28/2017 2:42:00 AM	B48055

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1712C98

Date Reported: 12/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-171220

Project: CLC Joint Superfund Project: Center Mo

Collection Date: 12/20/2017 9:21:00 AM

Lab ID: 1712C98-005

Matrix: AQUEOUS

Received Date: 12/21/2017 10:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
Toluene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
Ethylbenzene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
Naphthalene	ND	2.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
1-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
2-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
Acetone	ND	10		µg/L	1	12/28/2017 3:05:00 AM	B48055
Bromobenzene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
Bromodichloromethane	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
Bromoform	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
Bromomethane	ND	3.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
2-Butanone	ND	10		µg/L	1	12/28/2017 3:05:00 AM	B48055
Carbon disulfide	ND	10		µg/L	1	12/28/2017 3:05:00 AM	B48055
Carbon Tetrachloride	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
Chlorobenzene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
Chloroethane	ND	2.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
Chloroform	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
Chloromethane	ND	3.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
2-Chlorotoluene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
4-Chlorotoluene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
cis-1,2-DCE	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
Dibromochloromethane	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
Dibromomethane	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
1,1-Dichloroethane	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
1,1-Dichloroethene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
1,2-Dichloropropane	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
1,3-Dichloropropane	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
2,2-Dichloropropane	ND	2.0		µg/L	1	12/28/2017 3:05:00 AM	B48055

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-171220

Project: CLC Joint Superfund Project: Center Mo

Collection Date: 12/20/2017 9:21:00 AM

Lab ID: 1712C98-005

Matrix: AQUEOUS

Received Date: 12/21/2017 10:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
Hexachlorobutadiene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
2-Hexanone	ND	10		µg/L	1	12/28/2017 3:05:00 AM	B48055
Isopropylbenzene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
4-Isopropyltoluene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
4-Methyl-2-pentanone	ND	10		µg/L	1	12/28/2017 3:05:00 AM	B48055
Methylene Chloride	ND	3.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
n-Butylbenzene	ND	3.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
n-Propylbenzene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
sec-Butylbenzene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
Styrene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
tert-Butylbenzene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
trans-1,2-DCE	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
Trichlorofluoromethane	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
Vinyl chloride	ND	1.0		µg/L	1	12/28/2017 3:05:00 AM	B48055
Xylenes, Total	ND	1.5		µg/L	1	12/28/2017 3:05:00 AM	B48055
Surr: 1,2-Dichloroethane-d4	91.5	70-130		%Rec	1	12/28/2017 3:05:00 AM	B48055
Surr: 4-Bromofluorobenzene	97.3	70-130		%Rec	1	12/28/2017 3:05:00 AM	B48055
Surr: Dibromofluoromethane	95.2	70-130		%Rec	1	12/28/2017 3:05:00 AM	B48055
Surr: Toluene-d8	93.7	70-130		%Rec	1	12/28/2017 3:05:00 AM	B48055

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1712C98

Date Reported: 12/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-171220 DUP

Project: CLC Joint Superfund Project: Center Mo

Collection Date: 12/20/2017 9:21:00 AM

Lab ID: 1712C98-006

Matrix: AQUEOUS

Received Date: 12/21/2017 10:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
Toluene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
Ethylbenzene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
Naphthalene	ND	2.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
1-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
2-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
Acetone	ND	10		µg/L	1	12/28/2017 3:27:00 AM	B48055
Bromobenzene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
Bromodichloromethane	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
Bromoform	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
Bromomethane	ND	3.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
2-Butanone	ND	10		µg/L	1	12/28/2017 3:27:00 AM	B48055
Carbon disulfide	ND	10		µg/L	1	12/28/2017 3:27:00 AM	B48055
Carbon Tetrachloride	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
Chlorobenzene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
Chloroethane	ND	2.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
Chloroform	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
Chloromethane	ND	3.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
2-Chlorotoluene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
4-Chlorotoluene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
cis-1,2-DCE	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
Dibromochloromethane	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
Dibromomethane	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
1,1-Dichloroethane	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
1,1-Dichloroethene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
1,2-Dichloropropane	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
1,3-Dichloropropane	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
2,2-Dichloropropane	ND	2.0		µg/L	1	12/28/2017 3:27:00 AM	B48055

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1712C98

Date Reported: 12/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-171220 DUP

Project: CLC Joint Superfund Project: Center Mo

Collection Date: 12/20/2017 9:21:00 AM

Lab ID: 1712C98-006

Matrix: AQUEOUS

Received Date: 12/21/2017 10:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
Hexachlorobutadiene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
2-Hexanone	ND	10		µg/L	1	12/28/2017 3:27:00 AM	B48055
Isopropylbenzene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
4-Isopropyltoluene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
4-Methyl-2-pentanone	ND	10		µg/L	1	12/28/2017 3:27:00 AM	B48055
Methylene Chloride	ND	3.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
n-Butylbenzene	ND	3.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
n-Propylbenzene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
sec-Butylbenzene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
Styrene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
tert-Butylbenzene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
trans-1,2-DCE	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
Trichlorofluoromethane	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
Vinyl chloride	ND	1.0		µg/L	1	12/28/2017 3:27:00 AM	B48055
Xylenes, Total	ND	1.5		µg/L	1	12/28/2017 3:27:00 AM	B48055
Surr: 1,2-Dichloroethane-d4	91.5	70-130		%Rec	1	12/28/2017 3:27:00 AM	B48055
Surr: 4-Bromofluorobenzene	97.4	70-130		%Rec	1	12/28/2017 3:27:00 AM	B48055
Surr: Dibromofluoromethane	96.2	70-130		%Rec	1	12/28/2017 3:27:00 AM	B48055
Surr: Toluene-d8	93.0	70-130		%Rec	1	12/28/2017 3:27:00 AM	B48055

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1712C98

Date Reported: 12/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-171220

Project: CLC Joint Superfund Project: Center Mo

Collection Date: 12/20/2017 9:23:00 AM

Lab ID: 1712C98-007

Matrix: AQUEOUS

Received Date: 12/21/2017 10:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
Toluene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
Ethylbenzene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
Naphthalene	ND	2.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
1-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
2-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
Acetone	ND	10		µg/L	1	12/28/2017 3:50:00 AM	B48055
Bromobenzene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
Bromodichloromethane	5.1	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
Bromoform	3.3	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
Bromomethane	ND	3.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
2-Butanone	ND	10		µg/L	1	12/28/2017 3:50:00 AM	B48055
Carbon disulfide	ND	10		µg/L	1	12/28/2017 3:50:00 AM	B48055
Carbon Tetrachloride	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
Chlorobenzene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
Chloroethane	ND	2.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
Chloroform	4.0	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
Chloromethane	ND	3.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
2-Chlorotoluene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
4-Chlorotoluene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
cis-1,2-DCE	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
Dibromochloromethane	5.7	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
Dibromomethane	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
1,1-Dichloroethane	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
1,1-Dichloroethene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
1,2-Dichloropropane	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
1,3-Dichloropropane	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
2,2-Dichloropropane	ND	2.0		µg/L	1	12/28/2017 3:50:00 AM	B48055

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1712C98

Date Reported: 12/29/2017

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-171220

Project: CLC Joint Superfund Project: Center Mo

Collection Date: 12/20/2017 9:23:00 AM

Lab ID: 1712C98-007

Matrix: AQUEOUS

Received Date: 12/21/2017 10:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
Hexachlorobutadiene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
2-Hexanone	ND	10		µg/L	1	12/28/2017 3:50:00 AM	B48055
Isopropylbenzene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
4-Isopropyltoluene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
4-Methyl-2-pentanone	ND	10		µg/L	1	12/28/2017 3:50:00 AM	B48055
Methylene Chloride	ND	3.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
n-Butylbenzene	ND	3.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
n-Propylbenzene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
sec-Butylbenzene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
Styrene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
tert-Butylbenzene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
trans-1,2-DCE	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
Trichlorofluoromethane	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
Vinyl chloride	ND	1.0		µg/L	1	12/28/2017 3:50:00 AM	B48055
Xylenes, Total	ND	1.5		µg/L	1	12/28/2017 3:50:00 AM	B48055
Surr: 1,2-Dichloroethane-d4	91.4	70-130		%Rec	1	12/28/2017 3:50:00 AM	B48055
Surr: 4-Bromofluorobenzene	96.5	70-130		%Rec	1	12/28/2017 3:50:00 AM	B48055
Surr: Dibromofluoromethane	96.0	70-130		%Rec	1	12/28/2017 3:50:00 AM	B48055
Surr: Toluene-d8	93.5	70-130		%Rec	1	12/28/2017 3:50:00 AM	B48055

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1712C98

29-Dec-17

Client: City of Las Cruces
Project: CLC Joint Superfund Project: Center Monthly A

Sample ID 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: B48055		RunNo: 48055							
Prep Date:	Analysis Date: 12/28/2017		SeqNo: 1540317		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	20	1.0	20.00	0	99.9	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	115	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	100	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.5	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.2	70	130			
Surr: Dibromofluoromethane	9.7		10.00		97.1	70	130			
Surr: Toluene-d8	9.3		10.00		93.2	70	130			

Sample ID rb2	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: B48055		RunNo: 48055							
Prep Date:	Analysis Date: 12/28/2017		SeqNo: 1540320		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1712C98

29-Dec-17

Client: City of Las Cruces
Project: CLC Joint Superfund Project: Center Monthly A

Sample ID: rb2	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: B48055	RunNo: 48055
Prep Date:	Analysis Date: 12/28/2017	SeqNo: 1540320 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1712C98

29-Dec-17

Client: City of Las Cruces
Project: CLC Joint Superfund Project: Center Monthly A

Sample ID: rb2	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: B48055		RunNo: 48055							
Prep Date:	Analysis Date: 12/28/2017		SeqNo: 1540320		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.9	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.7	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.9	70	130			
Surr: Toluene-d8	9.3		10.00		93.5	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1712C98

RcptNo: 1

Received By: Erin Melendrez 12/21/2017 10:25:00 AM *EM*

Completed By: Dennis Suazo 12/21/2017 1:10:01 PM *DS*

Reviewed By: *SPR* 12/21/17

Chain of Custody

1. Custody seals intact on sample bottles? Yes No Not Present
2. Is Chain of Custody complete? Yes No Not Present
3. How was the sample delivered? FedEx

Log In

4. Was an attempt made to cool the samples? Yes No NA
5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
6. Sample(s) in proper container(s)? Yes No
7. Sufficient sample volume for indicated test(s)? Yes No
8. Are samples (except VOA and ONG) properly preserved? Yes No
9. Was preservative added to bottles? Yes No NA
10. VOA vials have zero headspace? Yes No No VOA Vials
11. Were any sample containers received broken? Yes No
12. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes No
14. Is it clear what analyses were requested? Yes No
15. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____ (<2 or >12 unless noted) Adjusted? _____ Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____	Date: _____
By Whom: _____	Via: <input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding: _____	
Client Instructions: _____	

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.6	Good	No			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
 Mailing Address: P.O. Box 20000
Las Cruces, N.M. 88004
 Phone #: 575-528-3604
 email or Fax#: quwal@las-cruces.org / 575-3630
 QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation
 NELAP Other _____
 EDD (Type) EUREL

Turn-Around Time:
 Standard Rush
 Project Name:
JSL Joint Superior Project Center
Monthly Analysis
 Project #:
CNC-JSL: Briggs Walnut
 Project Manager:
Luis Guerra
575-528-3609
 Sampler: Jedrick Bryan
 On loc: Yes No
 Sample Temperature: 10-10(CF) = 0.6

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
12/20/17	0906	Drinking Water	CNC 18-171220	340ml Vals	Tap	1712098
	0936	Drinking Water	CNC 27-171220			002
	0943	Drinking Water	CNC IS1-171220			003
	0947	Drinking Water	CNC 01-171220			004
	0921	Drinking Water	CNC 02-171220			005
	0921	Drinking Water	CNC 02-171220 DM			006
2/20/17	0923	Drinking Water	CNC IS1-171220	340ml Vals	Tap	007

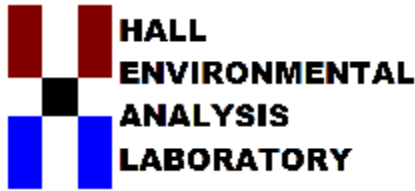
Date: 2/20/17 Time: 1500 Relinquished by: Jedrick Bryan
 Date: 12/21/17 Time: 1025 Received by: Luis Guerra
 Date: 12/21/17 Time: _____ Relinquished by: _____ Received by: _____

Analysis Request

BTEX + MTBE + TMBs (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GR0 / DR0 / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA) VOC	8270 (Semi-VOA)	Air Fishes (Y or N)
									X		
									X		
									X		
									X		
									X		
									X		
									X		

Remarks: Send Results to:
Luis Guerra lguerra@las-cruces.org
Jedrick Bryan jbryan@las-cruces.org
(Send unaltered CNC 010 Luis Guerra)

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 03, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: CLC Joint Superfund Projec Center Monthly Analysis

OrderNo.: 1712D01

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 2 sample(s) on 12/21/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1712D01

Date Reported: 1/3/2018

CLIENT: City of Las Cruces

Client Sample ID: AS1-171220

Project: CLC Joint Superfund Projec Center Mont

Collection Date: 12/20/2017 9:14:00 AM

Lab ID: 1712D01-001

Matrix: AIR

Received Date: 12/21/2017 10:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
Toluene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
Ethylbenzene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
Naphthalene	ND	0.20		µg/L	1	12/29/2017 11:10:00 AM	R48124
1-Methylnaphthalene	ND	0.40		µg/L	1	12/29/2017 11:10:00 AM	R48124
2-Methylnaphthalene	ND	0.40		µg/L	1	12/29/2017 11:10:00 AM	R48124
Acetone	ND	1.0		µg/L	1	12/29/2017 11:10:00 AM	R48124
Bromobenzene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
Bromodichloromethane	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
Bromoform	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
Bromomethane	ND	0.20		µg/L	1	12/29/2017 11:10:00 AM	R48124
2-Butanone	ND	1.0		µg/L	1	12/29/2017 11:10:00 AM	R48124
Carbon disulfide	ND	1.0		µg/L	1	12/29/2017 11:10:00 AM	R48124
Carbon tetrachloride	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
Chlorobenzene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
Chloroethane	ND	0.20		µg/L	1	12/29/2017 11:10:00 AM	R48124
Chloroform	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
Chloromethane	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
2-Chlorotoluene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
4-Chlorotoluene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
cis-1,2-DCE	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	12/29/2017 11:10:00 AM	R48124
Dibromochloromethane	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
Dibromomethane	ND	0.20		µg/L	1	12/29/2017 11:10:00 AM	R48124
1,2-Dichlorobenzene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
1,3-Dichlorobenzene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
1,4-Dichlorobenzene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
Dichlorodifluoromethane	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
1,1-Dichloroethane	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
1,1-Dichloroethene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
1,2-Dichloropropane	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
1,3-Dichloropropane	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
2,2-Dichloropropane	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 1 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1712D01

Date Reported: 1/3/2018

CLIENT: City of Las Cruces

Client Sample ID: AS1-171220

Project: CLC Joint Superfund Projec Center Mont

Collection Date: 12/20/2017 9:14:00 AM

Lab ID: 1712D01-001

Matrix: AIR

Received Date: 12/21/2017 10:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
Hexachlorobutadiene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
2-Hexanone	ND	1.0		µg/L	1	12/29/2017 11:10:00 AM	R48124
Isopropylbenzene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
4-Isopropyltoluene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
4-Methyl-2-pentanone	ND	1.0		µg/L	1	12/29/2017 11:10:00 AM	R48124
Methylene chloride	ND	0.30		µg/L	1	12/29/2017 11:10:00 AM	R48124
n-Butylbenzene	ND	0.30		µg/L	1	12/29/2017 11:10:00 AM	R48124
n-Propylbenzene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
sec-Butylbenzene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
Styrene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
tert-Butylbenzene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
trans-1,2-DCE	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
1,1,1-Trichloroethane	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
1,1,2-Trichloroethane	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
Trichloroethene (TCE)	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
Trichlorofluoromethane	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
1,2,3-Trichloropropane	ND	0.20		µg/L	1	12/29/2017 11:10:00 AM	R48124
Vinyl chloride	ND	0.10		µg/L	1	12/29/2017 11:10:00 AM	R48124
Xylenes, Total	ND	0.15		µg/L	1	12/29/2017 11:10:00 AM	R48124
Surr: Dibromofluoromethane	82.7	70-130		%Rec	1	12/29/2017 11:10:00 AM	R48124
Surr: 1,2-Dichloroethane-d4	81.3	70-130		%Rec	1	12/29/2017 11:10:00 AM	R48124
Surr: Toluene-d8	86.1	70-130		%Rec	1	12/29/2017 11:10:00 AM	R48124
Surr: 4-Bromofluorobenzene	83.2	70-130		%Rec	1	12/29/2017 11:10:00 AM	R48124

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 2 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1712D01

Date Reported: 1/3/2018

CLIENT: City of Las Cruces

Client Sample ID: AS2-171220

Project: CLC Joint Superfund Projec Center Mont

Collection Date: 12/20/2017 9:18:00 AM

Lab ID: 1712D01-002

Matrix: AIR

Received Date: 12/21/2017 10:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
Toluene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
Ethylbenzene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
Naphthalene	ND	0.20		µg/L	1	12/29/2017 11:56:00 AM	R48124
1-Methylnaphthalene	ND	0.40		µg/L	1	12/29/2017 11:56:00 AM	R48124
2-Methylnaphthalene	ND	0.40		µg/L	1	12/29/2017 11:56:00 AM	R48124
Acetone	ND	1.0		µg/L	1	12/29/2017 11:56:00 AM	R48124
Bromobenzene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
Bromodichloromethane	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
Bromoform	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
Bromomethane	ND	0.20		µg/L	1	12/29/2017 11:56:00 AM	R48124
2-Butanone	ND	1.0		µg/L	1	12/29/2017 11:56:00 AM	R48124
Carbon disulfide	ND	1.0		µg/L	1	12/29/2017 11:56:00 AM	R48124
Carbon tetrachloride	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
Chlorobenzene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
Chloroethane	ND	0.20		µg/L	1	12/29/2017 11:56:00 AM	R48124
Chloroform	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
Chloromethane	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
2-Chlorotoluene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
4-Chlorotoluene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
cis-1,2-DCE	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	12/29/2017 11:56:00 AM	R48124
Dibromochloromethane	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
Dibromomethane	ND	0.20		µg/L	1	12/29/2017 11:56:00 AM	R48124
1,2-Dichlorobenzene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
1,3-Dichlorobenzene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
1,4-Dichlorobenzene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
Dichlorodifluoromethane	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
1,1-Dichloroethane	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
1,1-Dichloroethene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
1,2-Dichloropropane	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
1,3-Dichloropropane	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
2,2-Dichloropropane	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 3 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1712D01

Date Reported: 1/3/2018

CLIENT: City of Las Cruces

Client Sample ID: AS2-171220

Project: CLC Joint Superfund Projec Center Mont

Collection Date: 12/20/2017 9:18:00 AM

Lab ID: 1712D01-002

Matrix: AIR

Received Date: 12/21/2017 10:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
Hexachlorobutadiene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
2-Hexanone	ND	1.0		µg/L	1	12/29/2017 11:56:00 AM	R48124
Isopropylbenzene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
4-Isopropyltoluene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
4-Methyl-2-pentanone	ND	1.0		µg/L	1	12/29/2017 11:56:00 AM	R48124
Methylene chloride	ND	0.30		µg/L	1	12/29/2017 11:56:00 AM	R48124
n-Butylbenzene	ND	0.30		µg/L	1	12/29/2017 11:56:00 AM	R48124
n-Propylbenzene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
sec-Butylbenzene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
Styrene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
tert-Butylbenzene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
trans-1,2-DCE	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
1,1,1-Trichloroethane	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
1,1,2-Trichloroethane	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
Trichloroethene (TCE)	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
Trichlorofluoromethane	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
1,2,3-Trichloropropane	ND	0.20		µg/L	1	12/29/2017 11:56:00 AM	R48124
Vinyl chloride	ND	0.10		µg/L	1	12/29/2017 11:56:00 AM	R48124
Xylenes, Total	ND	0.15		µg/L	1	12/29/2017 11:56:00 AM	R48124
Surr: Dibromofluoromethane	81.7	70-130		%Rec	1	12/29/2017 11:56:00 AM	R48124
Surr: 1,2-Dichloroethane-d4	78.1	70-130		%Rec	1	12/29/2017 11:56:00 AM	R48124
Surr: Toluene-d8	86.8	70-130		%Rec	1	12/29/2017 11:56:00 AM	R48124
Surr: 4-Bromofluorobenzene	83.1	70-130		%Rec	1	12/29/2017 11:56:00 AM	R48124

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 4 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Client Name: City of Las Cruces

Work Order Number: 1712D01

RcptNo: 1

Received By: Erin Melendrez

12/21/2017 10:25:00 AM

Erin Melendrez

Completed By: Dennis Suazo

12/21/2017 1:18:05 PM

Dennis Suazo

Reviewed By: ENM

12/21/17

Chain of Custody

1. Custody seals intact on sample bottles? Yes No Not Present
2. Is Chain of Custody complete? Yes No Not Present
3. How was the sample delivered? FedEx

Log In

4. Was an attempt made to cool the samples? Yes No NA
5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
6. Sample(s) in proper container(s)? Yes No
7. Sufficient sample volume for indicated test(s)? Yes No
8. Are samples (except VOA and ONG) properly preserved? Yes No
9. Was preservative added to bottles? Yes No NA
10. VOA vials have zero headspace? Yes No No VOA Vials
11. Were any sample containers received broken? Yes No
12. Does paperwork match bottle labels?
 (Note discrepancies on chain of custody) Yes No
13. Are matrices correctly identified on Chain of Custody? Yes No
14. Is it clear what analyses were requested? Yes No
15. Were all holding times able to be met?
 (If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

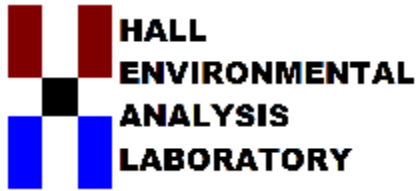
16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	NA	Good	Not Present			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 26, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP Joint Superfund Project Center Monthly Analysis

OrderNo.: 1801930

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 6 sample(s) on 1/18/2018 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued January 24, 2018.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLC 18-180117**Project:** JSP Joint Superfund Project Center Mont**Collection Date:** 1/17/2018 9:07:00 AM**Lab ID:** 1801930-001**Matrix:** AQUEOUS**Received Date:** 1/18/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.062	1.0		µg/L	1	1/22/2018 8:47:00 PM
Toluene	ND	0.064	1.0		µg/L	1	1/22/2018 8:47:00 PM
Ethylbenzene	ND	0.093	1.0		µg/L	1	1/22/2018 8:47:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	1/22/2018 8:47:00 PM
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	1/22/2018 8:47:00 PM
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	1/22/2018 8:47:00 PM
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	1/22/2018 8:47:00 PM
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	1/22/2018 8:47:00 PM
Naphthalene	ND	0.11	2.0		µg/L	1	1/22/2018 8:47:00 PM
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	1/22/2018 8:47:00 PM
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	1/22/2018 8:47:00 PM
Acetone	ND	0.82	10		µg/L	1	1/22/2018 8:47:00 PM
Bromobenzene	ND	0.14	1.0		µg/L	1	1/22/2018 8:47:00 PM
Bromodichloromethane	ND	0.18	1.0		µg/L	1	1/22/2018 8:47:00 PM
Bromoform	ND	0.21	1.0		µg/L	1	1/22/2018 8:47:00 PM
Bromomethane	ND	0.26	3.0		µg/L	1	1/22/2018 8:47:00 PM
2-Butanone	ND	1.1	10		µg/L	1	1/22/2018 8:47:00 PM
Carbon disulfide	ND	0.40	10		µg/L	1	1/22/2018 8:47:00 PM
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	1/22/2018 8:47:00 PM
Chlorobenzene	ND	0.11	1.0		µg/L	1	1/22/2018 8:47:00 PM
Chloroethane	ND	0.23	2.0		µg/L	1	1/22/2018 8:47:00 PM
Chloroform	ND	0.40	1.0		µg/L	1	1/22/2018 8:47:00 PM
Chloromethane	ND	0.29	3.0		µg/L	1	1/22/2018 8:47:00 PM
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	1/22/2018 8:47:00 PM
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	1/22/2018 8:47:00 PM
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	1/22/2018 8:47:00 PM
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	1/22/2018 8:47:00 PM
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	1/22/2018 8:47:00 PM
Dibromochloromethane	ND	0.072	1.0		µg/L	1	1/22/2018 8:47:00 PM
Dibromomethane	ND	0.091	1.0		µg/L	1	1/22/2018 8:47:00 PM
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	1/22/2018 8:47:00 PM
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	1/22/2018 8:47:00 PM
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	1/22/2018 8:47:00 PM
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	1/22/2018 8:47:00 PM
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	1/22/2018 8:47:00 PM
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	1/22/2018 8:47:00 PM
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	1/22/2018 8:47:00 PM
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	1/22/2018 8:47:00 PM
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	1/22/2018 8:47:00 PM
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	1/22/2018 8:47:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLC 18-180117**Project:** JSP Joint Superfund Project Center Mont**Collection Date:** 1/17/2018 9:07:00 AM**Lab ID:** 1801930-001**Matrix:** AQUEOUS**Received Date:** 1/18/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	1/22/2018 8:47:00 PM
2-Hexanone	ND	0.66	10		µg/L	1	1/22/2018 8:47:00 PM
Isopropylbenzene	ND	0.051	1.0		µg/L	1	1/22/2018 8:47:00 PM
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	1/22/2018 8:47:00 PM
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	1/22/2018 8:47:00 PM
Methylene Chloride	ND	0.11	3.0		µg/L	1	1/22/2018 8:47:00 PM
n-Butylbenzene	ND	0.13	3.0		µg/L	1	1/22/2018 8:47:00 PM
n-Propylbenzene	ND	0.074	1.0		µg/L	1	1/22/2018 8:47:00 PM
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	1/22/2018 8:47:00 PM
Styrene	ND	0.16	1.0		µg/L	1	1/22/2018 8:47:00 PM
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	1/22/2018 8:47:00 PM
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	1/22/2018 8:47:00 PM
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	1/22/2018 8:47:00 PM
Tetrachloroethene (PCE)	11	0.13	1.0		µg/L	1	1/22/2018 8:47:00 PM
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	1/22/2018 8:47:00 PM
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	1/22/2018 8:47:00 PM
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	1/22/2018 8:47:00 PM
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	1/22/2018 8:47:00 PM
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	1/22/2018 8:47:00 PM
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	1/22/2018 8:47:00 PM
Trichloroethene (TCE)	0.27	0.11	1.0	J	µg/L	1	1/22/2018 8:47:00 PM
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	1/22/2018 8:47:00 PM
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	1/22/2018 8:47:00 PM
Vinyl chloride	ND	0.18	1.0		µg/L	1	1/22/2018 8:47:00 PM
Xylenes, Total	ND	0.32	1.5		µg/L	1	1/22/2018 8:47:00 PM
Surr: 1,2-Dichloroethane-d4	81.4	0	70-130		%Rec	1	1/22/2018 8:47:00 PM
Surr: 4-Bromofluorobenzene	71.3	0	70-130		%Rec	1	1/22/2018 8:47:00 PM
Surr: Dibromofluoromethane	79.4	0	70-130		%Rec	1	1/22/2018 8:47:00 PM
Surr: Toluene-d8	81.2	0	70-130		%Rec	1	1/22/2018 8:47:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-180117

Project: JSP Joint Superfund Project Center Mont

Collection Date: 1/17/2018 9:43:00 AM

Lab ID: 1801930-002

Matrix: AQUEOUS

Received Date: 1/18/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.062	1.0		µg/L	1	1/22/2018 9:11:00 PM
Toluene	ND	0.064	1.0		µg/L	1	1/22/2018 9:11:00 PM
Ethylbenzene	ND	0.093	1.0		µg/L	1	1/22/2018 9:11:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	1/22/2018 9:11:00 PM
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	1/22/2018 9:11:00 PM
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	1/22/2018 9:11:00 PM
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	1/22/2018 9:11:00 PM
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	1/22/2018 9:11:00 PM
Naphthalene	ND	0.11	2.0		µg/L	1	1/22/2018 9:11:00 PM
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	1/22/2018 9:11:00 PM
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	1/22/2018 9:11:00 PM
Acetone	ND	0.82	10		µg/L	1	1/22/2018 9:11:00 PM
Bromobenzene	ND	0.14	1.0		µg/L	1	1/22/2018 9:11:00 PM
Bromodichloromethane	ND	0.18	1.0		µg/L	1	1/22/2018 9:11:00 PM
Bromoform	ND	0.21	1.0		µg/L	1	1/22/2018 9:11:00 PM
Bromomethane	ND	0.26	3.0		µg/L	1	1/22/2018 9:11:00 PM
2-Butanone	ND	1.1	10		µg/L	1	1/22/2018 9:11:00 PM
Carbon disulfide	ND	0.40	10		µg/L	1	1/22/2018 9:11:00 PM
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	1/22/2018 9:11:00 PM
Chlorobenzene	ND	0.11	1.0		µg/L	1	1/22/2018 9:11:00 PM
Chloroethane	ND	0.23	2.0		µg/L	1	1/22/2018 9:11:00 PM
Chloroform	ND	0.40	1.0		µg/L	1	1/22/2018 9:11:00 PM
Chloromethane	ND	0.29	3.0		µg/L	1	1/22/2018 9:11:00 PM
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	1/22/2018 9:11:00 PM
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	1/22/2018 9:11:00 PM
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	1/22/2018 9:11:00 PM
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	1/22/2018 9:11:00 PM
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	1/22/2018 9:11:00 PM
Dibromochloromethane	ND	0.072	1.0		µg/L	1	1/22/2018 9:11:00 PM
Dibromomethane	ND	0.091	1.0		µg/L	1	1/22/2018 9:11:00 PM
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	1/22/2018 9:11:00 PM
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	1/22/2018 9:11:00 PM
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	1/22/2018 9:11:00 PM
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	1/22/2018 9:11:00 PM
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	1/22/2018 9:11:00 PM
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	1/22/2018 9:11:00 PM
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	1/22/2018 9:11:00 PM
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	1/22/2018 9:11:00 PM
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	1/22/2018 9:11:00 PM
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	1/22/2018 9:11:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLC 27-180117**Project:** JSP Joint Superfund Project Center Mont**Collection Date:** 1/17/2018 9:43:00 AM**Lab ID:** 1801930-002**Matrix:** AQUEOUS**Received Date:** 1/18/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	1/22/2018 9:11:00 PM
2-Hexanone	ND	0.66	10		µg/L	1	1/22/2018 9:11:00 PM
Isopropylbenzene	ND	0.051	1.0		µg/L	1	1/22/2018 9:11:00 PM
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	1/22/2018 9:11:00 PM
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	1/22/2018 9:11:00 PM
Methylene Chloride	ND	0.11	3.0		µg/L	1	1/22/2018 9:11:00 PM
n-Butylbenzene	ND	0.13	3.0		µg/L	1	1/22/2018 9:11:00 PM
n-Propylbenzene	ND	0.074	1.0		µg/L	1	1/22/2018 9:11:00 PM
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	1/22/2018 9:11:00 PM
Styrene	ND	0.16	1.0		µg/L	1	1/22/2018 9:11:00 PM
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	1/22/2018 9:11:00 PM
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	1/22/2018 9:11:00 PM
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	1/22/2018 9:11:00 PM
Tetrachloroethene (PCE)	14	0.13	1.0		µg/L	1	1/22/2018 9:11:00 PM
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	1/22/2018 9:11:00 PM
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	1/22/2018 9:11:00 PM
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	1/22/2018 9:11:00 PM
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	1/22/2018 9:11:00 PM
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	1/22/2018 9:11:00 PM
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	1/22/2018 9:11:00 PM
Trichloroethene (TCE)	0.36	0.11	1.0	J	µg/L	1	1/22/2018 9:11:00 PM
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	1/22/2018 9:11:00 PM
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	1/22/2018 9:11:00 PM
Vinyl chloride	ND	0.18	1.0		µg/L	1	1/22/2018 9:11:00 PM
Xylenes, Total	ND	0.32	1.5		µg/L	1	1/22/2018 9:11:00 PM
Surr: 1,2-Dichloroethane-d4	81.9	0	70-130		%Rec	1	1/22/2018 9:11:00 PM
Surr: 4-Bromofluorobenzene	72.5	0	70-130		%Rec	1	1/22/2018 9:11:00 PM
Surr: Dibromofluoromethane	78.2	0	70-130		%Rec	1	1/22/2018 9:11:00 PM
Surr: Toluene-d8	81.3	0	70-130		%Rec	1	1/22/2018 9:11:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-180117

Project: JSP Joint Superfund Project Center Mont

Collection Date: 1/17/2018 9:18:00 AM

Lab ID: 1801930-003

Matrix: AQUEOUS

Received Date: 1/18/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.062	1.0		µg/L	1	1/22/2018 9:35:00 PM
Toluene	ND	0.064	1.0		µg/L	1	1/22/2018 9:35:00 PM
Ethylbenzene	ND	0.093	1.0		µg/L	1	1/22/2018 9:35:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	1/22/2018 9:35:00 PM
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	1/22/2018 9:35:00 PM
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	1/22/2018 9:35:00 PM
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	1/22/2018 9:35:00 PM
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	1/22/2018 9:35:00 PM
Naphthalene	ND	0.11	2.0		µg/L	1	1/22/2018 9:35:00 PM
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	1/22/2018 9:35:00 PM
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	1/22/2018 9:35:00 PM
Acetone	ND	0.82	10		µg/L	1	1/22/2018 9:35:00 PM
Bromobenzene	ND	0.14	1.0		µg/L	1	1/22/2018 9:35:00 PM
Bromodichloromethane	ND	0.18	1.0		µg/L	1	1/22/2018 9:35:00 PM
Bromoform	ND	0.21	1.0		µg/L	1	1/22/2018 9:35:00 PM
Bromomethane	ND	0.26	3.0		µg/L	1	1/22/2018 9:35:00 PM
2-Butanone	ND	1.1	10		µg/L	1	1/22/2018 9:35:00 PM
Carbon disulfide	ND	0.40	10		µg/L	1	1/22/2018 9:35:00 PM
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	1/22/2018 9:35:00 PM
Chlorobenzene	ND	0.11	1.0		µg/L	1	1/22/2018 9:35:00 PM
Chloroethane	ND	0.23	2.0		µg/L	1	1/22/2018 9:35:00 PM
Chloroform	ND	0.40	1.0		µg/L	1	1/22/2018 9:35:00 PM
Chloromethane	ND	0.29	3.0		µg/L	1	1/22/2018 9:35:00 PM
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	1/22/2018 9:35:00 PM
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	1/22/2018 9:35:00 PM
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	1/22/2018 9:35:00 PM
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	1/22/2018 9:35:00 PM
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	1/22/2018 9:35:00 PM
Dibromochloromethane	ND	0.072	1.0		µg/L	1	1/22/2018 9:35:00 PM
Dibromomethane	ND	0.091	1.0		µg/L	1	1/22/2018 9:35:00 PM
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	1/22/2018 9:35:00 PM
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	1/22/2018 9:35:00 PM
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	1/22/2018 9:35:00 PM
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	1/22/2018 9:35:00 PM
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	1/22/2018 9:35:00 PM
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	1/22/2018 9:35:00 PM
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	1/22/2018 9:35:00 PM
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	1/22/2018 9:35:00 PM
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	1/22/2018 9:35:00 PM
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	1/22/2018 9:35:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLC IS1-180117**Project:** JSP Joint Superfund Project Center Mont**Collection Date:** 1/17/2018 9:18:00 AM**Lab ID:** 1801930-003**Matrix:** AQUEOUS**Received Date:** 1/18/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	1/22/2018 9:35:00 PM
2-Hexanone	ND	0.66	10		µg/L	1	1/22/2018 9:35:00 PM
Isopropylbenzene	ND	0.051	1.0		µg/L	1	1/22/2018 9:35:00 PM
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	1/22/2018 9:35:00 PM
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	1/22/2018 9:35:00 PM
Methylene Chloride	ND	0.11	3.0		µg/L	1	1/22/2018 9:35:00 PM
n-Butylbenzene	ND	0.13	3.0		µg/L	1	1/22/2018 9:35:00 PM
n-Propylbenzene	ND	0.074	1.0		µg/L	1	1/22/2018 9:35:00 PM
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	1/22/2018 9:35:00 PM
Styrene	ND	0.16	1.0		µg/L	1	1/22/2018 9:35:00 PM
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	1/22/2018 9:35:00 PM
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	1/22/2018 9:35:00 PM
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	1/22/2018 9:35:00 PM
Tetrachloroethene (PCE)	10	0.13	1.0		µg/L	1	1/22/2018 9:35:00 PM
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	1/22/2018 9:35:00 PM
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	1/22/2018 9:35:00 PM
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	1/22/2018 9:35:00 PM
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	1/22/2018 9:35:00 PM
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	1/22/2018 9:35:00 PM
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	1/22/2018 9:35:00 PM
Trichloroethene (TCE)	0.31	0.11	1.0	J	µg/L	1	1/22/2018 9:35:00 PM
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	1/22/2018 9:35:00 PM
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	1/22/2018 9:35:00 PM
Vinyl chloride	ND	0.18	1.0		µg/L	1	1/22/2018 9:35:00 PM
Xylenes, Total	ND	0.32	1.5		µg/L	1	1/22/2018 9:35:00 PM
Surr: 1,2-Dichloroethane-d4	83.5	0	70-130		%Rec	1	1/22/2018 9:35:00 PM
Surr: 4-Bromofluorobenzene	71.6	0	70-130		%Rec	1	1/22/2018 9:35:00 PM
Surr: Dibromofluoromethane	78.5	0	70-130		%Rec	1	1/22/2018 9:35:00 PM
Surr: Toluene-d8	81.1	0	70-130		%Rec	1	1/22/2018 9:35:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLC C1-180117**Project:** JSP Joint Superfund Project Center Mont**Collection Date:** 1/17/2018 9:20:00 AM**Lab ID:** 1801930-004**Matrix:** AQUEOUS**Received Date:** 1/18/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.062	1.0		µg/L	1	1/22/2018 9:59:00 PM
Toluene	ND	0.064	1.0		µg/L	1	1/22/2018 9:59:00 PM
Ethylbenzene	ND	0.093	1.0		µg/L	1	1/22/2018 9:59:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	1/22/2018 9:59:00 PM
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	1/22/2018 9:59:00 PM
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	1/22/2018 9:59:00 PM
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	1/22/2018 9:59:00 PM
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	1/22/2018 9:59:00 PM
Naphthalene	ND	0.11	2.0		µg/L	1	1/22/2018 9:59:00 PM
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	1/22/2018 9:59:00 PM
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	1/22/2018 9:59:00 PM
Acetone	ND	0.82	10		µg/L	1	1/22/2018 9:59:00 PM
Bromobenzene	ND	0.14	1.0		µg/L	1	1/22/2018 9:59:00 PM
Bromodichloromethane	ND	0.18	1.0		µg/L	1	1/22/2018 9:59:00 PM
Bromoform	ND	0.21	1.0		µg/L	1	1/22/2018 9:59:00 PM
Bromomethane	ND	0.26	3.0		µg/L	1	1/22/2018 9:59:00 PM
2-Butanone	ND	1.1	10		µg/L	1	1/22/2018 9:59:00 PM
Carbon disulfide	ND	0.40	10		µg/L	1	1/22/2018 9:59:00 PM
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	1/22/2018 9:59:00 PM
Chlorobenzene	ND	0.11	1.0		µg/L	1	1/22/2018 9:59:00 PM
Chloroethane	ND	0.23	2.0		µg/L	1	1/22/2018 9:59:00 PM
Chloroform	ND	0.40	1.0		µg/L	1	1/22/2018 9:59:00 PM
Chloromethane	ND	0.29	3.0		µg/L	1	1/22/2018 9:59:00 PM
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	1/22/2018 9:59:00 PM
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	1/22/2018 9:59:00 PM
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	1/22/2018 9:59:00 PM
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	1/22/2018 9:59:00 PM
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	1/22/2018 9:59:00 PM
Dibromochloromethane	ND	0.072	1.0		µg/L	1	1/22/2018 9:59:00 PM
Dibromomethane	ND	0.091	1.0		µg/L	1	1/22/2018 9:59:00 PM
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	1/22/2018 9:59:00 PM
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	1/22/2018 9:59:00 PM
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	1/22/2018 9:59:00 PM
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	1/22/2018 9:59:00 PM
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	1/22/2018 9:59:00 PM
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	1/22/2018 9:59:00 PM
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	1/22/2018 9:59:00 PM
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	1/22/2018 9:59:00 PM
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	1/22/2018 9:59:00 PM
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	1/22/2018 9:59:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLC C1-180117**Project:** JSP Joint Superfund Project Center Mont**Collection Date:** 1/17/2018 9:20:00 AM**Lab ID:** 1801930-004**Matrix:** AQUEOUS**Received Date:** 1/18/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	1/22/2018 9:59:00 PM
2-Hexanone	ND	0.66	10		µg/L	1	1/22/2018 9:59:00 PM
Isopropylbenzene	ND	0.051	1.0		µg/L	1	1/22/2018 9:59:00 PM
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	1/22/2018 9:59:00 PM
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	1/22/2018 9:59:00 PM
Methylene Chloride	ND	0.11	3.0		µg/L	1	1/22/2018 9:59:00 PM
n-Butylbenzene	ND	0.13	3.0		µg/L	1	1/22/2018 9:59:00 PM
n-Propylbenzene	ND	0.074	1.0		µg/L	1	1/22/2018 9:59:00 PM
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	1/22/2018 9:59:00 PM
Styrene	ND	0.16	1.0		µg/L	1	1/22/2018 9:59:00 PM
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	1/22/2018 9:59:00 PM
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	1/22/2018 9:59:00 PM
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	1/22/2018 9:59:00 PM
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	1/22/2018 9:59:00 PM
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	1/22/2018 9:59:00 PM
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	1/22/2018 9:59:00 PM
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	1/22/2018 9:59:00 PM
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	1/22/2018 9:59:00 PM
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	1/22/2018 9:59:00 PM
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	1/22/2018 9:59:00 PM
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	1/22/2018 9:59:00 PM
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	1/22/2018 9:59:00 PM
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	1/22/2018 9:59:00 PM
Vinyl chloride	ND	0.18	1.0		µg/L	1	1/22/2018 9:59:00 PM
Xylenes, Total	ND	0.32	1.5		µg/L	1	1/22/2018 9:59:00 PM
Surr: 1,2-Dichloroethane-d4	81.1	0	70-130		%Rec	1	1/22/2018 9:59:00 PM
Surr: 4-Bromofluorobenzene	70.2	0	70-130		%Rec	1	1/22/2018 9:59:00 PM
Surr: Dibromofluoromethane	78.6	0	70-130		%Rec	1	1/22/2018 9:59:00 PM
Surr: Toluene-d8	81.5	0	70-130		%Rec	1	1/22/2018 9:59:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLC C2-180117**Project:** JSP Joint Superfund Project Center Mont**Collection Date:** 1/17/2018 9:22:00 AM**Lab ID:** 1801930-005**Matrix:** AQUEOUS**Received Date:** 1/18/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.062	1.0		µg/L	1	1/22/2018 10:23:00 PM
Toluene	ND	0.064	1.0		µg/L	1	1/22/2018 10:23:00 PM
Ethylbenzene	ND	0.093	1.0		µg/L	1	1/22/2018 10:23:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	1/22/2018 10:23:00 PM
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	1/22/2018 10:23:00 PM
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	1/22/2018 10:23:00 PM
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	1/22/2018 10:23:00 PM
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	1/22/2018 10:23:00 PM
Naphthalene	ND	0.11	2.0		µg/L	1	1/22/2018 10:23:00 PM
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	1/22/2018 10:23:00 PM
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	1/22/2018 10:23:00 PM
Acetone	ND	0.82	10		µg/L	1	1/22/2018 10:23:00 PM
Bromobenzene	ND	0.14	1.0		µg/L	1	1/22/2018 10:23:00 PM
Bromodichloromethane	ND	0.18	1.0		µg/L	1	1/22/2018 10:23:00 PM
Bromoform	ND	0.21	1.0		µg/L	1	1/22/2018 10:23:00 PM
Bromomethane	ND	0.26	3.0		µg/L	1	1/22/2018 10:23:00 PM
2-Butanone	ND	1.1	10		µg/L	1	1/22/2018 10:23:00 PM
Carbon disulfide	ND	0.40	10		µg/L	1	1/22/2018 10:23:00 PM
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	1/22/2018 10:23:00 PM
Chlorobenzene	ND	0.11	1.0		µg/L	1	1/22/2018 10:23:00 PM
Chloroethane	ND	0.23	2.0		µg/L	1	1/22/2018 10:23:00 PM
Chloroform	ND	0.40	1.0		µg/L	1	1/22/2018 10:23:00 PM
Chloromethane	ND	0.29	3.0		µg/L	1	1/22/2018 10:23:00 PM
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	1/22/2018 10:23:00 PM
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	1/22/2018 10:23:00 PM
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	1/22/2018 10:23:00 PM
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	1/22/2018 10:23:00 PM
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	1/22/2018 10:23:00 PM
Dibromochloromethane	ND	0.072	1.0		µg/L	1	1/22/2018 10:23:00 PM
Dibromomethane	ND	0.091	1.0		µg/L	1	1/22/2018 10:23:00 PM
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	1/22/2018 10:23:00 PM
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	1/22/2018 10:23:00 PM
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	1/22/2018 10:23:00 PM
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	1/22/2018 10:23:00 PM
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	1/22/2018 10:23:00 PM
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	1/22/2018 10:23:00 PM
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	1/22/2018 10:23:00 PM
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	1/22/2018 10:23:00 PM
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	1/22/2018 10:23:00 PM
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	1/22/2018 10:23:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLC C2-180117**Project:** JSP Joint Superfund Project Center Mont**Collection Date:** 1/17/2018 9:22:00 AM**Lab ID:** 1801930-005**Matrix:** AQUEOUS**Received Date:** 1/18/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	1/22/2018 10:23:00 PM
2-Hexanone	ND	0.66	10		µg/L	1	1/22/2018 10:23:00 PM
Isopropylbenzene	ND	0.051	1.0		µg/L	1	1/22/2018 10:23:00 PM
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	1/22/2018 10:23:00 PM
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	1/22/2018 10:23:00 PM
Methylene Chloride	ND	0.11	3.0		µg/L	1	1/22/2018 10:23:00 PM
n-Butylbenzene	ND	0.13	3.0		µg/L	1	1/22/2018 10:23:00 PM
n-Propylbenzene	ND	0.074	1.0		µg/L	1	1/22/2018 10:23:00 PM
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	1/22/2018 10:23:00 PM
Styrene	ND	0.16	1.0		µg/L	1	1/22/2018 10:23:00 PM
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	1/22/2018 10:23:00 PM
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	1/22/2018 10:23:00 PM
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	1/22/2018 10:23:00 PM
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	1/22/2018 10:23:00 PM
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	1/22/2018 10:23:00 PM
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	1/22/2018 10:23:00 PM
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	1/22/2018 10:23:00 PM
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	1/22/2018 10:23:00 PM
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	1/22/2018 10:23:00 PM
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	1/22/2018 10:23:00 PM
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	1/22/2018 10:23:00 PM
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	1/22/2018 10:23:00 PM
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	1/22/2018 10:23:00 PM
Vinyl chloride	ND	0.18	1.0		µg/L	1	1/22/2018 10:23:00 PM
Xylenes, Total	ND	0.32	1.5		µg/L	1	1/22/2018 10:23:00 PM
Surr: 1,2-Dichloroethane-d4	82.2	0	70-130		%Rec	1	1/22/2018 10:23:00 PM
Surr: 4-Bromofluorobenzene	70.3	0	70-130		%Rec	1	1/22/2018 10:23:00 PM
Surr: Dibromofluoromethane	80.1	0	70-130		%Rec	1	1/22/2018 10:23:00 PM
Surr: Toluene-d8	80.1	0	70-130		%Rec	1	1/22/2018 10:23:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-180117

Project: JSP Joint Superfund Project Center Mont

Collection Date: 1/17/2018 9:24:00 AM

Lab ID: 1801930-006

Matrix: AQUEOUS

Received Date: 1/18/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.062	1.0		µg/L	1	1/22/2018 10:46:00 PM
Toluene	ND	0.064	1.0		µg/L	1	1/22/2018 10:46:00 PM
Ethylbenzene	ND	0.093	1.0		µg/L	1	1/22/2018 10:46:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.24	1.0		µg/L	1	1/22/2018 10:46:00 PM
1,2,4-Trimethylbenzene	ND	0.11	1.0		µg/L	1	1/22/2018 10:46:00 PM
1,3,5-Trimethylbenzene	ND	0.087	1.0		µg/L	1	1/22/2018 10:46:00 PM
1,2-Dichloroethane (EDC)	ND	0.40	1.0		µg/L	1	1/22/2018 10:46:00 PM
1,2-Dibromoethane (EDB)	ND	0.13	1.0		µg/L	1	1/22/2018 10:46:00 PM
Naphthalene	ND	0.11	2.0		µg/L	1	1/22/2018 10:46:00 PM
1-Methylnaphthalene	ND	0.16	4.0		µg/L	1	1/22/2018 10:46:00 PM
2-Methylnaphthalene	ND	0.15	4.0		µg/L	1	1/22/2018 10:46:00 PM
Acetone	ND	0.82	10		µg/L	1	1/22/2018 10:46:00 PM
Bromobenzene	ND	0.14	1.0		µg/L	1	1/22/2018 10:46:00 PM
Bromodichloromethane	0.68	0.18	1.0	J	µg/L	1	1/22/2018 10:46:00 PM
Bromoform	6.6	0.21	1.0		µg/L	1	1/22/2018 10:46:00 PM
Bromomethane	ND	0.26	3.0		µg/L	1	1/22/2018 10:46:00 PM
2-Butanone	ND	1.1	10		µg/L	1	1/22/2018 10:46:00 PM
Carbon disulfide	ND	0.40	10		µg/L	1	1/22/2018 10:46:00 PM
Carbon Tetrachloride	ND	0.11	1.0		µg/L	1	1/22/2018 10:46:00 PM
Chlorobenzene	ND	0.11	1.0		µg/L	1	1/22/2018 10:46:00 PM
Chloroethane	ND	0.23	2.0		µg/L	1	1/22/2018 10:46:00 PM
Chloroform	ND	0.40	1.0		µg/L	1	1/22/2018 10:46:00 PM
Chloromethane	ND	0.29	3.0		µg/L	1	1/22/2018 10:46:00 PM
2-Chlorotoluene	ND	0.40	1.0		µg/L	1	1/22/2018 10:46:00 PM
4-Chlorotoluene	ND	0.40	1.0		µg/L	1	1/22/2018 10:46:00 PM
cis-1,2-DCE	ND	0.20	1.0		µg/L	1	1/22/2018 10:46:00 PM
cis-1,3-Dichloropropene	ND	0.082	1.0		µg/L	1	1/22/2018 10:46:00 PM
1,2-Dibromo-3-chloropropane	ND	1.4	2.0		µg/L	1	1/22/2018 10:46:00 PM
Dibromochloromethane	2.0	0.072	1.0		µg/L	1	1/22/2018 10:46:00 PM
Dibromomethane	ND	0.091	1.0		µg/L	1	1/22/2018 10:46:00 PM
1,2-Dichlorobenzene	ND	0.090	1.0		µg/L	1	1/22/2018 10:46:00 PM
1,3-Dichlorobenzene	ND	0.15	1.0		µg/L	1	1/22/2018 10:46:00 PM
1,4-Dichlorobenzene	ND	0.40	1.0		µg/L	1	1/22/2018 10:46:00 PM
Dichlorodifluoromethane	ND	1.0	1.0		µg/L	1	1/22/2018 10:46:00 PM
1,1-Dichloroethane	ND	0.40	1.0		µg/L	1	1/22/2018 10:46:00 PM
1,1-Dichloroethene	ND	0.081	1.0		µg/L	1	1/22/2018 10:46:00 PM
1,2-Dichloropropane	ND	0.10	1.0		µg/L	1	1/22/2018 10:46:00 PM
1,3-Dichloropropane	ND	0.17	1.0		µg/L	1	1/22/2018 10:46:00 PM
2,2-Dichloropropane	ND	0.16	2.0		µg/L	1	1/22/2018 10:46:00 PM
1,1-Dichloropropene	ND	0.093	1.0		µg/L	1	1/22/2018 10:46:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLC ES1-180117**Project:** JSP Joint Superfund Project Center Mont**Collection Date:** 1/17/2018 9:24:00 AM**Lab ID:** 1801930-006**Matrix:** AQUEOUS**Received Date:** 1/18/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Hexachlorobutadiene	ND	0.80	1.0		µg/L	1	1/22/2018 10:46:00 PM
2-Hexanone	ND	0.66	10		µg/L	1	1/22/2018 10:46:00 PM
Isopropylbenzene	ND	0.051	1.0		µg/L	1	1/22/2018 10:46:00 PM
4-Isopropyltoluene	ND	0.096	1.0		µg/L	1	1/22/2018 10:46:00 PM
4-Methyl-2-pentanone	ND	0.71	10		µg/L	1	1/22/2018 10:46:00 PM
Methylene Chloride	ND	0.11	3.0		µg/L	1	1/22/2018 10:46:00 PM
n-Butylbenzene	ND	0.13	3.0		µg/L	1	1/22/2018 10:46:00 PM
n-Propylbenzene	ND	0.074	1.0		µg/L	1	1/22/2018 10:46:00 PM
sec-Butylbenzene	ND	0.11	1.0		µg/L	1	1/22/2018 10:46:00 PM
Styrene	ND	0.16	1.0		µg/L	1	1/22/2018 10:46:00 PM
tert-Butylbenzene	ND	0.10	1.0		µg/L	1	1/22/2018 10:46:00 PM
1,1,1,2-Tetrachloroethane	ND	0.10	1.0		µg/L	1	1/22/2018 10:46:00 PM
1,1,2,2-Tetrachloroethane	ND	0.14	2.0		µg/L	1	1/22/2018 10:46:00 PM
Tetrachloroethene (PCE)	ND	0.13	1.0		µg/L	1	1/22/2018 10:46:00 PM
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	1/22/2018 10:46:00 PM
trans-1,3-Dichloropropene	ND	0.22	1.0		µg/L	1	1/22/2018 10:46:00 PM
1,2,3-Trichlorobenzene	ND	0.12	1.0		µg/L	1	1/22/2018 10:46:00 PM
1,2,4-Trichlorobenzene	ND	0.14	1.0		µg/L	1	1/22/2018 10:46:00 PM
1,1,1-Trichloroethane	ND	0.073	1.0		µg/L	1	1/22/2018 10:46:00 PM
1,1,2-Trichloroethane	ND	0.14	1.0		µg/L	1	1/22/2018 10:46:00 PM
Trichloroethene (TCE)	ND	0.11	1.0		µg/L	1	1/22/2018 10:46:00 PM
Trichlorofluoromethane	ND	0.18	1.0		µg/L	1	1/22/2018 10:46:00 PM
1,2,3-Trichloropropane	ND	0.39	2.0		µg/L	1	1/22/2018 10:46:00 PM
Vinyl chloride	ND	0.18	1.0		µg/L	1	1/22/2018 10:46:00 PM
Xylenes, Total	ND	0.32	1.5		µg/L	1	1/22/2018 10:46:00 PM
Surr: 1,2-Dichloroethane-d4	83.6	0	70-130		%Rec	1	1/22/2018 10:46:00 PM
Surr: 4-Bromofluorobenzene	71.8	0	70-130		%Rec	1	1/22/2018 10:46:00 PM
Surr: Dibromofluoromethane	81.4	0	70-130		%Rec	1	1/22/2018 10:46:00 PM
Surr: Toluene-d8	80.5	0	70-130		%Rec	1	1/22/2018 10:46:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1801930

26-Jan-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Center Monthly An

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R48612		RunNo: 48612							
Prep Date:	Analysis Date: 1/22/2018		SeqNo: 1563430		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.3	70	130			
Toluene	20	1.0	20.00	0	99.0	70	130			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	106	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	91.2	70	130			
Surr: 1,2-Dichloroethane-d4	8.4		10.00		83.8	70	130			
Surr: 4-Bromofluorobenzene	7.5		10.00		74.8	70	130			
Surr: Dibromofluoromethane	8.1		10.00		81.3	70	130			
Surr: Toluene-d8	8.3		10.00		83.2	70	130			

Sample ID RB	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R48612		RunNo: 48612							
Prep Date:	Analysis Date: 1/22/2018		SeqNo: 1563434		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1801930

26-Jan-18

Client: City of Las Cruces

Project: JSP Joint Superfund Project Center Monthly An

Sample ID	RB	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID:	PBW	Batch ID: R48612	RunNo: 48612
Prep Date:		Analysis Date: 1/22/2018	SeqNo: 1563434 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1801930

26-Jan-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Center Monthly An

Sample ID	RB	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R48612		RunNo: 48612						
Prep Date:		Analysis Date: 1/22/2018		SeqNo: 1563434			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.4		10.00		83.5	70	130			
Surr: 4-Bromofluorobenzene	7.3		10.00		73.3	70	130			
Surr: Dibromofluoromethane	8.0		10.00		79.5	70	130			
Surr: Toluene-d8	8.4		10.00		83.9	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

Client Name: City of Las Cruces

Work Order Number: 1801930

RcptNo: 1

Received By: Erin Melendrez

1/18/2018 10:00:00 AM

EM

Completed By: Erin Melendrez

1/18/2018 12:13:10 PM

EM

Reviewed By: *SPC 01/18/18*

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
5. Sample(s) in proper container(s)? Yes No
6. Sufficient sample volume for indicated test(s)? Yes No
7. Are samples (except VOA and ONG) properly preserved? Yes No
8. Was preservative added to bottles? Yes No NA
9. VOA vials have zero headspace? Yes No No VOA Vials
10. Were any sample containers received broken? Yes No
11. Does paperwork match bottle labels?
 (Note discrepancies on chain of custody) Yes No
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Is it clear what analyses were requested? Yes No
14. Were all holding times able to be met?
 (If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.5	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
 Mailing Address: P.O. Box 2600
Las Cruces, N.M. 88004
 Phone #: 575-522-3604
 email or Fax#: laurie@lab-cruces.com 575-522-3604
 Standard Level 4 (Full Validation)
 Accreditation
 NELAP Other
 EDD (Type) EXCEL

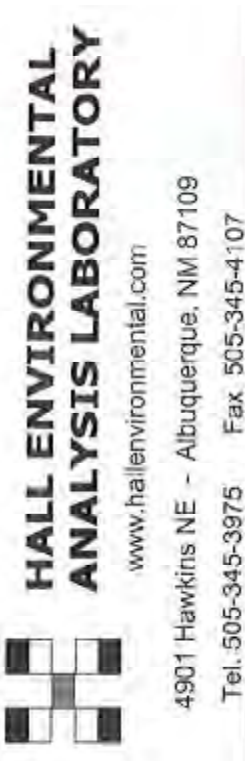
Turn-Around Time:
 Standard Rush
 Project Name:
SR-51st Superfund Project Center
Monthly Analysis
 Project #:
CRC JSP: Griggs Walnut
 Project Manager:
Luis Guerra
575-528-3609
 Sampler: Luis Guerra
 On Ice: Yes No
 Sample Temperature: 2.5-1.0 (CF) = 1.5

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
1-17-18	12:07	working water	CRC 17 - 180117	3-40ml Vials	H ₂ O ₂	1801930
	12:42	working water	CRC 27 - 180117			-002
	1:17	working water	CRC 15 L - 180117			-003
	1:20	working water	CRC C1 - 180117			-004
	1:22	working water	CRC C2 - 180117			-005
1-17-18	1:24	working water	CRC ES1 - 180117	3-40ml Vials	H ₂ O ₂	-006

Date: 01-17-18 Time: 1500
 Relinquished by: [Signature]
 Date: 01-17-18 Time: 11:18 AM
 Received by: [Signature]
 Received by: FEDEX

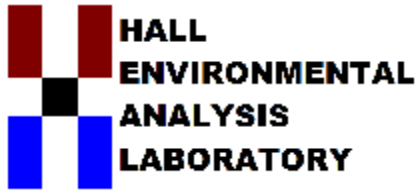
Analysis Request	Remarks
BTEX + MTBE + TMBs (8021)	
BTEX + MTBE + TPH (Gas only)	
TPH 8015B (GRO / DRO / MRO)	
TPH (Method 418.1)	
EDB (Method 504.1)	
PAH's (8310 or 8270 SIMS)	
R CRA 8 Metals	
Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	
8081 Pesticides / 8082 PCB's	
8260B (VOA) VOC	
8270 (Semi-VOA)	

Remarks: Send Prints to:
Luis Guerra lguerra@lab-cruces.org
lguerra@lab-cruces.org
Send prints to CRC c/o Luis Guerra



HALL ENVIRONMENTAL ANALYSIS LABORATORY
 www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly noted on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 24, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP Joint Superfund Project Center Monthly Analysis

OrderNo.: 1801931

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 3 sample(s) on 1/18/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** AS1-180117**Project:** JSP Joint Superfund Project Center Mont**Collection Date:** 1/17/2018 8:27:00 AM**Lab ID:** 1801931-001**Matrix:** AIR**Received Date:** 1/18/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
Toluene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
Ethylbenzene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
Methyl tert-butyl ether (MTBE)	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
1,2,4-Trimethylbenzene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
1,3,5-Trimethylbenzene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
1,2-Dichloroethane (EDC)	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
1,2-Dibromoethane (EDB)	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
Naphthalene	ND	0.20	0.20		µg/L	1	1/23/2018 11:03:55 AM
1-Methylnaphthalene	ND	0.40	0.40		µg/L	1	1/23/2018 11:03:55 AM
2-Methylnaphthalene	ND	0.40	0.40		µg/L	1	1/23/2018 11:03:55 AM
Acetone	ND	1.0	1.0		µg/L	1	1/23/2018 11:03:55 AM
Bromobenzene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
Bromodichloromethane	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
Bromoform	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
Bromomethane	ND	0.20	0.20		µg/L	1	1/23/2018 11:03:55 AM
2-Butanone	ND	1.0	1.0		µg/L	1	1/23/2018 11:03:55 AM
Carbon disulfide	ND	1.0	1.0		µg/L	1	1/23/2018 11:03:55 AM
Carbon tetrachloride	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
Chlorobenzene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
Chloroethane	ND	0.20	0.20		µg/L	1	1/23/2018 11:03:55 AM
Chloroform	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
Chloromethane	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
2-Chlorotoluene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
4-Chlorotoluene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
cis-1,2-DCE	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
cis-1,3-Dichloropropene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
1,2-Dibromo-3-chloropropane	ND	0.20	0.20		µg/L	1	1/23/2018 11:03:55 AM
Dibromochloromethane	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
Dibromomethane	ND	0.20	0.20		µg/L	1	1/23/2018 11:03:55 AM
1,2-Dichlorobenzene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
1,3-Dichlorobenzene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
1,4-Dichlorobenzene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
Dichlorodifluoromethane	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
1,1-Dichloroethane	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
1,1-Dichloroethene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
1,2-Dichloropropane	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
1,3-Dichloropropane	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
2,2-Dichloropropane	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
1,1-Dichloropropene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** AS1-180117**Project:** JSP Joint Superfund Project Center Mont**Collection Date:** 1/17/2018 8:27:00 AM**Lab ID:** 1801931-001**Matrix:** AIR**Received Date:** 1/18/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Hexachlorobutadiene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
2-Hexanone	ND	1.0	1.0		µg/L	1	1/23/2018 11:03:55 AM
Isopropylbenzene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
4-Isopropyltoluene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
4-Methyl-2-pentanone	ND	1.0	1.0		µg/L	1	1/23/2018 11:03:55 AM
Methylene chloride	ND	0.30	0.30		µg/L	1	1/23/2018 11:03:55 AM
n-Butylbenzene	ND	0.30	0.30		µg/L	1	1/23/2018 11:03:55 AM
n-Propylbenzene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
sec-Butylbenzene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
Styrene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
tert-Butylbenzene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
1,1,1,2-Tetrachloroethane	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
1,1,2,2-Tetrachloroethane	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
Tetrachloroethene (PCE)	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
trans-1,2-DCE	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
trans-1,3-Dichloropropene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
1,2,3-Trichlorobenzene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
1,2,4-Trichlorobenzene	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
1,1,1-Trichloroethane	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
1,1,2-Trichloroethane	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
Trichloroethene (TCE)	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
Trichlorofluoromethane	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
1,2,3-Trichloropropane	ND	0.20	0.20		µg/L	1	1/23/2018 11:03:55 AM
Vinyl chloride	ND	0.10	0.10		µg/L	1	1/23/2018 11:03:55 AM
Xylenes, Total	ND	0.15	0.15		µg/L	1	1/23/2018 11:03:55 AM
Surr: Dibromofluoromethane	95.7	0	70-130		%Rec	1	1/23/2018 11:03:55 AM
Surr: 1,2-Dichloroethane-d4	88.2	0	70-130		%Rec	1	1/23/2018 11:03:55 AM
Surr: Toluene-d8	104	0	70-130		%Rec	1	1/23/2018 11:03:55 AM
Surr: 4-Bromofluorobenzene	109	0	70-130		%Rec	1	1/23/2018 11:03:55 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** AS1-180117 DUP**Project:** JSP Joint Superfund Project Center Mont**Collection Date:** 1/17/2018 8:28:00 AM**Lab ID:** 1801931-002**Matrix:** AIR**Received Date:** 1/18/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
Toluene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
Ethylbenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
Methyl tert-butyl ether (MTBE)	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
1,2,4-Trimethylbenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
1,3,5-Trimethylbenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
1,2-Dichloroethane (EDC)	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
1,2-Dibromoethane (EDB)	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
Naphthalene	ND	0.20	0.20		µg/L	1	1/23/2018 12:02:27 PM
1-Methylnaphthalene	ND	0.40	0.40		µg/L	1	1/23/2018 12:02:27 PM
2-Methylnaphthalene	ND	0.40	0.40		µg/L	1	1/23/2018 12:02:27 PM
Acetone	ND	1.0	1.0		µg/L	1	1/23/2018 12:02:27 PM
Bromobenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
Bromodichloromethane	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
Bromoform	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
Bromomethane	ND	0.20	0.20		µg/L	1	1/23/2018 12:02:27 PM
2-Butanone	ND	1.0	1.0		µg/L	1	1/23/2018 12:02:27 PM
Carbon disulfide	ND	1.0	1.0		µg/L	1	1/23/2018 12:02:27 PM
Carbon tetrachloride	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
Chlorobenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
Chloroethane	ND	0.20	0.20		µg/L	1	1/23/2018 12:02:27 PM
Chloroform	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
Chloromethane	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
2-Chlorotoluene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
4-Chlorotoluene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
cis-1,2-DCE	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
cis-1,3-Dichloropropene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
1,2-Dibromo-3-chloropropane	ND	0.20	0.20		µg/L	1	1/23/2018 12:02:27 PM
Dibromochloromethane	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
Dibromomethane	ND	0.20	0.20		µg/L	1	1/23/2018 12:02:27 PM
1,2-Dichlorobenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
1,3-Dichlorobenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
1,4-Dichlorobenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
Dichlorodifluoromethane	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
1,1-Dichloroethane	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
1,1-Dichloroethene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
1,2-Dichloropropane	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
1,3-Dichloropropane	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
2,2-Dichloropropane	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
1,1-Dichloropropene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** AS1-180117 DUP**Project:** JSP Joint Superfund Project Center Mont**Collection Date:** 1/17/2018 8:28:00 AM**Lab ID:** 1801931-002**Matrix:** AIR**Received Date:** 1/18/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Hexachlorobutadiene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
2-Hexanone	ND	1.0	1.0		µg/L	1	1/23/2018 12:02:27 PM
Isopropylbenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
4-Isopropyltoluene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
4-Methyl-2-pentanone	ND	1.0	1.0		µg/L	1	1/23/2018 12:02:27 PM
Methylene chloride	ND	0.30	0.30		µg/L	1	1/23/2018 12:02:27 PM
n-Butylbenzene	ND	0.30	0.30		µg/L	1	1/23/2018 12:02:27 PM
n-Propylbenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
sec-Butylbenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
Styrene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
tert-Butylbenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
1,1,1,2-Tetrachloroethane	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
1,1,2,2-Tetrachloroethane	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
Tetrachloroethene (PCE)	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
trans-1,2-DCE	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
trans-1,3-Dichloropropene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
1,2,3-Trichlorobenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
1,2,4-Trichlorobenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
1,1,1-Trichloroethane	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
1,1,2-Trichloroethane	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
Trichloroethene (TCE)	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
Trichlorofluoromethane	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
1,2,3-Trichloropropane	ND	0.20	0.20		µg/L	1	1/23/2018 12:02:27 PM
Vinyl chloride	ND	0.10	0.10		µg/L	1	1/23/2018 12:02:27 PM
Xylenes, Total	ND	0.15	0.15		µg/L	1	1/23/2018 12:02:27 PM
Surr: Dibromofluoromethane	97.6	0	70-130		%Rec	1	1/23/2018 12:02:27 PM
Surr: 1,2-Dichloroethane-d4	92.1	0	70-130		%Rec	1	1/23/2018 12:02:27 PM
Surr: Toluene-d8	106	0	70-130		%Rec	1	1/23/2018 12:02:27 PM
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	1/23/2018 12:02:27 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** AS2-180117**Project:** JSP Joint Superfund Project Center Mont**Collection Date:** 1/17/2018 8:31:00 AM**Lab ID:** 1801931-003**Matrix:** AIR**Received Date:** 1/18/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
Toluene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
Ethylbenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
Methyl tert-butyl ether (MTBE)	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
1,2,4-Trimethylbenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
1,3,5-Trimethylbenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
1,2-Dichloroethane (EDC)	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
1,2-Dibromoethane (EDB)	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
Naphthalene	ND	0.20	0.20		µg/L	1	1/23/2018 12:31:57 PM
1-Methylnaphthalene	ND	0.40	0.40		µg/L	1	1/23/2018 12:31:57 PM
2-Methylnaphthalene	ND	0.40	0.40		µg/L	1	1/23/2018 12:31:57 PM
Acetone	ND	1.0	1.0		µg/L	1	1/23/2018 12:31:57 PM
Bromobenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
Bromodichloromethane	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
Bromoform	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
Bromomethane	ND	0.20	0.20		µg/L	1	1/23/2018 12:31:57 PM
2-Butanone	ND	1.0	1.0		µg/L	1	1/23/2018 12:31:57 PM
Carbon disulfide	ND	1.0	1.0		µg/L	1	1/23/2018 12:31:57 PM
Carbon tetrachloride	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
Chlorobenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
Chloroethane	ND	0.20	0.20		µg/L	1	1/23/2018 12:31:57 PM
Chloroform	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
Chloromethane	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
2-Chlorotoluene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
4-Chlorotoluene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
cis-1,2-DCE	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
cis-1,3-Dichloropropene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
1,2-Dibromo-3-chloropropane	ND	0.20	0.20		µg/L	1	1/23/2018 12:31:57 PM
Dibromochloromethane	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
Dibromomethane	ND	0.20	0.20		µg/L	1	1/23/2018 12:31:57 PM
1,2-Dichlorobenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
1,3-Dichlorobenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
1,4-Dichlorobenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
Dichlorodifluoromethane	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
1,1-Dichloroethane	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
1,1-Dichloroethene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
1,2-Dichloropropane	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
1,3-Dichloropropane	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
2,2-Dichloropropane	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
1,1-Dichloropropene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** AS2-180117**Project:** JSP Joint Superfund Project Center Mont**Collection Date:** 1/17/2018 8:31:00 AM**Lab ID:** 1801931-003**Matrix:** AIR**Received Date:** 1/18/2018 10:00:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Hexachlorobutadiene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
2-Hexanone	ND	1.0	1.0		µg/L	1	1/23/2018 12:31:57 PM
Isopropylbenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
4-Isopropyltoluene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
4-Methyl-2-pentanone	ND	1.0	1.0		µg/L	1	1/23/2018 12:31:57 PM
Methylene chloride	ND	0.30	0.30		µg/L	1	1/23/2018 12:31:57 PM
n-Butylbenzene	ND	0.30	0.30		µg/L	1	1/23/2018 12:31:57 PM
n-Propylbenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
sec-Butylbenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
Styrene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
tert-Butylbenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
1,1,1,2-Tetrachloroethane	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
1,1,2,2-Tetrachloroethane	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
Tetrachloroethene (PCE)	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
trans-1,2-DCE	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
trans-1,3-Dichloropropene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
1,2,3-Trichlorobenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
1,2,4-Trichlorobenzene	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
1,1,1-Trichloroethane	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
1,1,2-Trichloroethane	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
Trichloroethene (TCE)	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
Trichlorofluoromethane	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
1,2,3-Trichloropropane	ND	0.20	0.20		µg/L	1	1/23/2018 12:31:57 PM
Vinyl chloride	ND	0.10	0.10		µg/L	1	1/23/2018 12:31:57 PM
Xylenes, Total	ND	0.15	0.15		µg/L	1	1/23/2018 12:31:57 PM
Surr: Dibromofluoromethane	99.7	0	70-130		%Rec	1	1/23/2018 12:31:57 PM
Surr: 1,2-Dichloroethane-d4	92.7	0	70-130		%Rec	1	1/23/2018 12:31:57 PM
Surr: Toluene-d8	106	0	70-130		%Rec	1	1/23/2018 12:31:57 PM
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	1/23/2018 12:31:57 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1801931

24-Jan-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Center Monthly An

Sample ID 1801931-001a dup		SampType: DUP		TestCode: EPA Method 8260B: Volatiles						
Client ID: AS1-180117		Batch ID: W48619		RunNo: 48619						
Prep Date:		Analysis Date: 1/23/2018		SeqNo: 1564733 Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.10						0	20	
Toluene	ND	0.10						0	20	
Ethylbenzene	ND	0.10						0	20	
Methyl tert-butyl ether (MTBE)	ND	0.10						0	20	
1,2,4-Trimethylbenzene	ND	0.10						0	20	
1,3,5-Trimethylbenzene	ND	0.10						0	20	
1,2-Dichloroethane (EDC)	ND	0.10						0	20	
1,2-Dibromoethane (EDB)	ND	0.10						0	20	
Naphthalene	ND	0.20						0	20	
1-Methylnaphthalene	ND	0.40						0	20	
2-Methylnaphthalene	ND	0.40						0	20	
Acetone	ND	1.0						0	20	
Bromobenzene	ND	0.10						0	20	
Bromodichloromethane	ND	0.10						0	20	
Bromoform	ND	0.10						0	20	
Bromomethane	ND	0.20						0	20	
2-Butanone	ND	1.0						0	20	
Carbon disulfide	ND	1.0						0	20	
Carbon tetrachloride	ND	0.10						0	20	
Chlorobenzene	ND	0.10						0	20	
Chloroethane	ND	0.20						0	20	
Chloroform	ND	0.10						0	20	
Chloromethane	ND	0.10						0	20	
2-Chlorotoluene	ND	0.10						0	20	
4-Chlorotoluene	ND	0.10						0	20	
cis-1,2-DCE	ND	0.10						0	20	
cis-1,3-Dichloropropene	ND	0.10						0	20	
1,2-Dibromo-3-chloropropane	ND	0.20						0	20	
Dibromochloromethane	ND	0.10						0	20	
Dibromomethane	ND	0.20						0	20	
1,2-Dichlorobenzene	ND	0.10						0	20	
1,3-Dichlorobenzene	ND	0.10						0	20	
1,4-Dichlorobenzene	ND	0.10						0	20	
Dichlorodifluoromethane	ND	0.10						0	20	
1,1-Dichloroethane	ND	0.10						0	20	
1,1-Dichloroethene	ND	0.10						0	20	
1,2-Dichloropropane	ND	0.10						0	20	
1,3-Dichloropropane	ND	0.10						0	20	
2,2-Dichloropropane	ND	0.10						0	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1801931

24-Jan-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Center Monthly An

Sample ID	1801931-001a dup	SampType:	DUP	TestCode:	EPA Method 8260B: Volatiles					
Client ID:	AS1-180117	Batch ID:	W48619	RunNo:	48619					
Prep Date:		Analysis Date:	1/23/2018	SeqNo:	1564733	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.10						0	20	
Hexachlorobutadiene	ND	0.10						0	20	
2-Hexanone	ND	1.0						0	20	
Isopropylbenzene	ND	0.10						0	20	
4-Isopropyltoluene	ND	0.10						0	20	
4-Methyl-2-pentanone	ND	1.0						0	20	
Methylene chloride	ND	0.30						0	20	
n-Butylbenzene	ND	0.30						0	20	
n-Propylbenzene	ND	0.10						0	20	
sec-Butylbenzene	ND	0.10						0	20	
Styrene	ND	0.10						0	20	
tert-Butylbenzene	ND	0.10						0	20	
1,1,1,2-Tetrachloroethane	ND	0.10						0	20	
1,1,2,2-Tetrachloroethane	ND	0.10						0	20	
Tetrachloroethene (PCE)	ND	0.10						0	20	
trans-1,2-DCE	ND	0.10						0	20	
trans-1,3-Dichloropropene	ND	0.10						0	20	
1,2,3-Trichlorobenzene	ND	0.10						0	20	
1,2,4-Trichlorobenzene	ND	0.10						0	20	
1,1,1-Trichloroethane	ND	0.10						0	20	
1,1,2-Trichloroethane	ND	0.10						0	20	
Trichloroethene (TCE)	ND	0.10						0	20	
Trichlorofluoromethane	ND	0.10						0	20	
1,2,3-Trichloropropane	ND	0.20						0	20	
Vinyl chloride	ND	0.10						0	20	
Xylenes, Total	ND	0.15						0	20	
Surr: Dibromofluoromethane	1.0		1.000		101	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	1.0		1.000		100	70	130	0	0	
Surr: Toluene-d8	1.0		1.000		104	70	130	0	0	
Surr: 4-Bromofluorobenzene	1.1		1.000		108	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: City of Las Cruces Work Order Number: 1801931 RcptNo: 1

Received By: Erin Melendrez 1/18/2018 10:00:00 AM *EM*
 Completed By: Erin Melendrez 1/18/2018 12:20:35 PM *EM*
 Reviewed By: *SRK 1/18/18*

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

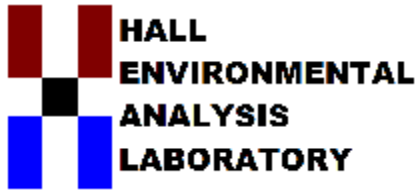
15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.5	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

February 22, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP Joint Superfund Project Center Monthly Analysis

OrderNo.: 1802930

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 2 sample(s) on 2/16/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** AS1-180215**Project:** JSP Joint Superfund Project Center Mon**Collection Date:** 2/15/2018 9:58:00 AM**Lab ID:** 1802930-001**Matrix:** AIR**Received Date:** 2/16/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
Toluene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
Ethylbenzene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
Methyl tert-butyl ether (MTBE)	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
1,2,4-Trimethylbenzene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
1,3,5-Trimethylbenzene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
1,2-Dichloroethane (EDC)	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
1,2-Dibromoethane (EDB)	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
Naphthalene	ND	0.20	0.20		µg/L	1	2/21/2018 11:30:39 AM
1-Methylnaphthalene	ND	0.40	0.40		µg/L	1	2/21/2018 11:30:39 AM
2-Methylnaphthalene	ND	0.40	0.40		µg/L	1	2/21/2018 11:30:39 AM
Acetone	ND	1.0	1.0		µg/L	1	2/21/2018 11:30:39 AM
Bromobenzene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
Bromodichloromethane	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
Bromoform	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
Bromomethane	ND	0.20	0.20		µg/L	1	2/21/2018 11:30:39 AM
2-Butanone	ND	1.0	1.0		µg/L	1	2/21/2018 11:30:39 AM
Carbon disulfide	ND	1.0	1.0		µg/L	1	2/21/2018 11:30:39 AM
Carbon tetrachloride	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
Chlorobenzene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
Chloroethane	ND	0.20	0.20		µg/L	1	2/21/2018 11:30:39 AM
Chloroform	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
Chloromethane	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
2-Chlorotoluene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
4-Chlorotoluene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
cis-1,2-DCE	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
cis-1,3-Dichloropropene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
1,2-Dibromo-3-chloropropane	ND	0.20	0.20		µg/L	1	2/21/2018 11:30:39 AM
Dibromochloromethane	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
Dibromomethane	ND	0.20	0.20		µg/L	1	2/21/2018 11:30:39 AM
1,2-Dichlorobenzene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
1,3-Dichlorobenzene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
1,4-Dichlorobenzene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
Dichlorodifluoromethane	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
1,1-Dichloroethane	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
1,1-Dichloroethene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
1,2-Dichloropropane	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
1,3-Dichloropropane	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
2,2-Dichloropropane	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
1,1-Dichloropropene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** AS1-180215**Project:** JSP Joint Superfund Project Center Mon**Collection Date:** 2/15/2018 9:58:00 AM**Lab ID:** 1802930-001**Matrix:** AIR**Received Date:** 2/16/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Hexachlorobutadiene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
2-Hexanone	ND	1.0	1.0		µg/L	1	2/21/2018 11:30:39 AM
Isopropylbenzene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
4-Isopropyltoluene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
4-Methyl-2-pentanone	ND	1.0	1.0		µg/L	1	2/21/2018 11:30:39 AM
Methylene chloride	ND	0.30	0.30		µg/L	1	2/21/2018 11:30:39 AM
n-Butylbenzene	ND	0.30	0.30		µg/L	1	2/21/2018 11:30:39 AM
n-Propylbenzene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
sec-Butylbenzene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
Styrene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
tert-Butylbenzene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
1,1,1,2-Tetrachloroethane	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
1,1,2,2-Tetrachloroethane	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
Tetrachloroethene (PCE)	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
trans-1,2-DCE	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
trans-1,3-Dichloropropene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
1,2,3-Trichlorobenzene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
1,2,4-Trichlorobenzene	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
1,1,1-Trichloroethane	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
1,1,2-Trichloroethane	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
Trichloroethene (TCE)	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
Trichlorofluoromethane	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
1,2,3-Trichloropropane	ND	0.20	0.20		µg/L	1	2/21/2018 11:30:39 AM
Vinyl chloride	ND	0.10	0.10		µg/L	1	2/21/2018 11:30:39 AM
Xylenes, Total	ND	0.15	0.15		µg/L	1	2/21/2018 11:30:39 AM
Surr: Dibromofluoromethane	97.8	0	70-130		%Rec	1	2/21/2018 11:30:39 AM
Surr: 1,2-Dichloroethane-d4	86.6	0	70-130		%Rec	1	2/21/2018 11:30:39 AM
Surr: Toluene-d8	105	0	70-130		%Rec	1	2/21/2018 11:30:39 AM
Surr: 4-Bromofluorobenzene	114	0	70-130		%Rec	1	2/21/2018 11:30:39 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 2 of 6
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** AS2-180215**Project:** JSP Joint Superfund Project Center Mon**Collection Date:** 2/15/2018 10:00:00 AM**Lab ID:** 1802930-002**Matrix:** AIR**Received Date:** 2/16/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
Toluene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
Ethylbenzene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
Methyl tert-butyl ether (MTBE)	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
1,2,4-Trimethylbenzene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
1,3,5-Trimethylbenzene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
1,2-Dichloroethane (EDC)	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
1,2-Dibromoethane (EDB)	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
Naphthalene	ND	0.20	0.20		µg/L	1	2/21/2018 12:00:16 PM
1-Methylnaphthalene	ND	0.40	0.40		µg/L	1	2/21/2018 12:00:16 PM
2-Methylnaphthalene	ND	0.40	0.40		µg/L	1	2/21/2018 12:00:16 PM
Acetone	ND	1.0	1.0		µg/L	1	2/21/2018 12:00:16 PM
Bromobenzene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
Bromodichloromethane	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
Bromoform	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
Bromomethane	ND	0.20	0.20		µg/L	1	2/21/2018 12:00:16 PM
2-Butanone	ND	1.0	1.0		µg/L	1	2/21/2018 12:00:16 PM
Carbon disulfide	ND	1.0	1.0		µg/L	1	2/21/2018 12:00:16 PM
Carbon tetrachloride	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
Chlorobenzene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
Chloroethane	ND	0.20	0.20		µg/L	1	2/21/2018 12:00:16 PM
Chloroform	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
Chloromethane	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
2-Chlorotoluene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
4-Chlorotoluene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
cis-1,2-DCE	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
cis-1,3-Dichloropropene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
1,2-Dibromo-3-chloropropane	ND	0.20	0.20		µg/L	1	2/21/2018 12:00:16 PM
Dibromochloromethane	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
Dibromomethane	ND	0.20	0.20		µg/L	1	2/21/2018 12:00:16 PM
1,2-Dichlorobenzene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
1,3-Dichlorobenzene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
1,4-Dichlorobenzene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
Dichlorodifluoromethane	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
1,1-Dichloroethane	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
1,1-Dichloroethene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
1,2-Dichloropropane	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
1,3-Dichloropropane	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
2,2-Dichloropropane	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
1,1-Dichloropropene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** AS2-180215**Project:** JSP Joint Superfund Project Center Mon**Collection Date:** 2/15/2018 10:00:00 AM**Lab ID:** 1802930-002**Matrix:** AIR**Received Date:** 2/16/2018 8:45:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Hexachlorobutadiene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
2-Hexanone	ND	1.0	1.0		µg/L	1	2/21/2018 12:00:16 PM
Isopropylbenzene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
4-Isopropyltoluene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
4-Methyl-2-pentanone	ND	1.0	1.0		µg/L	1	2/21/2018 12:00:16 PM
Methylene chloride	ND	0.30	0.30		µg/L	1	2/21/2018 12:00:16 PM
n-Butylbenzene	ND	0.30	0.30		µg/L	1	2/21/2018 12:00:16 PM
n-Propylbenzene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
sec-Butylbenzene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
Styrene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
tert-Butylbenzene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
1,1,1,2-Tetrachloroethane	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
1,1,2,2-Tetrachloroethane	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
Tetrachloroethene (PCE)	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
trans-1,2-DCE	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
trans-1,3-Dichloropropene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
1,2,3-Trichlorobenzene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
1,2,4-Trichlorobenzene	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
1,1,1-Trichloroethane	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
1,1,2-Trichloroethane	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
Trichloroethene (TCE)	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
Trichlorofluoromethane	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
1,2,3-Trichloropropane	ND	0.20	0.20		µg/L	1	2/21/2018 12:00:16 PM
Vinyl chloride	ND	0.10	0.10		µg/L	1	2/21/2018 12:00:16 PM
Xylenes, Total	ND	0.15	0.15		µg/L	1	2/21/2018 12:00:16 PM
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	2/21/2018 12:00:16 PM
Surr: 1,2-Dichloroethane-d4	92.3	0	70-130		%Rec	1	2/21/2018 12:00:16 PM
Surr: Toluene-d8	102	0	70-130		%Rec	1	2/21/2018 12:00:16 PM
Surr: 4-Bromofluorobenzene	113	0	70-130		%Rec	1	2/21/2018 12:00:16 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1802930

22-Feb-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Center Monthly An

Sample ID 1802930-001a dup		SampType: DUP		TestCode: EPA Method 8260B: Volatiles						
Client ID: AS1-180215		Batch ID: W49304		RunNo: 49304						
Prep Date:		Analysis Date: 2/21/2018		SeqNo: 1591095 Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.10						0	20	
Toluene	ND	0.10						0	20	
Ethylbenzene	ND	0.10						0	20	
Methyl tert-butyl ether (MTBE)	ND	0.10						0	20	
1,2,4-Trimethylbenzene	ND	0.10						0	20	
1,3,5-Trimethylbenzene	ND	0.10						0	20	
1,2-Dichloroethane (EDC)	ND	0.10						0	20	
1,2-Dibromoethane (EDB)	ND	0.10						0	20	
Naphthalene	ND	0.20						0	20	
1-Methylnaphthalene	ND	0.40						0	20	
2-Methylnaphthalene	ND	0.40						0	20	
Acetone	ND	1.0						0	20	
Bromobenzene	ND	0.10						0	20	
Bromodichloromethane	ND	0.10						0	20	
Bromoform	ND	0.10						0	20	
Bromomethane	ND	0.20						0	20	
2-Butanone	ND	1.0						0	20	
Carbon disulfide	ND	1.0						0	20	
Carbon tetrachloride	ND	0.10						0	20	
Chlorobenzene	ND	0.10						0	20	
Chloroethane	ND	0.20						0	20	
Chloroform	ND	0.10						0	20	
Chloromethane	ND	0.10						0	20	
2-Chlorotoluene	ND	0.10						0	20	
4-Chlorotoluene	ND	0.10						0	20	
cis-1,2-DCE	ND	0.10						0	20	
cis-1,3-Dichloropropene	ND	0.10						0	20	
1,2-Dibromo-3-chloropropane	ND	0.20						0	20	
Dibromochloromethane	ND	0.10						0	20	
Dibromomethane	ND	0.20						0	20	
1,2-Dichlorobenzene	ND	0.10						0	20	
1,3-Dichlorobenzene	ND	0.10						0	20	
1,4-Dichlorobenzene	ND	0.10						0	20	
Dichlorodifluoromethane	ND	0.10						0	20	
1,1-Dichloroethane	ND	0.10						0	20	
1,1-Dichloroethene	ND	0.10						0	20	
1,2-Dichloropropane	ND	0.10						0	20	
1,3-Dichloropropane	ND	0.10						0	20	
2,2-Dichloropropane	ND	0.10						0	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1802930

22-Feb-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Center Monthly An

Sample ID 1802930-001a dup		SampType: DUP		TestCode: EPA Method 8260B: Volatiles						
Client ID: AS1-180215		Batch ID: W49304		RunNo: 49304						
Prep Date:		Analysis Date: 2/21/2018		SeqNo: 1591095 Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.10						0	20	
Hexachlorobutadiene	ND	0.10						0	20	
2-Hexanone	ND	1.0						0	20	
Isopropylbenzene	ND	0.10						0	20	
4-Isopropyltoluene	ND	0.10						0	20	
4-Methyl-2-pentanone	ND	1.0						0	20	
Methylene chloride	ND	0.30						0	20	
n-Butylbenzene	ND	0.30						0	20	
n-Propylbenzene	ND	0.10						0	20	
sec-Butylbenzene	ND	0.10						0	20	
Styrene	ND	0.10						0	20	
tert-Butylbenzene	ND	0.10						0	20	
1,1,1,2-Tetrachloroethane	ND	0.10						0	20	
1,1,2,2-Tetrachloroethane	ND	0.10						0	20	
Tetrachloroethene (PCE)	ND	0.10						0	20	
trans-1,2-DCE	ND	0.10						0	20	
trans-1,3-Dichloropropene	ND	0.10						0	20	
1,2,3-Trichlorobenzene	ND	0.10						0	20	
1,2,4-Trichlorobenzene	ND	0.10						0	20	
1,1,1-Trichloroethane	ND	0.10						0	20	
1,1,2-Trichloroethane	ND	0.10						0	20	
Trichloroethene (TCE)	ND	0.10						0	20	
Trichlorofluoromethane	ND	0.10						0	20	
1,2,3-Trichloropropane	ND	0.20						0	20	
Vinyl chloride	ND	0.10						0	20	
Xylenes, Total	ND	0.15						0	20	
Surr: Dibromofluoromethane	1.0		1.000		99.6	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	0.86		1.000		86.4	70	130	0	0	
Surr: Toluene-d8	1.0		1.000		103	70	130	0	0	
Surr: 4-Bromofluorobenzene	1.2		1.000		117	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

February 22, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: Joint Superfund Project Center Monthly Analysis

OrderNo.: 1802980

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 2/16/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1802980

Date Reported: 2/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-180215

Project: Joint Superfund Project Center Monthly

Collection Date: 2/15/2018 9:06:00 AM

Lab ID: 1802980-001

Matrix: AQUEOUS

Received Date: 2/16/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
Toluene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
Ethylbenzene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
Naphthalene	ND	2.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
1-Methylnaphthalene	ND	4.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
2-Methylnaphthalene	ND	4.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
Acetone	ND	10		µg/L	1	2/22/2018 12:16:00 AM	R49300
Bromobenzene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
Bromodichloromethane	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
Bromoform	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
Bromomethane	ND	3.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
2-Butanone	ND	10		µg/L	1	2/22/2018 12:16:00 AM	R49300
Carbon disulfide	ND	10		µg/L	1	2/22/2018 12:16:00 AM	R49300
Carbon Tetrachloride	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
Chlorobenzene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
Chloroethane	ND	2.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
Chloroform	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
Chloromethane	ND	3.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
2-Chlorotoluene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
4-Chlorotoluene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
cis-1,2-DCE	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
Dibromochloromethane	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
Dibromomethane	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
1,1-Dichloroethane	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
1,1-Dichloroethene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
1,2-Dichloropropane	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
1,3-Dichloropropane	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
2,2-Dichloropropane	ND	2.0		µg/L	1	2/22/2018 12:16:00 AM	R49300

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1802980

Date Reported: 2/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-180215

Project: Joint Superfund Project Center Monthly

Collection Date: 2/15/2018 9:06:00 AM

Lab ID: 1802980-001

Matrix: AQUEOUS

Received Date: 2/16/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
Hexachlorobutadiene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
2-Hexanone	ND	10		µg/L	1	2/22/2018 12:16:00 AM	R49300
Isopropylbenzene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
4-Isopropyltoluene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
4-Methyl-2-pentanone	ND	10		µg/L	1	2/22/2018 12:16:00 AM	R49300
Methylene Chloride	ND	3.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
n-Butylbenzene	ND	3.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
n-Propylbenzene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
sec-Butylbenzene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
Styrene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
tert-Butylbenzene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
Tetrachloroethene (PCE)	11	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
trans-1,2-DCE	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
Trichlorofluoromethane	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
Vinyl chloride	ND	1.0		µg/L	1	2/22/2018 12:16:00 AM	R49300
Xylenes, Total	ND	1.5		µg/L	1	2/22/2018 12:16:00 AM	R49300
Surr: 1,2-Dichloroethane-d4	85.0	70-130		%Rec	1	2/22/2018 12:16:00 AM	R49300
Surr: 4-Bromofluorobenzene	78.0	70-130		%Rec	1	2/22/2018 12:16:00 AM	R49300
Surr: Dibromofluoromethane	87.8	70-130		%Rec	1	2/22/2018 12:16:00 AM	R49300
Surr: Toluene-d8	78.3	70-130		%Rec	1	2/22/2018 12:16:00 AM	R49300

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1802980

Date Reported: 2/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-180215

Project: Joint Superfund Project Center Monthly

Collection Date: 2/15/2018 10:09:00 AM

Lab ID: 1802980-002

Matrix: AQUEOUS

Received Date: 2/16/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
Toluene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
Ethylbenzene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
Naphthalene	ND	2.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
1-Methylnaphthalene	ND	4.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
2-Methylnaphthalene	ND	4.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
Acetone	ND	10		µg/L	1	2/22/2018 12:39:00 AM	R49300
Bromobenzene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
Bromodichloromethane	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
Bromoform	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
Bromomethane	ND	3.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
2-Butanone	ND	10		µg/L	1	2/22/2018 12:39:00 AM	R49300
Carbon disulfide	ND	10		µg/L	1	2/22/2018 12:39:00 AM	R49300
Carbon Tetrachloride	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
Chlorobenzene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
Chloroethane	ND	2.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
Chloroform	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
Chloromethane	ND	3.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
2-Chlorotoluene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
4-Chlorotoluene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
cis-1,2-DCE	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
Dibromochloromethane	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
Dibromomethane	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
1,1-Dichloroethane	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
1,1-Dichloroethene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
1,2-Dichloropropane	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
1,3-Dichloropropane	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
2,2-Dichloropropane	ND	2.0		µg/L	1	2/22/2018 12:39:00 AM	R49300

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1802980

Date Reported: 2/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-180215

Project: Joint Superfund Project Center Monthly

Collection Date: 2/15/2018 10:09:00 AM

Lab ID: 1802980-002

Matrix: AQUEOUS

Received Date: 2/16/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
Hexachlorobutadiene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
2-Hexanone	ND	10		µg/L	1	2/22/2018 12:39:00 AM	R49300
Isopropylbenzene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
4-Isopropyltoluene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
4-Methyl-2-pentanone	ND	10		µg/L	1	2/22/2018 12:39:00 AM	R49300
Methylene Chloride	ND	3.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
n-Butylbenzene	ND	3.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
n-Propylbenzene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
sec-Butylbenzene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
Styrene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
tert-Butylbenzene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
Tetrachloroethene (PCE)	14	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
trans-1,2-DCE	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
Trichlorofluoromethane	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
Vinyl chloride	ND	1.0		µg/L	1	2/22/2018 12:39:00 AM	R49300
Xylenes, Total	ND	1.5		µg/L	1	2/22/2018 12:39:00 AM	R49300
Surr: 1,2-Dichloroethane-d4	86.8	70-130		%Rec	1	2/22/2018 12:39:00 AM	R49300
Surr: 4-Bromofluorobenzene	77.4	70-130		%Rec	1	2/22/2018 12:39:00 AM	R49300
Surr: Dibromofluoromethane	90.0	70-130		%Rec	1	2/22/2018 12:39:00 AM	R49300
Surr: Toluene-d8	76.9	70-130		%Rec	1	2/22/2018 12:39:00 AM	R49300

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1802980

Date Reported: 2/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-180215

Project: Joint Superfund Project Center Monthly

Collection Date: 2/15/2018 9:51:00 AM

Lab ID: 1802980-003

Matrix: AQUEOUS

Received Date: 2/16/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
Toluene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
Ethylbenzene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
Naphthalene	ND	2.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
1-Methylnaphthalene	ND	4.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
2-Methylnaphthalene	ND	4.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
Acetone	ND	10		µg/L	1	2/22/2018 1:03:00 AM	R49300
Bromobenzene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
Bromodichloromethane	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
Bromoform	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
Bromomethane	ND	3.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
2-Butanone	ND	10		µg/L	1	2/22/2018 1:03:00 AM	R49300
Carbon disulfide	ND	10		µg/L	1	2/22/2018 1:03:00 AM	R49300
Carbon Tetrachloride	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
Chlorobenzene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
Chloroethane	ND	2.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
Chloroform	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
Chloromethane	ND	3.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
2-Chlorotoluene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
4-Chlorotoluene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
cis-1,2-DCE	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
Dibromochloromethane	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
Dibromomethane	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
1,1-Dichloroethane	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
1,1-Dichloroethene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
1,2-Dichloropropane	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
1,3-Dichloropropane	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
2,2-Dichloropropane	ND	2.0		µg/L	1	2/22/2018 1:03:00 AM	R49300

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1802980

Date Reported: 2/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-180215

Project: Joint Superfund Project Center Monthly

Collection Date: 2/15/2018 9:51:00 AM

Lab ID: 1802980-003

Matrix: AQUEOUS

Received Date: 2/16/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
Hexachlorobutadiene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
2-Hexanone	ND	10		µg/L	1	2/22/2018 1:03:00 AM	R49300
Isopropylbenzene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
4-Isopropyltoluene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
4-Methyl-2-pentanone	ND	10		µg/L	1	2/22/2018 1:03:00 AM	R49300
Methylene Chloride	ND	3.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
n-Butylbenzene	ND	3.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
n-Propylbenzene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
sec-Butylbenzene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
Styrene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
tert-Butylbenzene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
Tetrachloroethene (PCE)	9.1	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
trans-1,2-DCE	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
Trichlorofluoromethane	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
Vinyl chloride	ND	1.0		µg/L	1	2/22/2018 1:03:00 AM	R49300
Xylenes, Total	ND	1.5		µg/L	1	2/22/2018 1:03:00 AM	R49300
Surr: 1,2-Dichloroethane-d4	87.2	70-130		%Rec	1	2/22/2018 1:03:00 AM	R49300
Surr: 4-Bromofluorobenzene	77.3	70-130		%Rec	1	2/22/2018 1:03:00 AM	R49300
Surr: Dibromofluoromethane	89.2	70-130		%Rec	1	2/22/2018 1:03:00 AM	R49300
Surr: Toluene-d8	76.4	70-130		%Rec	1	2/22/2018 1:03:00 AM	R49300

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1802980

Date Reported: 2/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-180215

Project: Joint Superfund Project Center Monthly

Collection Date: 2/15/2018 9:52:00 AM

Lab ID: 1802980-004

Matrix: AQUEOUS

Received Date: 2/16/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
Toluene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
Ethylbenzene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
Naphthalene	ND	2.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
1-Methylnaphthalene	ND	4.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
2-Methylnaphthalene	ND	4.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
Acetone	ND	10		µg/L	1	2/22/2018 1:26:00 AM	R49300
Bromobenzene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
Bromodichloromethane	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
Bromoform	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
Bromomethane	ND	3.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
2-Butanone	ND	10		µg/L	1	2/22/2018 1:26:00 AM	R49300
Carbon disulfide	ND	10		µg/L	1	2/22/2018 1:26:00 AM	R49300
Carbon Tetrachloride	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
Chlorobenzene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
Chloroethane	ND	2.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
Chloroform	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
Chloromethane	ND	3.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
2-Chlorotoluene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
4-Chlorotoluene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
cis-1,2-DCE	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
Dibromochloromethane	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
Dibromomethane	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
1,1-Dichloroethane	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
1,1-Dichloroethene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
1,2-Dichloropropane	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
1,3-Dichloropropane	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
2,2-Dichloropropane	ND	2.0		µg/L	1	2/22/2018 1:26:00 AM	R49300

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1802980

Date Reported: 2/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-180215

Project: Joint Superfund Project Center Monthly

Collection Date: 2/15/2018 9:52:00 AM

Lab ID: 1802980-004

Matrix: AQUEOUS

Received Date: 2/16/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
Hexachlorobutadiene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
2-Hexanone	ND	10		µg/L	1	2/22/2018 1:26:00 AM	R49300
Isopropylbenzene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
4-Isopropyltoluene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
4-Methyl-2-pentanone	ND	10		µg/L	1	2/22/2018 1:26:00 AM	R49300
Methylene Chloride	ND	3.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
n-Butylbenzene	ND	3.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
n-Propylbenzene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
sec-Butylbenzene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
Styrene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
tert-Butylbenzene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
trans-1,2-DCE	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
Trichlorofluoromethane	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
Vinyl chloride	ND	1.0		µg/L	1	2/22/2018 1:26:00 AM	R49300
Xylenes, Total	ND	1.5		µg/L	1	2/22/2018 1:26:00 AM	R49300
Surr: 1,2-Dichloroethane-d4	85.3	70-130		%Rec	1	2/22/2018 1:26:00 AM	R49300
Surr: 4-Bromofluorobenzene	77.8	70-130		%Rec	1	2/22/2018 1:26:00 AM	R49300
Surr: Dibromofluoromethane	91.4	70-130		%Rec	1	2/22/2018 1:26:00 AM	R49300
Surr: Toluene-d8	77.7	70-130		%Rec	1	2/22/2018 1:26:00 AM	R49300

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1802980

Date Reported: 2/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-180215

Project: Joint Superfund Project Center Monthly

Collection Date: 2/15/2018 9:54:00 AM

Lab ID: 1802980-005

Matrix: AQUEOUS

Received Date: 2/16/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
Toluene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
Ethylbenzene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
Naphthalene	ND	2.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
1-Methylnaphthalene	ND	4.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
2-Methylnaphthalene	ND	4.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
Acetone	ND	10		µg/L	1	2/22/2018 1:50:00 AM	R49300
Bromobenzene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
Bromodichloromethane	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
Bromoform	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
Bromomethane	ND	3.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
2-Butanone	ND	10		µg/L	1	2/22/2018 1:50:00 AM	R49300
Carbon disulfide	ND	10		µg/L	1	2/22/2018 1:50:00 AM	R49300
Carbon Tetrachloride	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
Chlorobenzene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
Chloroethane	ND	2.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
Chloroform	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
Chloromethane	ND	3.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
2-Chlorotoluene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
4-Chlorotoluene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
cis-1,2-DCE	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
Dibromochloromethane	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
Dibromomethane	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
1,1-Dichloroethane	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
1,1-Dichloroethene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
1,2-Dichloropropane	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
1,3-Dichloropropane	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
2,2-Dichloropropane	ND	2.0		µg/L	1	2/22/2018 1:50:00 AM	R49300

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1802980

Date Reported: 2/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-180215

Project: Joint Superfund Project Center Monthly

Collection Date: 2/15/2018 9:54:00 AM

Lab ID: 1802980-005

Matrix: AQUEOUS

Received Date: 2/16/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
Hexachlorobutadiene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
2-Hexanone	ND	10		µg/L	1	2/22/2018 1:50:00 AM	R49300
Isopropylbenzene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
4-Isopropyltoluene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
4-Methyl-2-pentanone	ND	10		µg/L	1	2/22/2018 1:50:00 AM	R49300
Methylene Chloride	ND	3.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
n-Butylbenzene	ND	3.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
n-Propylbenzene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
sec-Butylbenzene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
Styrene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
tert-Butylbenzene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
trans-1,2-DCE	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
Trichlorofluoromethane	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
Vinyl chloride	ND	1.0		µg/L	1	2/22/2018 1:50:00 AM	R49300
Xylenes, Total	ND	1.5		µg/L	1	2/22/2018 1:50:00 AM	R49300
Surr: 1,2-Dichloroethane-d4	86.4	70-130		%Rec	1	2/22/2018 1:50:00 AM	R49300
Surr: 4-Bromofluorobenzene	76.9	70-130		%Rec	1	2/22/2018 1:50:00 AM	R49300
Surr: Dibromofluoromethane	87.8	70-130		%Rec	1	2/22/2018 1:50:00 AM	R49300
Surr: Toluene-d8	76.4	70-130		%Rec	1	2/22/2018 1:50:00 AM	R49300

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1802980

Date Reported: 2/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-180215

Project: Joint Superfund Project Center Monthly

Collection Date: 2/15/2018 9:55:00 AM

Lab ID: 1802980-006

Matrix: AQUEOUS

Received Date: 2/16/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
Toluene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
Ethylbenzene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
Naphthalene	ND	2.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
1-Methylnaphthalene	ND	4.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
2-Methylnaphthalene	ND	4.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
Acetone	ND	10		µg/L	1	2/22/2018 3:47:00 AM	R49300
Bromobenzene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
Bromodichloromethane	4.0	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
Bromoform	3.1	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
Bromomethane	ND	3.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
2-Butanone	ND	10		µg/L	1	2/22/2018 3:47:00 AM	R49300
Carbon disulfide	ND	10		µg/L	1	2/22/2018 3:47:00 AM	R49300
Carbon Tetrachloride	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
Chlorobenzene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
Chloroethane	ND	2.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
Chloroform	2.4	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
Chloromethane	ND	3.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
2-Chlorotoluene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
4-Chlorotoluene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
cis-1,2-DCE	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
Dibromochloromethane	4.3	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
Dibromomethane	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
1,1-Dichloroethane	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
1,1-Dichloroethene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
1,2-Dichloropropane	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
1,3-Dichloropropane	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
2,2-Dichloropropane	ND	2.0		µg/L	1	2/22/2018 3:47:00 AM	R49300

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1802980

Date Reported: 2/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-180215

Project: Joint Superfund Project Center Monthly

Collection Date: 2/15/2018 9:55:00 AM

Lab ID: 1802980-006

Matrix: AQUEOUS

Received Date: 2/16/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
Hexachlorobutadiene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
2-Hexanone	ND	10		µg/L	1	2/22/2018 3:47:00 AM	R49300
Isopropylbenzene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
4-Isopropyltoluene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
4-Methyl-2-pentanone	ND	10		µg/L	1	2/22/2018 3:47:00 AM	R49300
Methylene Chloride	ND	3.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
n-Butylbenzene	ND	3.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
n-Propylbenzene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
sec-Butylbenzene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
Styrene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
tert-Butylbenzene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
trans-1,2-DCE	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
Trichlorofluoromethane	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
Vinyl chloride	ND	1.0		µg/L	1	2/22/2018 3:47:00 AM	R49300
Xylenes, Total	ND	1.5		µg/L	1	2/22/2018 3:47:00 AM	R49300
Surr: 1,2-Dichloroethane-d4	86.5	70-130		%Rec	1	2/22/2018 3:47:00 AM	R49300
Surr: 4-Bromofluorobenzene	77.3	70-130		%Rec	1	2/22/2018 3:47:00 AM	R49300
Surr: Dibromofluoromethane	90.4	70-130		%Rec	1	2/22/2018 3:47:00 AM	R49300
Surr: Toluene-d8	77.4	70-130		%Rec	1	2/22/2018 3:47:00 AM	R49300

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1802980

Date Reported: 2/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-180215 DUP

Project: Joint Superfund Project Center Monthly

Collection Date: 2/15/2018 9:56:00 AM

Lab ID: 1802980-007

Matrix: AQUEOUS

Received Date: 2/16/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
Toluene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
Ethylbenzene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
Naphthalene	ND	2.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
1-Methylnaphthalene	ND	4.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
2-Methylnaphthalene	ND	4.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
Acetone	ND	10		µg/L	1	2/22/2018 4:11:00 AM	R49300
Bromobenzene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
Bromodichloromethane	3.1	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
Bromoform	3.9	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
Bromomethane	ND	3.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
2-Butanone	ND	10		µg/L	1	2/22/2018 4:11:00 AM	R49300
Carbon disulfide	ND	10		µg/L	1	2/22/2018 4:11:00 AM	R49300
Carbon Tetrachloride	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
Chlorobenzene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
Chloroethane	ND	2.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
Chloroform	1.3	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
Chloromethane	ND	3.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
2-Chlorotoluene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
4-Chlorotoluene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
cis-1,2-DCE	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
Dibromochloromethane	4.4	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
Dibromomethane	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
1,1-Dichloroethane	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
1,1-Dichloroethene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
1,2-Dichloropropane	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
1,3-Dichloropropane	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
2,2-Dichloropropane	ND	2.0		µg/L	1	2/22/2018 4:11:00 AM	R49300

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1802980

Date Reported: 2/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-180215 DUP

Project: Joint Superfund Project Center Monthly

Collection Date: 2/15/2018 9:56:00 AM

Lab ID: 1802980-007

Matrix: AQUEOUS

Received Date: 2/16/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
Hexachlorobutadiene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
2-Hexanone	ND	10		µg/L	1	2/22/2018 4:11:00 AM	R49300
Isopropylbenzene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
4-Isopropyltoluene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
4-Methyl-2-pentanone	ND	10		µg/L	1	2/22/2018 4:11:00 AM	R49300
Methylene Chloride	ND	3.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
n-Butylbenzene	ND	3.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
n-Propylbenzene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
sec-Butylbenzene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
Styrene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
tert-Butylbenzene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
trans-1,2-DCE	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
Trichlorofluoromethane	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
Vinyl chloride	ND	1.0		µg/L	1	2/22/2018 4:11:00 AM	R49300
Xylenes, Total	ND	1.5		µg/L	1	2/22/2018 4:11:00 AM	R49300
Surr: 1,2-Dichloroethane-d4	85.2	70-130		%Rec	1	2/22/2018 4:11:00 AM	R49300
Surr: 4-Bromofluorobenzene	78.0	70-130		%Rec	1	2/22/2018 4:11:00 AM	R49300
Surr: Dibromofluoromethane	90.2	70-130		%Rec	1	2/22/2018 4:11:00 AM	R49300
Surr: Toluene-d8	76.6	70-130		%Rec	1	2/22/2018 4:11:00 AM	R49300

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1802980

23-Feb-18

Client: City of Las Cruces
Project: Joint Superfund Project Center Monthly Analysis

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R49300		RunNo: 49300							
Prep Date:	Analysis Date: 2/21/2018		SeqNo: 1590831		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	24	1.0	20.00	0	118	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	26	1.0	20.00	0	128	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	110	70	130			
Surr: 1,2-Dichloroethane-d4	8.8		10.00		88.4	70	130			
Surr: 4-Bromofluorobenzene	8.0		10.00		79.5	70	130			
Surr: Dibromofluoromethane	9.1		10.00		90.8	70	130			
Surr: Toluene-d8	7.8		10.00		78.2	70	130			

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R49300		RunNo: 49300							
Prep Date:	Analysis Date: 2/21/2018		SeqNo: 1590832		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1802980

23-Feb-18

Client: City of Las Cruces
Project: Joint Superfund Project Center Monthly Analysis

Sample ID	rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID:	PBW	Batch ID: R49300	RunNo: 49300
Prep Date:		Analysis Date: 2/21/2018	SeqNo: 1590832 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1802980

23-Feb-18

Client: City of Las Cruces
Project: Joint Superfund Project Center Monthly Analysis

Sample ID	rb	SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID:	R49300		RunNo:	49300				
Prep Date:		Analysis Date:	2/21/2018		SeqNo:	1590832	Units:	µg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.9		10.00		88.9	70	130			
Surr: 4-Bromofluorobenzene	7.6		10.00		76.1	70	130			
Surr: Dibromofluoromethane	9.2		10.00		91.7	70	130			
Surr: Toluene-d8	7.7		10.00		77.3	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1802980

RcptNo: 1

Received By: Sophia Campuzano 2/16/2018 8:45:00 AM

Completed By: Erin Melendrez 2/19/2018 9:55:46 AM

Reviewed By: *IMO* 2/19/18

MW 2/19/18

[Handwritten signatures]

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
5. Sample(s) in proper container(s)? Yes No
6. Sufficient sample volume for indicated test(s)? Yes No
7. Are samples (except VOA and ONG) properly preserved? Yes No
8. Was preservative added to bottles? Yes No NA
9. VOA vials have zero headspace? Yes No No VOA Vials
10. Were any sample containers received broken? Yes No
11. Does paperwork match bottle labels? Yes No
- (Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Is it clear what analyses were requested? Yes No
14. Were all holding times able to be met? Yes No
- (If no, notify customer for authorization.)
- # of preserved bottles checked for pH: _____

(<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____

By Whom: _____ Via: eMail Phone Fax In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
 Mailing Address: P.O. Box 20006
Las Cruces, N.M. 88004
 Phone #: 575-518-3604
 email or Fax #: luc@waterquality.org (575) 518-3600
 QA/QC Package: Level 4 (Full Validation)
 Standard Other _____
 Accreditation
 NELAP Other _____
 EDD (Type) EXCEL

Turn-Around Time: _____
 Standard Rush
 Project Name:
JSP Joint Superfund Project Center
Monthly Analysis
 Project #:
CJCSP Griggs Without
 Project Manager:
Luis Guzman
575-528-309
 Sampler: Hills Guzman
 On Ice: Yes No
 Sample Temperature: 1.8

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
2-15-18	1406	DRINKING WATER	CJC18-180215	3-10ml Vials	HgCl ₂	180218D
	1009	DRINKING WATER	CJC27-180215			-001
	0951	DRINKING WATER	CJC 151-180215			-002
	0952	DRINKING WATER	CJC 01-180215			-003
	0954	DRINKING WATER	CJC 02-180215			-004
	0955	DRINKING WATER	CJC 03-180215			-005
2-15-18	0956	DRINKING WATER	CJC 04-180215 DUP	3-10ml Vials	HgCl ₂	-006
						-007

Date: 2-15-18 Time: 1500
 Relinquished by: [Signature]
 Date: 2-16-18 Time: 0845
 Received by: Soph-C FedEX
 Date: _____ Time: _____
 Received by: _____

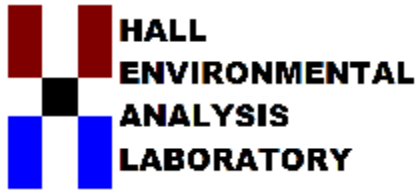


HALL ENVIRONMENTAL ANALYSIS LABORATORY
 www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request	
BTEX + MTBE + TMBs (8021)	
BTEX + MTBE + TPH (Gas only)	
TPH 8015B (GRO / DRO / MRO)	
TPH (Method 418.1)	
EDB (Method 504.1)	
PAHs (8310 or 8270 SIMS)	
RCRA 8 Metals	
Anions (F ⁻ , Cl ⁻ , NO ₂ ⁻ , NO ₃ ⁻ , PO ₄ ⁻³ , SO ₄ ⁻²)	
8081 Pesticides / 8082 PCBs	
8260B (VOA)-YLC	X
8270 (Semi-VOA)	X

Remarks: Send Results to:
Luis Guzman lucg@waterquality.org
Josua Rosublatte: jrosublatte@waterquality.org
(Send invoice to CJC 0/Luis Guzman)

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 26, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP Joint Superfund Project Center Monthly Analysis

OrderNo.: 1803D08

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 3/23/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803D08

Date Reported: 3/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC18-180322

Project: JSP Joint Superfund Project Center Mont

Collection Date: 3/22/2018 9:25:00 AM

Lab ID: 1803D08-001

Matrix: AQUEOUS

Received Date: 3/23/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
Toluene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
Ethylbenzene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
Naphthalene	ND	2.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
1-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
2-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
Acetone	ND	10		µg/L	1	3/24/2018 7:55:39 PM	A50054
Bromobenzene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
Bromodichloromethane	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
Bromoform	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
Bromomethane	ND	3.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
2-Butanone	ND	10		µg/L	1	3/24/2018 7:55:39 PM	A50054
Carbon disulfide	ND	10		µg/L	1	3/24/2018 7:55:39 PM	A50054
Carbon Tetrachloride	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
Chlorobenzene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
Chloroethane	ND	2.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
Chloroform	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
Chloromethane	ND	3.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
2-Chlorotoluene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
4-Chlorotoluene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
cis-1,2-DCE	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
Dibromochloromethane	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
Dibromomethane	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
1,1-Dichloroethane	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
1,1-Dichloroethene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
1,2-Dichloropropane	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
1,3-Dichloropropane	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
2,2-Dichloropropane	ND	2.0		µg/L	1	3/24/2018 7:55:39 PM	A50054

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803D08

Date Reported: 3/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC18-180322

Project: JSP Joint Superfund Project Center Mont

Collection Date: 3/22/2018 9:25:00 AM

Lab ID: 1803D08-001

Matrix: AQUEOUS

Received Date: 3/23/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
Hexachlorobutadiene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
2-Hexanone	ND	10		µg/L	1	3/24/2018 7:55:39 PM	A50054
Isopropylbenzene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
4-Isopropyltoluene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
4-Methyl-2-pentanone	ND	10		µg/L	1	3/24/2018 7:55:39 PM	A50054
Methylene Chloride	ND	3.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
n-Butylbenzene	ND	3.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
n-Propylbenzene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
sec-Butylbenzene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
Styrene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
tert-Butylbenzene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
Tetrachloroethene (PCE)	1.7	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
trans-1,2-DCE	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
Trichlorofluoromethane	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
Vinyl chloride	ND	1.0		µg/L	1	3/24/2018 7:55:39 PM	A50054
Xylenes, Total	ND	1.5		µg/L	1	3/24/2018 7:55:39 PM	A50054
Surr: 1,2-Dichloroethane-d4	115	70-130		%Rec	1	3/24/2018 7:55:39 PM	A50054
Surr: 4-Bromofluorobenzene	114	70-130		%Rec	1	3/24/2018 7:55:39 PM	A50054
Surr: Dibromofluoromethane	110	70-130		%Rec	1	3/24/2018 7:55:39 PM	A50054
Surr: Toluene-d8	99.6	70-130		%Rec	1	3/24/2018 7:55:39 PM	A50054

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803D08

Date Reported: 3/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC27-180322

Project: JSP Joint Superfund Project Center Mont

Collection Date: 3/22/2018 10:07:00 AM

Lab ID: 1803D08-002

Matrix: AQUEOUS

Received Date: 3/23/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
Toluene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
Ethylbenzene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
Naphthalene	ND	2.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
1-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
2-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
Acetone	ND	10		µg/L	1	3/24/2018 8:25:22 PM	A50054
Bromobenzene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
Bromodichloromethane	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
Bromoform	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
Bromomethane	ND	3.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
2-Butanone	ND	10		µg/L	1	3/24/2018 8:25:22 PM	A50054
Carbon disulfide	ND	10		µg/L	1	3/24/2018 8:25:22 PM	A50054
Carbon Tetrachloride	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
Chlorobenzene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
Chloroethane	ND	2.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
Chloroform	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
Chloromethane	ND	3.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
2-Chlorotoluene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
4-Chlorotoluene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
cis-1,2-DCE	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
Dibromochloromethane	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
Dibromomethane	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
1,1-Dichloroethane	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
1,1-Dichloroethene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
1,2-Dichloropropane	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
1,3-Dichloropropane	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
2,2-Dichloropropane	ND	2.0		µg/L	1	3/24/2018 8:25:22 PM	A50054

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803D08

Date Reported: 3/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC27-180322

Project: JSP Joint Superfund Project Center Mont

Collection Date: 3/22/2018 10:07:00 AM

Lab ID: 1803D08-002

Matrix: AQUEOUS

Received Date: 3/23/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
Hexachlorobutadiene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
2-Hexanone	ND	10		µg/L	1	3/24/2018 8:25:22 PM	A50054
Isopropylbenzene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
4-Isopropyltoluene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
4-Methyl-2-pentanone	ND	10		µg/L	1	3/24/2018 8:25:22 PM	A50054
Methylene Chloride	ND	3.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
n-Butylbenzene	ND	3.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
n-Propylbenzene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
sec-Butylbenzene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
Styrene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
tert-Butylbenzene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
Tetrachloroethene (PCE)	14	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
trans-1,2-DCE	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
Trichlorofluoromethane	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
Vinyl chloride	ND	1.0		µg/L	1	3/24/2018 8:25:22 PM	A50054
Xylenes, Total	ND	1.5		µg/L	1	3/24/2018 8:25:22 PM	A50054
Surr: 1,2-Dichloroethane-d4	112	70-130		%Rec	1	3/24/2018 8:25:22 PM	A50054
Surr: 4-Bromofluorobenzene	119	70-130		%Rec	1	3/24/2018 8:25:22 PM	A50054
Surr: Dibromofluoromethane	106	70-130		%Rec	1	3/24/2018 8:25:22 PM	A50054
Surr: Toluene-d8	100	70-130		%Rec	1	3/24/2018 8:25:22 PM	A50054

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803D08

Date Reported: 3/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCIS1-180322

Project: JSP Joint Superfund Project Center Mont

Collection Date: 3/22/2018 9:30:00 AM

Lab ID: 1803D08-003

Matrix: AQUEOUS

Received Date: 3/23/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
Toluene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
Ethylbenzene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
Naphthalene	ND	2.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
1-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
2-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
Acetone	ND	10		µg/L	1	3/24/2018 8:54:21 PM	A50054
Bromobenzene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
Bromodichloromethane	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
Bromoform	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
Bromomethane	ND	3.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
2-Butanone	ND	10		µg/L	1	3/24/2018 8:54:21 PM	A50054
Carbon disulfide	ND	10		µg/L	1	3/24/2018 8:54:21 PM	A50054
Carbon Tetrachloride	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
Chlorobenzene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
Chloroethane	ND	2.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
Chloroform	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
Chloromethane	ND	3.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
2-Chlorotoluene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
4-Chlorotoluene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
cis-1,2-DCE	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
Dibromochloromethane	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
Dibromomethane	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
1,1-Dichloroethane	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
1,1-Dichloroethene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
1,2-Dichloropropane	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
1,3-Dichloropropane	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
2,2-Dichloropropane	ND	2.0		µg/L	1	3/24/2018 8:54:21 PM	A50054

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803D08

Date Reported: 3/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCIS1-180322

Project: JSP Joint Superfund Project Center Mont

Collection Date: 3/22/2018 9:30:00 AM

Lab ID: 1803D08-003

Matrix: AQUEOUS

Received Date: 3/23/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
Hexachlorobutadiene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
2-Hexanone	ND	10		µg/L	1	3/24/2018 8:54:21 PM	A50054
Isopropylbenzene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
4-Isopropyltoluene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
4-Methyl-2-pentanone	ND	10		µg/L	1	3/24/2018 8:54:21 PM	A50054
Methylene Chloride	ND	3.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
n-Butylbenzene	ND	3.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
n-Propylbenzene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
sec-Butylbenzene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
Styrene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
tert-Butylbenzene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
Tetrachloroethene (PCE)	9.7	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
trans-1,2-DCE	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
Trichlorofluoromethane	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
Vinyl chloride	ND	1.0		µg/L	1	3/24/2018 8:54:21 PM	A50054
Xylenes, Total	ND	1.5		µg/L	1	3/24/2018 8:54:21 PM	A50054
Surr: 1,2-Dichloroethane-d4	114	70-130		%Rec	1	3/24/2018 8:54:21 PM	A50054
Surr: 4-Bromofluorobenzene	112	70-130		%Rec	1	3/24/2018 8:54:21 PM	A50054
Surr: Dibromofluoromethane	106	70-130		%Rec	1	3/24/2018 8:54:21 PM	A50054
Surr: Toluene-d8	99.0	70-130		%Rec	1	3/24/2018 8:54:21 PM	A50054

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803D08

Date Reported: 3/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCIS1-180322DUP

Project: JSP Joint Superfund Project Center Mont

Collection Date: 3/22/2018 9:30:00 AM

Lab ID: 1803D08-004

Matrix: AQUEOUS

Received Date: 3/23/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
Toluene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
Ethylbenzene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
Naphthalene	ND	2.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
1-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
2-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
Acetone	ND	10		µg/L	1	3/24/2018 9:24:01 PM	A50054
Bromobenzene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
Bromodichloromethane	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
Bromoform	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
Bromomethane	ND	3.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
2-Butanone	ND	10		µg/L	1	3/24/2018 9:24:01 PM	A50054
Carbon disulfide	ND	10		µg/L	1	3/24/2018 9:24:01 PM	A50054
Carbon Tetrachloride	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
Chlorobenzene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
Chloroethane	ND	2.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
Chloroform	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
Chloromethane	ND	3.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
2-Chlorotoluene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
4-Chlorotoluene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
cis-1,2-DCE	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
Dibromochloromethane	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
Dibromomethane	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
1,1-Dichloroethane	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
1,1-Dichloroethene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
1,2-Dichloropropane	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
1,3-Dichloropropane	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
2,2-Dichloropropane	ND	2.0		µg/L	1	3/24/2018 9:24:01 PM	A50054

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803D08

Date Reported: 3/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCIS1-180322DUP

Project: JSP Joint Superfund Project Center Mont

Collection Date: 3/22/2018 9:30:00 AM

Lab ID: 1803D08-004

Matrix: AQUEOUS

Received Date: 3/23/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
Hexachlorobutadiene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
2-Hexanone	ND	10		µg/L	1	3/24/2018 9:24:01 PM	A50054
Isopropylbenzene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
4-Isopropyltoluene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
4-Methyl-2-pentanone	ND	10		µg/L	1	3/24/2018 9:24:01 PM	A50054
Methylene Chloride	ND	3.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
n-Butylbenzene	ND	3.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
n-Propylbenzene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
sec-Butylbenzene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
Styrene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
tert-Butylbenzene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
Tetrachloroethene (PCE)	9.4	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
trans-1,2-DCE	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
Trichlorofluoromethane	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
Vinyl chloride	ND	1.0		µg/L	1	3/24/2018 9:24:01 PM	A50054
Xylenes, Total	ND	1.5		µg/L	1	3/24/2018 9:24:01 PM	A50054
Surr: 1,2-Dichloroethane-d4	114	70-130		%Rec	1	3/24/2018 9:24:01 PM	A50054
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	1	3/24/2018 9:24:01 PM	A50054
Surr: Dibromofluoromethane	107	70-130		%Rec	1	3/24/2018 9:24:01 PM	A50054
Surr: Toluene-d8	97.5	70-130		%Rec	1	3/24/2018 9:24:01 PM	A50054

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803D08

Date Reported: 3/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCC1-180322

Project: JSP Joint Superfund Project Center Mont

Collection Date: 3/22/2018 9:35:00 AM

Lab ID: 1803D08-005

Matrix: AQUEOUS

Received Date: 3/23/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
Toluene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
Ethylbenzene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
Naphthalene	ND	2.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
1-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
2-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
Acetone	ND	10		µg/L	1	3/24/2018 9:53:51 PM	A50054
Bromobenzene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
Bromodichloromethane	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
Bromoform	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
Bromomethane	ND	3.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
2-Butanone	ND	10		µg/L	1	3/24/2018 9:53:51 PM	A50054
Carbon disulfide	ND	10		µg/L	1	3/24/2018 9:53:51 PM	A50054
Carbon Tetrachloride	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
Chlorobenzene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
Chloroethane	ND	2.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
Chloroform	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
Chloromethane	ND	3.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
2-Chlorotoluene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
4-Chlorotoluene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
cis-1,2-DCE	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
Dibromochloromethane	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
Dibromomethane	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
1,1-Dichloroethane	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
1,1-Dichloroethene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
1,2-Dichloropropane	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
1,3-Dichloropropane	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
2,2-Dichloropropane	ND	2.0		µg/L	1	3/24/2018 9:53:51 PM	A50054

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803D08

Date Reported: 3/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCC1-180322

Project: JSP Joint Superfund Project Center Mont

Collection Date: 3/22/2018 9:35:00 AM

Lab ID: 1803D08-005

Matrix: AQUEOUS

Received Date: 3/23/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
Hexachlorobutadiene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
2-Hexanone	ND	10		µg/L	1	3/24/2018 9:53:51 PM	A50054
Isopropylbenzene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
4-Isopropyltoluene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
4-Methyl-2-pentanone	ND	10		µg/L	1	3/24/2018 9:53:51 PM	A50054
Methylene Chloride	ND	3.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
n-Butylbenzene	ND	3.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
n-Propylbenzene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
sec-Butylbenzene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
Styrene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
tert-Butylbenzene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
trans-1,2-DCE	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
Trichlorofluoromethane	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
Vinyl chloride	ND	1.0		µg/L	1	3/24/2018 9:53:51 PM	A50054
Xylenes, Total	ND	1.5		µg/L	1	3/24/2018 9:53:51 PM	A50054
Surr: 1,2-Dichloroethane-d4	114	70-130		%Rec	1	3/24/2018 9:53:51 PM	A50054
Surr: 4-Bromofluorobenzene	114	70-130		%Rec	1	3/24/2018 9:53:51 PM	A50054
Surr: Dibromofluoromethane	107	70-130		%Rec	1	3/24/2018 9:53:51 PM	A50054
Surr: Toluene-d8	99.9	70-130		%Rec	1	3/24/2018 9:53:51 PM	A50054

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803D08

Date Reported: 3/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCC2-180322

Project: JSP Joint Superfund Project Center Mont

Collection Date: 3/22/2018 9:37:00 AM

Lab ID: 1803D08-006

Matrix: AQUEOUS

Received Date: 3/23/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
Toluene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
Ethylbenzene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
Naphthalene	ND	2.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
1-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
2-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
Acetone	ND	10		µg/L	1	3/24/2018 10:23:02 PM	A50054
Bromobenzene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
Bromodichloromethane	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
Bromoform	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
Bromomethane	ND	3.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
2-Butanone	ND	10		µg/L	1	3/24/2018 10:23:02 PM	A50054
Carbon disulfide	ND	10		µg/L	1	3/24/2018 10:23:02 PM	A50054
Carbon Tetrachloride	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
Chlorobenzene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
Chloroethane	ND	2.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
Chloroform	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
Chloromethane	ND	3.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
2-Chlorotoluene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
4-Chlorotoluene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
cis-1,2-DCE	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
Dibromochloromethane	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
Dibromomethane	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
1,1-Dichloroethane	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
1,1-Dichloroethene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
1,2-Dichloropropane	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
1,3-Dichloropropane	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
2,2-Dichloropropane	ND	2.0		µg/L	1	3/24/2018 10:23:02 PM	A50054

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803D08

Date Reported: 3/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCC2-180322

Project: JSP Joint Superfund Project Center Mont

Collection Date: 3/22/2018 9:37:00 AM

Lab ID: 1803D08-006

Matrix: AQUEOUS

Received Date: 3/23/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
Hexachlorobutadiene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
2-Hexanone	ND	10		µg/L	1	3/24/2018 10:23:02 PM	A50054
Isopropylbenzene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
4-Isopropyltoluene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
4-Methyl-2-pentanone	ND	10		µg/L	1	3/24/2018 10:23:02 PM	A50054
Methylene Chloride	ND	3.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
n-Butylbenzene	ND	3.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
n-Propylbenzene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
sec-Butylbenzene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
Styrene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
tert-Butylbenzene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
trans-1,2-DCE	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
Trichlorofluoromethane	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
Vinyl chloride	ND	1.0		µg/L	1	3/24/2018 10:23:02 PM	A50054
Xylenes, Total	ND	1.5		µg/L	1	3/24/2018 10:23:02 PM	A50054
Surr: 1,2-Dichloroethane-d4	115	70-130		%Rec	1	3/24/2018 10:23:02 PM	A50054
Surr: 4-Bromofluorobenzene	114	70-130		%Rec	1	3/24/2018 10:23:02 PM	A50054
Surr: Dibromofluoromethane	109	70-130		%Rec	1	3/24/2018 10:23:02 PM	A50054
Surr: Toluene-d8	100	70-130		%Rec	1	3/24/2018 10:23:02 PM	A50054

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803D08

Date Reported: 3/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCES1-180322

Project: JSP Joint Superfund Project Center Mont

Collection Date: 3/22/2018 9:39:00 AM

Lab ID: 1803D08-007

Matrix: AQUEOUS

Received Date: 3/23/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
Toluene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
Ethylbenzene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
Naphthalene	ND	2.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
1-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
2-Methylnaphthalene	ND	4.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
Acetone	ND	10		µg/L	1	3/24/2018 10:52:07 PM	A50054
Bromobenzene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
Bromodichloromethane	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
Bromoform	6.6	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
Bromomethane	ND	3.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
2-Butanone	ND	10		µg/L	1	3/24/2018 10:52:07 PM	A50054
Carbon disulfide	ND	10		µg/L	1	3/24/2018 10:52:07 PM	A50054
Carbon Tetrachloride	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
Chlorobenzene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
Chloroethane	ND	2.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
Chloroform	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
Chloromethane	ND	3.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
2-Chlorotoluene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
4-Chlorotoluene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
cis-1,2-DCE	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
Dibromochloromethane	1.5	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
Dibromomethane	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
1,1-Dichloroethane	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
1,1-Dichloroethene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
1,2-Dichloropropane	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
1,3-Dichloropropane	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
2,2-Dichloropropane	ND	2.0		µg/L	1	3/24/2018 10:52:07 PM	A50054

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803D08

Date Reported: 3/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCES1-180322

Project: JSP Joint Superfund Project Center Mont

Collection Date: 3/22/2018 9:39:00 AM

Lab ID: 1803D08-007

Matrix: AQUEOUS

Received Date: 3/23/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
Hexachlorobutadiene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
2-Hexanone	ND	10		µg/L	1	3/24/2018 10:52:07 PM	A50054
Isopropylbenzene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
4-Isopropyltoluene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
4-Methyl-2-pentanone	ND	10		µg/L	1	3/24/2018 10:52:07 PM	A50054
Methylene Chloride	ND	3.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
n-Butylbenzene	ND	3.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
n-Propylbenzene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
sec-Butylbenzene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
Styrene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
tert-Butylbenzene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
trans-1,2-DCE	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
Trichlorofluoromethane	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
Vinyl chloride	ND	1.0		µg/L	1	3/24/2018 10:52:07 PM	A50054
Xylenes, Total	ND	1.5		µg/L	1	3/24/2018 10:52:07 PM	A50054
Surr: 1,2-Dichloroethane-d4	115	70-130		%Rec	1	3/24/2018 10:52:07 PM	A50054
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	3/24/2018 10:52:07 PM	A50054
Surr: Dibromofluoromethane	107	70-130		%Rec	1	3/24/2018 10:52:07 PM	A50054
Surr: Toluene-d8	98.8	70-130		%Rec	1	3/24/2018 10:52:07 PM	A50054

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803D08

26-Mar-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Center Monthly An

Sample ID	rb	SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID:	A50054		RunNo:	50054				
Prep Date:		Analysis Date:	3/24/2018		SeqNo:	1620902	Units:	µg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803D08

26-Mar-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Center Monthly An

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: A50054			RunNo: 50054					
Prep Date:		Analysis Date: 3/24/2018			SeqNo: 1620902		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		109	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		114	70	130			
Surr: Dibromofluoromethane	10		10.00		105	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: A50054			RunNo: 50054					
Prep Date:		Analysis Date: 3/24/2018			SeqNo: 1620903		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	84.8	70	130			
Toluene	15	1.0	20.00	0	77.0	70	130			
Chlorobenzene	15	1.0	20.00	0	77.3	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803D08

26-Mar-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Center Monthly An

Sample ID: 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: A50054		RunNo: 50054							
Prep Date:	Analysis Date: 3/24/2018		SeqNo: 1620903		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19	1.0	20.00	0	96.6	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	80.1	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		113	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		116	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.8		10.00		98.4	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1803D08

RcptNo: 1

Received By: Mandy Woods 3/23/2018 9:00:00 AM

Completed By: Ashley Gallegos 3/23/2018 10:41:23 AM

Reviewed By: *mg* 03/23/18 Labeled by: *MW* 3/23/18

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____	Date: _____
By Whom: _____	Via: <input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding: _____	
Client Instructions: _____	

16. Additional remarks:

17. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Not Present			

Chain-of-Custody Record

Client: City of Las Cruces
 Water Quality Laboratory
 Mailing Address: P.O. Box 20060
Las Cruces N.M. 88004
 Phone #: 575-528-3604
 email or Fax#: lgurra@lascrucesnm.gov 575-528-3604
 QA/QC Package: Standard Level 4 (Full Validation)
 Accreditation: NELAP Other EXCEL
 Turn-Around Time: Standard Rush
 Project Name: JSP: Joint Superfund Project Center Monthly Analysis
 Project #: CNC-JSP: Griggs Walnut
 Project Manager: Luis Guerra
 Sampler: Luis Guerra
 On Ice: Yes No
 Sample Temperature: 1.3

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
3-22-18	0925	Drinking Water	CNC18-180322	340ml Nals	HgCl2	1803208
	1007	Drinking Water	CNC27-180322			-001
	0930	Drinking Water	CNC151-180322			-002
	0930	Drinking Water	CNC151-180322 DUP			-003
	0935	Drinking Water	CNC1-180322			-004
	0937	Drinking Water	CNC2-180322			-005
	0939	Drinking Water	CNC2-180322			-006
3-22-18	0939	Water	CNC EST-180322	340ml Nals	HgCl2	-007

Date: 3-22-18 Time: 1500
 Relinquished by: [Signature]
 Date: 3-22-18 Time: 0900
 Relinquished by: [Signature]
 Received by: [Signature] Date: 3/23/18 Time: 0900
 Received by: [Signature]

BTEX + MTBE + TMBs (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAHs (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO3, NO2, PO4, SO4)	8081 Pesticides / 8082 PCBs	8260B (VOC) VCL	8270 (Semi-VOA)	Air Bubbles (Y or N)
									X		
									X		
									X		
									X		
									X		
									X		
									X		

Remarks: Send results to Luis Guerra lguerra@lascrucesnm.gov Justin Rosenthal jrosenthal@lascrucesnm.gov
Send invoice to all old Luis Guerra

Analysis Request

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 04, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP Joint Superfund Project Center Monthly Analysis

OrderNo.: 1803D09

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 2 sample(s) on 3/23/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803D09

Date Reported: 4/4/2018

CLIENT: City of Las Cruces

Client Sample ID: AS1-180322

Project: JSP Joint Superfund Project Center Mont

Collection Date: 3/22/2018 9:47:00 AM

Lab ID: 1803D09-001

Matrix: AIR

Received Date: 3/23/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
Toluene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
Ethylbenzene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
Naphthalene	ND	0.20		µg/L	1	4/3/2018 11:48:00 AM	R50272
1-Methylnaphthalene	ND	0.40		µg/L	1	4/3/2018 11:48:00 AM	R50272
2-Methylnaphthalene	ND	0.40		µg/L	1	4/3/2018 11:48:00 AM	R50272
Acetone	ND	1.0		µg/L	1	4/3/2018 11:48:00 AM	R50272
Bromobenzene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
Bromodichloromethane	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
Bromoform	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
Bromomethane	ND	0.20		µg/L	1	4/3/2018 11:48:00 AM	R50272
2-Butanone	ND	1.0		µg/L	1	4/3/2018 11:48:00 AM	R50272
Carbon disulfide	ND	1.0		µg/L	1	4/3/2018 11:48:00 AM	R50272
Carbon tetrachloride	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
Chlorobenzene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
Chloroethane	ND	0.20		µg/L	1	4/3/2018 11:48:00 AM	R50272
Chloroform	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
Chloromethane	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
2-Chlorotoluene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
4-Chlorotoluene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
cis-1,2-DCE	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	4/3/2018 11:48:00 AM	R50272
Dibromochloromethane	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
Dibromomethane	ND	0.20		µg/L	1	4/3/2018 11:48:00 AM	R50272
1,2-Dichlorobenzene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
1,3-Dichlorobenzene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
1,4-Dichlorobenzene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
Dichlorodifluoromethane	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
1,1-Dichloroethane	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
1,1-Dichloroethene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
1,2-Dichloropropane	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
1,3-Dichloropropane	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
2,2-Dichloropropane	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 1 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803D09

Date Reported: 4/4/2018

CLIENT: City of Las Cruces

Client Sample ID: AS1-180322

Project: JSP Joint Superfund Project Center Mont

Collection Date: 3/22/2018 9:47:00 AM

Lab ID: 1803D09-001

Matrix: AIR

Received Date: 3/23/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
Hexachlorobutadiene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
2-Hexanone	ND	1.0		µg/L	1	4/3/2018 11:48:00 AM	R50272
Isopropylbenzene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
4-Isopropyltoluene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
4-Methyl-2-pentanone	ND	1.0		µg/L	1	4/3/2018 11:48:00 AM	R50272
Methylene chloride	ND	0.30		µg/L	1	4/3/2018 11:48:00 AM	R50272
n-Butylbenzene	ND	0.30		µg/L	1	4/3/2018 11:48:00 AM	R50272
n-Propylbenzene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
sec-Butylbenzene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
Styrene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
tert-Butylbenzene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
trans-1,2-DCE	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
1,1,1-Trichloroethane	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
1,1,2-Trichloroethane	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
Trichloroethene (TCE)	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
Trichlorofluoromethane	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
1,2,3-Trichloropropane	ND	0.20		µg/L	1	4/3/2018 11:48:00 AM	R50272
Vinyl chloride	ND	0.10		µg/L	1	4/3/2018 11:48:00 AM	R50272
Xylenes, Total	ND	0.15		µg/L	1	4/3/2018 11:48:00 AM	R50272
Surr: Dibromofluoromethane	90.5	70-130		%Rec	1	4/3/2018 11:48:00 AM	R50272
Surr: 1,2-Dichloroethane-d4	92.8	70-130		%Rec	1	4/3/2018 11:48:00 AM	R50272
Surr: Toluene-d8	84.9	70-130		%Rec	1	4/3/2018 11:48:00 AM	R50272
Surr: 4-Bromofluorobenzene	81.9	70-130		%Rec	1	4/3/2018 11:48:00 AM	R50272

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803D09

Date Reported: 4/4/2018

CLIENT: City of Las Cruces

Client Sample ID: AS2-180322

Project: JSP Joint Superfund Project Center Mont

Collection Date: 3/22/2018 9:50:00 AM

Lab ID: 1803D09-002

Matrix: AIR

Received Date: 3/23/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
Toluene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
Ethylbenzene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
Naphthalene	ND	0.20		µg/L	1	4/3/2018 12:36:00 PM	R50272
1-Methylnaphthalene	ND	0.40		µg/L	1	4/3/2018 12:36:00 PM	R50272
2-Methylnaphthalene	ND	0.40		µg/L	1	4/3/2018 12:36:00 PM	R50272
Acetone	ND	1.0		µg/L	1	4/3/2018 12:36:00 PM	R50272
Bromobenzene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
Bromodichloromethane	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
Bromoform	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
Bromomethane	ND	0.20		µg/L	1	4/3/2018 12:36:00 PM	R50272
2-Butanone	ND	1.0		µg/L	1	4/3/2018 12:36:00 PM	R50272
Carbon disulfide	ND	1.0		µg/L	1	4/3/2018 12:36:00 PM	R50272
Carbon tetrachloride	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
Chlorobenzene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
Chloroethane	ND	0.20		µg/L	1	4/3/2018 12:36:00 PM	R50272
Chloroform	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
Chloromethane	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
2-Chlorotoluene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
4-Chlorotoluene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
cis-1,2-DCE	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	4/3/2018 12:36:00 PM	R50272
Dibromochloromethane	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
Dibromomethane	ND	0.20		µg/L	1	4/3/2018 12:36:00 PM	R50272
1,2-Dichlorobenzene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
1,3-Dichlorobenzene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
1,4-Dichlorobenzene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
Dichlorodifluoromethane	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
1,1-Dichloroethane	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
1,1-Dichloroethene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
1,2-Dichloropropane	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
1,3-Dichloropropane	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
2,2-Dichloropropane	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 3 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803D09

Date Reported: 4/4/2018

CLIENT: City of Las Cruces

Client Sample ID: AS2-180322

Project: JSP Joint Superfund Project Center Mont

Collection Date: 3/22/2018 9:50:00 AM

Lab ID: 1803D09-002

Matrix: AIR

Received Date: 3/23/2018 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
Hexachlorobutadiene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
2-Hexanone	ND	1.0		µg/L	1	4/3/2018 12:36:00 PM	R50272
Isopropylbenzene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
4-Isopropyltoluene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
4-Methyl-2-pentanone	ND	1.0		µg/L	1	4/3/2018 12:36:00 PM	R50272
Methylene chloride	ND	0.30		µg/L	1	4/3/2018 12:36:00 PM	R50272
n-Butylbenzene	ND	0.30		µg/L	1	4/3/2018 12:36:00 PM	R50272
n-Propylbenzene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
sec-Butylbenzene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
Styrene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
tert-Butylbenzene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
trans-1,2-DCE	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
1,1,1-Trichloroethane	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
1,1,2-Trichloroethane	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
Trichloroethene (TCE)	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
Trichlorofluoromethane	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
1,2,3-Trichloropropane	ND	0.20		µg/L	1	4/3/2018 12:36:00 PM	R50272
Vinyl chloride	ND	0.10		µg/L	1	4/3/2018 12:36:00 PM	R50272
Xylenes, Total	ND	0.15		µg/L	1	4/3/2018 12:36:00 PM	R50272
Surr: Dibromofluoromethane	89.7	70-130		%Rec	1	4/3/2018 12:36:00 PM	R50272
Surr: 1,2-Dichloroethane-d4	92.2	70-130		%Rec	1	4/3/2018 12:36:00 PM	R50272
Surr: Toluene-d8	86.3	70-130		%Rec	1	4/3/2018 12:36:00 PM	R50272
Surr: 4-Bromofluorobenzene	92.0	70-130		%Rec	1	4/3/2018 12:36:00 PM	R50272

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 4 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1803D09

RcptNo: 1

Received By: Mandy Woods

3/23/2018 9:00:00 AM

MW

Completed By: Ashley Gallegos

3/23/2018 11:01:16 AM

AG

Reviewed By:

AG

03/23/18

Labeled by:

MW 3/23/18

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____ (<2 or >12 unless noted) Adjusted? _____ Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____	Date: _____
By Whom: _____	Via: <input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding: _____	
Client Instructions: _____	

16. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Not Present			

Chain-of-Custody Record



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Turn-Around Time: Standard Rush

Project Name: JSP - Joint Superintendent Project Center Monthly Analysis

Project #: CH- JSP - Griggs Walnut

Project Manager: Luis Guerra

Sampler: Luis Guerra

On Ice: Yes No

Sample Temperature: 19 N/A

Container Type and # 1803 D00

Preservative Type None

HEAL No. 0913/18

Client: City of Las Cruces

Water Quality Laboratory

Mailing Address: P.O. Box 20000

Las Cruces N.M. 88004

Phone #: 575-528-3604

email or Fax#: lguerra@las-cruces.org (575) 528-3630

QA/QC Package: Standard Level 4 (Full Validation)

Accreditation: NELAP Other

EDD (Type) EXCEL

Date Time Matrix Sample Request ID

3-22-18 1947 AIR AS1-180322

3-22-18 1950 AIR AS2-180322

Received by: Fedex 3/23/18 Date Time 0900

Relinquished by: [Signature]

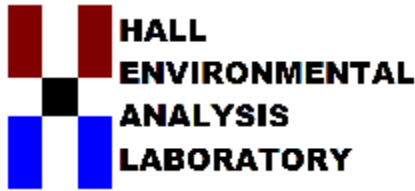
Relinquished by: [Signature]

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA) VDL	8270 (Semi-VOA)	Air Bubbles (Y or N)
									X		
									X		

Remarks: Send Results to:
Luis Guerra lguerra@las-cruces.org
Josua Rosendette jrosndette@las-cruces.org
(Send notice to CEC also Luis Guerra)

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 01, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: Joint Superfund Center Monthly Analysis

OrderNo.: 1804B61

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 2 sample(s) on 4/23/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1804B61

Date Reported: 5/1/2018

CLIENT: City of Las Cruces

Client Sample ID: AS1-180419

Project: Joint Superfund Center Monthly Analysis

Collection Date: 4/19/2018 8:26:00 AM

Lab ID: 1804B61-001

Matrix: AIR

Received Date: 4/23/2018 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
Toluene	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
Ethylbenzene	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
Naphthalene	ND	0.20		µg/L	1	4/27/2018 1:25:00 PM	R50915
1-Methylnaphthalene	ND	0.40		µg/L	1	4/27/2018 1:25:00 PM	R50915
2-Methylnaphthalene	ND	0.40		µg/L	1	4/27/2018 1:25:00 PM	R50915
Acetone	ND	1.0		µg/L	1	4/27/2018 1:25:00 PM	R50915
Bromobenzene	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
Bromodichloromethane	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
Bromoform	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
Bromomethane	ND	0.20		µg/L	1	4/27/2018 1:25:00 PM	R50915
2-Butanone	ND	1.0		µg/L	1	4/27/2018 1:25:00 PM	R50915
Carbon disulfide	ND	1.0		µg/L	1	4/27/2018 1:25:00 PM	R50915
Carbon tetrachloride	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
Chlorobenzene	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
Chloroethane	ND	0.20		µg/L	1	4/27/2018 1:25:00 PM	R50915
Chloroform	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
Chloromethane	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
2-Chlorotoluene	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
4-Chlorotoluene	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
cis-1,2-DCE	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	4/27/2018 1:25:00 PM	R50915
Dibromochloromethane	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
Dibromomethane	ND	0.20		µg/L	1	4/27/2018 1:25:00 PM	R50915
1,2-Dichlorobenzene	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
1,3-Dichlorobenzene	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
1,4-Dichlorobenzene	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
Dichlorodifluoromethane	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
1,1-Dichloroethane	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
1,1-Dichloroethene	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
1,2-Dichloropropane	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
1,3-Dichloropropane	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
2,2-Dichloropropane	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
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	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
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2-Hexanone	ND	1.0		µg/L	1	4/27/2018 1:25:00 PM	R50915
Isopropylbenzene	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
4-Isopropyltoluene	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
4-Methyl-2-pentanone	ND	1.0		µg/L	1	4/27/2018 1:25:00 PM	R50915
Methylene chloride	ND	0.30		µg/L	1	4/27/2018 1:25:00 PM	R50915
n-Butylbenzene	ND	0.30		µg/L	1	4/27/2018 1:25:00 PM	R50915
n-Propylbenzene	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
sec-Butylbenzene	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
Styrene	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
tert-Butylbenzene	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
trans-1,2-DCE	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
1,1,1-Trichloroethane	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
1,1,2-Trichloroethane	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
Trichloroethene (TCE)	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
Trichlorofluoromethane	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
1,2,3-Trichloropropane	ND	0.20		µg/L	1	4/27/2018 1:25:00 PM	R50915
Vinyl chloride	ND	0.10		µg/L	1	4/27/2018 1:25:00 PM	R50915
Xylenes, Total	ND	0.15		µg/L	1	4/27/2018 1:25:00 PM	R50915
Surr: Dibromofluoromethane	102	70-130		%Rec	1	4/27/2018 1:25:00 PM	R50915
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	4/27/2018 1:25:00 PM	R50915
Surr: Toluene-d8	98.3	70-130		%Rec	1	4/27/2018 1:25:00 PM	R50915
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	4/27/2018 1:25:00 PM	R50915

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1804B61

Date Reported: 5/1/2018

CLIENT: City of Las Cruces

Client Sample ID: AS2-180419

Project: Joint Superfund Center Monthly Analysis

Collection Date: 4/19/2018 8:30:00 AM

Lab ID: 1804B61-002

Matrix: AIR

Received Date: 4/23/2018 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
Toluene	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
Ethylbenzene	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
Naphthalene	ND	0.20		µg/L	1	4/27/2018 2:13:00 PM	R50915
1-Methylnaphthalene	ND	0.40		µg/L	1	4/27/2018 2:13:00 PM	R50915
2-Methylnaphthalene	ND	0.40		µg/L	1	4/27/2018 2:13:00 PM	R50915
Acetone	ND	1.0		µg/L	1	4/27/2018 2:13:00 PM	R50915
Bromobenzene	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
Bromodichloromethane	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
Bromoform	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
Bromomethane	ND	0.20		µg/L	1	4/27/2018 2:13:00 PM	R50915
2-Butanone	ND	1.0		µg/L	1	4/27/2018 2:13:00 PM	R50915
Carbon disulfide	ND	1.0		µg/L	1	4/27/2018 2:13:00 PM	R50915
Carbon tetrachloride	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
Chlorobenzene	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
Chloroethane	ND	0.20		µg/L	1	4/27/2018 2:13:00 PM	R50915
Chloroform	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
Chloromethane	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
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cis-1,2-DCE	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	4/27/2018 2:13:00 PM	R50915
Dibromochloromethane	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
Dibromomethane	ND	0.20		µg/L	1	4/27/2018 2:13:00 PM	R50915
1,2-Dichlorobenzene	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
1,3-Dichlorobenzene	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
1,4-Dichlorobenzene	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
Dichlorodifluoromethane	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
1,1-Dichloroethane	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
1,1-Dichloroethene	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
1,2-Dichloropropane	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
1,3-Dichloropropane	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
2,2-Dichloropropane	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
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	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
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	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1804B61

Date Reported: 5/1/2018

CLIENT: City of Las Cruces

Client Sample ID: AS2-180419

Project: Joint Superfund Center Monthly Analysis

Collection Date: 4/19/2018 8:30:00 AM

Lab ID: 1804B61-002

Matrix: AIR

Received Date: 4/23/2018 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
Hexachlorobutadiene	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
2-Hexanone	ND	1.0		µg/L	1	4/27/2018 2:13:00 PM	R50915
Isopropylbenzene	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
4-Isopropyltoluene	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
4-Methyl-2-pentanone	ND	1.0		µg/L	1	4/27/2018 2:13:00 PM	R50915
Methylene chloride	ND	0.30		µg/L	1	4/27/2018 2:13:00 PM	R50915
n-Butylbenzene	ND	0.30		µg/L	1	4/27/2018 2:13:00 PM	R50915
n-Propylbenzene	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
sec-Butylbenzene	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
Styrene	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
tert-Butylbenzene	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
Tetrachloroethene (PCE)	0.11	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
trans-1,2-DCE	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
1,1,1-Trichloroethane	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
1,1,2-Trichloroethane	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
Trichloroethene (TCE)	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
Trichlorofluoromethane	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
1,2,3-Trichloropropane	ND	0.20		µg/L	1	4/27/2018 2:13:00 PM	R50915
Vinyl chloride	ND	0.10		µg/L	1	4/27/2018 2:13:00 PM	R50915
Xylenes, Total	ND	0.15		µg/L	1	4/27/2018 2:13:00 PM	R50915
Surr: Dibromofluoromethane	101	70-130		%Rec	1	4/27/2018 2:13:00 PM	R50915
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	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1804B61

RcptNo: 1

Received By: Anne Thorne 4/23/2018 9:55:00 AM

Anne Thorne

Completed By: Anne Thorne 4/23/2018 2:48:13 PM

Anne Thorne

Reviewed By: *JW42318*

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

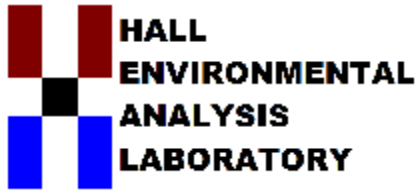
Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____	Date: _____
By Whom: _____	Via: <input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding: _____	
Client Instructions: _____	

16. Additional remarks:

17. **Cooler Information**



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 01, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP Joint Superfund Center Monthly Analysis

OrderNo.: 1804C39

Dear Luis Guerra:

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ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

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Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1804C39

Date Reported: 5/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS1-180424

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 4/24/2018 8:25:00 AM

Lab ID: 1804C39-001

Matrix: AIR

Received Date: 4/25/2018 9:05:00 AM

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EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
Toluene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
Ethylbenzene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
Naphthalene	ND	0.20		µg/L	1	4/27/2018 2:37:00 PM	R50915
1-Methylnaphthalene	ND	0.40		µg/L	1	4/27/2018 2:37:00 PM	R50915
2-Methylnaphthalene	ND	0.40		µg/L	1	4/27/2018 2:37:00 PM	R50915
Acetone	ND	1.0		µg/L	1	4/27/2018 2:37:00 PM	R50915
Bromobenzene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
Bromodichloromethane	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
Bromoform	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
Bromomethane	ND	0.20		µg/L	1	4/27/2018 2:37:00 PM	R50915
2-Butanone	ND	1.0		µg/L	1	4/27/2018 2:37:00 PM	R50915
Carbon disulfide	ND	1.0		µg/L	1	4/27/2018 2:37:00 PM	R50915
Carbon tetrachloride	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
Chlorobenzene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
Chloroethane	ND	0.20		µg/L	1	4/27/2018 2:37:00 PM	R50915
Chloroform	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
Chloromethane	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
2-Chlorotoluene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
4-Chlorotoluene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
cis-1,2-DCE	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	4/27/2018 2:37:00 PM	R50915
Dibromochloromethane	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
Dibromomethane	ND	0.20		µg/L	1	4/27/2018 2:37:00 PM	R50915
1,2-Dichlorobenzene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
1,3-Dichlorobenzene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
1,4-Dichlorobenzene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
Dichlorodifluoromethane	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
1,1-Dichloroethane	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
1,1-Dichloroethene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
1,2-Dichloropropane	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
1,3-Dichloropropane	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
2,2-Dichloropropane	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 1 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1804C39

Date Reported: 5/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS1-180424

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 4/24/2018 8:25:00 AM

Lab ID: 1804C39-001

Matrix: AIR

Received Date: 4/25/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
Hexachlorobutadiene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
2-Hexanone	ND	1.0		µg/L	1	4/27/2018 2:37:00 PM	R50915
Isopropylbenzene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
4-Isopropyltoluene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
4-Methyl-2-pentanone	ND	1.0		µg/L	1	4/27/2018 2:37:00 PM	R50915
Methylene chloride	ND	0.30		µg/L	1	4/27/2018 2:37:00 PM	R50915
n-Butylbenzene	ND	0.30		µg/L	1	4/27/2018 2:37:00 PM	R50915
n-Propylbenzene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
sec-Butylbenzene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
Styrene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
tert-Butylbenzene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
Tetrachloroethene (PCE)	0.14	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
trans-1,2-DCE	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
1,1,1-Trichloroethane	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
1,1,2-Trichloroethane	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
Trichloroethene (TCE)	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
Trichlorofluoromethane	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
1,2,3-Trichloropropane	ND	0.20		µg/L	1	4/27/2018 2:37:00 PM	R50915
Vinyl chloride	ND	0.10		µg/L	1	4/27/2018 2:37:00 PM	R50915
Xylenes, Total	ND	0.15		µg/L	1	4/27/2018 2:37:00 PM	R50915
Surr: Dibromofluoromethane	97.2	70-130		%Rec	1	4/27/2018 2:37:00 PM	R50915
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	4/27/2018 2:37:00 PM	R50915
Surr: Toluene-d8	97.5	70-130		%Rec	1	4/27/2018 2:37:00 PM	R50915
Surr: 4-Bromofluorobenzene	95.3	70-130		%Rec	1	4/27/2018 2:37:00 PM	R50915

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1804C39

Date Reported: 5/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS2-180424

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 4/24/2018 8:28:00 AM

Lab ID: 1804C39-002

Matrix: AIR

Received Date: 4/25/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
Toluene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
Ethylbenzene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
Naphthalene	ND	0.20		µg/L	1	4/27/2018 3:01:00 PM	R50915
1-Methylnaphthalene	ND	0.40		µg/L	1	4/27/2018 3:01:00 PM	R50915
2-Methylnaphthalene	ND	0.40		µg/L	1	4/27/2018 3:01:00 PM	R50915
Acetone	ND	1.0		µg/L	1	4/27/2018 3:01:00 PM	R50915
Bromobenzene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
Bromodichloromethane	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
Bromoform	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
Bromomethane	ND	0.20		µg/L	1	4/27/2018 3:01:00 PM	R50915
2-Butanone	ND	1.0		µg/L	1	4/27/2018 3:01:00 PM	R50915
Carbon disulfide	ND	1.0		µg/L	1	4/27/2018 3:01:00 PM	R50915
Carbon tetrachloride	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
Chlorobenzene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
Chloroethane	ND	0.20		µg/L	1	4/27/2018 3:01:00 PM	R50915
Chloroform	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
Chloromethane	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
2-Chlorotoluene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
4-Chlorotoluene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
cis-1,2-DCE	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	4/27/2018 3:01:00 PM	R50915
Dibromochloromethane	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
Dibromomethane	ND	0.20		µg/L	1	4/27/2018 3:01:00 PM	R50915
1,2-Dichlorobenzene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
1,3-Dichlorobenzene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
1,4-Dichlorobenzene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
Dichlorodifluoromethane	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
1,1-Dichloroethane	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
1,1-Dichloroethene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
1,2-Dichloropropane	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
1,3-Dichloropropane	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
2,2-Dichloropropane	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 3 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1804C39

Date Reported: 5/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS2-180424

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 4/24/2018 8:28:00 AM

Lab ID: 1804C39-002

Matrix: AIR

Received Date: 4/25/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
Hexachlorobutadiene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
2-Hexanone	ND	1.0		µg/L	1	4/27/2018 3:01:00 PM	R50915
Isopropylbenzene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
4-Isopropyltoluene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
4-Methyl-2-pentanone	ND	1.0		µg/L	1	4/27/2018 3:01:00 PM	R50915
Methylene chloride	ND	0.30		µg/L	1	4/27/2018 3:01:00 PM	R50915
n-Butylbenzene	ND	0.30		µg/L	1	4/27/2018 3:01:00 PM	R50915
n-Propylbenzene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
sec-Butylbenzene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
Styrene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
tert-Butylbenzene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
Tetrachloroethene (PCE)	0.11	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
trans-1,2-DCE	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
1,1,1-Trichloroethane	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
1,1,2-Trichloroethane	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
Trichloroethene (TCE)	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
Trichlorofluoromethane	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
1,2,3-Trichloropropane	ND	0.20		µg/L	1	4/27/2018 3:01:00 PM	R50915
Vinyl chloride	ND	0.10		µg/L	1	4/27/2018 3:01:00 PM	R50915
Xylenes, Total	ND	0.15		µg/L	1	4/27/2018 3:01:00 PM	R50915
Surr: Dibromofluoromethane	97.4	70-130		%Rec	1	4/27/2018 3:01:00 PM	R50915
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	4/27/2018 3:01:00 PM	R50915
Surr: Toluene-d8	95.8	70-130		%Rec	1	4/27/2018 3:01:00 PM	R50915
Surr: 4-Bromofluorobenzene	96.6	70-130		%Rec	1	4/27/2018 3:01:00 PM	R50915

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 4 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Client Name: City of Las Cruces

Work Order Number: 1804C39

RcptNo: 1

Received By: Erin Melendrez

4/25/2018 9:05:00 AM

EM

Completed By: Ashley Gallegos

4/25/2018 10:22:06 AM

AG

Reviewed By: ENM

4/25/18 Labeled by: MW 4/25/18

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
4. Were all samples received at a temperature of >0° C to 6.0° C? Yes No NA
5. Sample(s) in proper container(s)? Yes No
6. Sufficient sample volume for indicated test(s)? Yes No
7. Are samples (except VOA and ONG) properly preserved? Yes No
8. Was preservative added to bottles? Yes No NA
9. VOA vials have zero headspace? Yes No No VOA Vials
10. Were any sample containers received broken? Yes No
11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Is it clear what analyses were requested? Yes No
14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: MW 4/25/18
 (< 2 of 12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

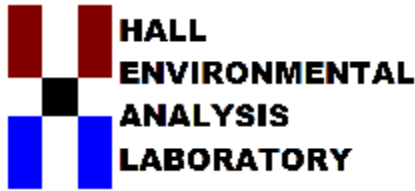
15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:

17. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	NA	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 01, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP Joint Superfund Center Monthly Analysis

OrderNo.: 1804C42

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 4/25/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1804C42

Date Reported: 5/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-180424

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 4/24/2018 8:10:00 AM

Lab ID: 1804C42-001

Matrix: AQUEOUS

Received Date: 4/25/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
Toluene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
Ethylbenzene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
Naphthalene	ND	2.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
1-Methylnaphthalene	ND	4.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
2-Methylnaphthalene	ND	4.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
Acetone	ND	10		µg/L	1	4/27/2018 10:36:00 PM	R50915
Bromobenzene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
Bromodichloromethane	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
Bromoform	3.0	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
Bromomethane	ND	3.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
2-Butanone	ND	10		µg/L	1	4/27/2018 10:36:00 PM	R50915
Carbon disulfide	ND	10		µg/L	1	4/27/2018 10:36:00 PM	R50915
Carbon Tetrachloride	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
Chlorobenzene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
Chloroethane	ND	2.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
Chloroform	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
Chloromethane	ND	3.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
2-Chlorotoluene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
4-Chlorotoluene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
cis-1,2-DCE	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
Dibromochloromethane	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
Dibromomethane	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
1,1-Dichloroethane	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
1,1-Dichloroethene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
1,2-Dichloropropane	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
1,3-Dichloropropane	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
2,2-Dichloropropane	ND	2.0		µg/L	1	4/27/2018 10:36:00 PM	R50915

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1804C42

Date Reported: 5/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-180424

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 4/24/2018 8:10:00 AM

Lab ID: 1804C42-001

Matrix: AQUEOUS

Received Date: 4/25/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
Hexachlorobutadiene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
2-Hexanone	ND	10		µg/L	1	4/27/2018 10:36:00 PM	R50915
Isopropylbenzene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
4-Isopropyltoluene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
4-Methyl-2-pentanone	ND	10		µg/L	1	4/27/2018 10:36:00 PM	R50915
Methylene Chloride	ND	3.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
n-Butylbenzene	ND	3.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
n-Propylbenzene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
sec-Butylbenzene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
Styrene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
tert-Butylbenzene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
Tetrachloroethene (PCE)	9.7	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
trans-1,2-DCE	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
Trichlorofluoromethane	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
Vinyl chloride	ND	1.0		µg/L	1	4/27/2018 10:36:00 PM	R50915
Xylenes, Total	ND	1.5		µg/L	1	4/27/2018 10:36:00 PM	R50915
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	4/27/2018 10:36:00 PM	R50915
Surr: 4-Bromofluorobenzene	98.2	70-130		%Rec	1	4/27/2018 10:36:00 PM	R50915
Surr: Dibromofluoromethane	102	70-130		%Rec	1	4/27/2018 10:36:00 PM	R50915
Surr: Toluene-d8	96.8	70-130		%Rec	1	4/27/2018 10:36:00 PM	R50915

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1804C42

Date Reported: 5/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-180424 DUP

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 4/24/2018 8:10:00 AM

Lab ID: 1804C42-002

Matrix: AQUEOUS

Received Date: 4/25/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
Toluene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
Ethylbenzene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
Naphthalene	ND	2.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
1-Methylnaphthalene	ND	4.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
2-Methylnaphthalene	ND	4.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
Acetone	ND	10		µg/L	1	4/27/2018 11:01:00 PM	R50915
Bromobenzene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
Bromodichloromethane	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
Bromoform	3.8	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
Bromomethane	ND	3.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
2-Butanone	ND	10		µg/L	1	4/27/2018 11:01:00 PM	R50915
Carbon disulfide	ND	10		µg/L	1	4/27/2018 11:01:00 PM	R50915
Carbon Tetrachloride	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
Chlorobenzene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
Chloroethane	ND	2.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
Chloroform	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
Chloromethane	ND	3.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
2-Chlorotoluene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
4-Chlorotoluene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
cis-1,2-DCE	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
Dibromochloromethane	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
Dibromomethane	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
1,1-Dichloroethane	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
1,1-Dichloroethene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
1,2-Dichloropropane	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
1,3-Dichloropropane	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
2,2-Dichloropropane	ND	2.0		µg/L	1	4/27/2018 11:01:00 PM	R50915

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1804C42

Date Reported: 5/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-180424 DUP

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 4/24/2018 8:10:00 AM

Lab ID: 1804C42-002

Matrix: AQUEOUS

Received Date: 4/25/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
Hexachlorobutadiene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
2-Hexanone	ND	10		µg/L	1	4/27/2018 11:01:00 PM	R50915
Isopropylbenzene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
4-Isopropyltoluene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
4-Methyl-2-pentanone	ND	10		µg/L	1	4/27/2018 11:01:00 PM	R50915
Methylene Chloride	ND	3.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
n-Butylbenzene	ND	3.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
n-Propylbenzene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
sec-Butylbenzene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
Styrene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
tert-Butylbenzene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
Tetrachloroethene (PCE)	9.7	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
trans-1,2-DCE	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
Trichlorofluoromethane	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
Vinyl chloride	ND	1.0		µg/L	1	4/27/2018 11:01:00 PM	R50915
Xylenes, Total	ND	1.5		µg/L	1	4/27/2018 11:01:00 PM	R50915
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	4/27/2018 11:01:00 PM	R50915
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	4/27/2018 11:01:00 PM	R50915
Surr: Dibromofluoromethane	100	70-130		%Rec	1	4/27/2018 11:01:00 PM	R50915
Surr: Toluene-d8	96.4	70-130		%Rec	1	4/27/2018 11:01:00 PM	R50915

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1804C42

Date Reported: 5/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-180424

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 4/24/2018 8:56:00 AM

Lab ID: 1804C42-003

Matrix: AQUEOUS

Received Date: 4/25/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
Toluene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
Ethylbenzene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
Naphthalene	ND	2.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
1-Methylnaphthalene	ND	4.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
2-Methylnaphthalene	ND	4.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
Acetone	ND	10		µg/L	1	4/27/2018 11:25:00 PM	R50915
Bromobenzene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
Bromodichloromethane	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
Bromoform	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
Bromomethane	ND	3.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
2-Butanone	ND	10		µg/L	1	4/27/2018 11:25:00 PM	R50915
Carbon disulfide	ND	10		µg/L	1	4/27/2018 11:25:00 PM	R50915
Carbon Tetrachloride	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
Chlorobenzene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
Chloroethane	ND	2.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
Chloroform	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
Chloromethane	ND	3.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
2-Chlorotoluene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
4-Chlorotoluene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
cis-1,2-DCE	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
Dibromochloromethane	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
Dibromomethane	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
1,1-Dichloroethane	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
1,1-Dichloroethene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
1,2-Dichloropropane	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
1,3-Dichloropropane	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
2,2-Dichloropropane	ND	2.0		µg/L	1	4/27/2018 11:25:00 PM	R50915

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1804C42

Date Reported: 5/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-180424

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 4/24/2018 8:56:00 AM

Lab ID: 1804C42-003

Matrix: AQUEOUS

Received Date: 4/25/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
Hexachlorobutadiene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
2-Hexanone	ND	10		µg/L	1	4/27/2018 11:25:00 PM	R50915
Isopropylbenzene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
4-Isopropyltoluene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
4-Methyl-2-pentanone	ND	10		µg/L	1	4/27/2018 11:25:00 PM	R50915
Methylene Chloride	ND	3.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
n-Butylbenzene	ND	3.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
n-Propylbenzene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
sec-Butylbenzene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
Styrene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
tert-Butylbenzene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
Tetrachloroethene (PCE)	16	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
trans-1,2-DCE	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
Trichlorofluoromethane	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
Vinyl chloride	ND	1.0		µg/L	1	4/27/2018 11:25:00 PM	R50915
Xylenes, Total	ND	1.5		µg/L	1	4/27/2018 11:25:00 PM	R50915
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	4/27/2018 11:25:00 PM	R50915
Surr: 4-Bromofluorobenzene	97.6	70-130		%Rec	1	4/27/2018 11:25:00 PM	R50915
Surr: Dibromofluoromethane	101	70-130		%Rec	1	4/27/2018 11:25:00 PM	R50915
Surr: Toluene-d8	98.2	70-130		%Rec	1	4/27/2018 11:25:00 PM	R50915

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1804C42

Date Reported: 5/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-180424

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 4/24/2018 8:15:00 AM

Lab ID: 1804C42-004

Matrix: AQUEOUS

Received Date: 4/25/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
Toluene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
Ethylbenzene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
Naphthalene	ND	2.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
1-Methylnaphthalene	ND	4.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
2-Methylnaphthalene	ND	4.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
Acetone	ND	10		µg/L	1	4/27/2018 11:49:00 PM	B50915
Bromobenzene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
Bromodichloromethane	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
Bromoform	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
Bromomethane	ND	3.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
2-Butanone	ND	10		µg/L	1	4/27/2018 11:49:00 PM	B50915
Carbon disulfide	ND	10		µg/L	1	4/27/2018 11:49:00 PM	B50915
Carbon Tetrachloride	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
Chlorobenzene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
Chloroethane	ND	2.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
Chloroform	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
Chloromethane	ND	3.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
2-Chlorotoluene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
4-Chlorotoluene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
cis-1,2-DCE	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
Dibromochloromethane	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
Dibromomethane	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
1,1-Dichloroethane	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
1,1-Dichloroethene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
1,2-Dichloropropane	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
1,3-Dichloropropane	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
2,2-Dichloropropane	ND	2.0		µg/L	1	4/27/2018 11:49:00 PM	B50915

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1804C42

Date Reported: 5/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-180424

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 4/24/2018 8:15:00 AM

Lab ID: 1804C42-004

Matrix: AQUEOUS

Received Date: 4/25/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
Hexachlorobutadiene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
2-Hexanone	ND	10		µg/L	1	4/27/2018 11:49:00 PM	B50915
Isopropylbenzene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
4-Isopropyltoluene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
4-Methyl-2-pentanone	ND	10		µg/L	1	4/27/2018 11:49:00 PM	B50915
Methylene Chloride	ND	3.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
n-Butylbenzene	ND	3.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
n-Propylbenzene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
sec-Butylbenzene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
Styrene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
tert-Butylbenzene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
Tetrachloroethene (PCE)	12	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
trans-1,2-DCE	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
Trichlorofluoromethane	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
Vinyl chloride	ND	1.0		µg/L	1	4/27/2018 11:49:00 PM	B50915
Xylenes, Total	ND	1.5		µg/L	1	4/27/2018 11:49:00 PM	B50915
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	4/27/2018 11:49:00 PM	B50915
Surr: 4-Bromofluorobenzene	97.4	70-130		%Rec	1	4/27/2018 11:49:00 PM	B50915
Surr: Dibromofluoromethane	103	70-130		%Rec	1	4/27/2018 11:49:00 PM	B50915
Surr: Toluene-d8	96.8	70-130		%Rec	1	4/27/2018 11:49:00 PM	B50915

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1804C42

Date Reported: 5/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-180424

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 4/24/2018 8:16:00 AM

Lab ID: 1804C42-005

Matrix: AQUEOUS

Received Date: 4/25/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
Toluene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
Ethylbenzene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
Naphthalene	ND	2.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
1-Methylnaphthalene	ND	4.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
2-Methylnaphthalene	ND	4.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
Acetone	ND	10		µg/L	1	4/28/2018 2:35:00 AM	B50915
Bromobenzene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
Bromodichloromethane	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
Bromoform	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
Bromomethane	ND	3.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
2-Butanone	ND	10		µg/L	1	4/28/2018 2:35:00 AM	B50915
Carbon disulfide	ND	10		µg/L	1	4/28/2018 2:35:00 AM	B50915
Carbon Tetrachloride	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
Chlorobenzene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
Chloroethane	ND	2.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
Chloroform	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
Chloromethane	ND	3.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
2-Chlorotoluene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
4-Chlorotoluene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
cis-1,2-DCE	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
Dibromochloromethane	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
Dibromomethane	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
1,1-Dichloroethane	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
1,1-Dichloroethene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
1,2-Dichloropropane	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
1,3-Dichloropropane	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
2,2-Dichloropropane	ND	2.0		µg/L	1	4/28/2018 2:35:00 AM	B50915

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1804C42

Date Reported: 5/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-180424

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 4/24/2018 8:16:00 AM

Lab ID: 1804C42-005

Matrix: AQUEOUS

Received Date: 4/25/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
Hexachlorobutadiene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
2-Hexanone	ND	10		µg/L	1	4/28/2018 2:35:00 AM	B50915
Isopropylbenzene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
4-Isopropyltoluene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
4-Methyl-2-pentanone	ND	10		µg/L	1	4/28/2018 2:35:00 AM	B50915
Methylene Chloride	ND	3.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
n-Butylbenzene	ND	3.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
n-Propylbenzene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
sec-Butylbenzene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
Styrene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
tert-Butylbenzene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
trans-1,2-DCE	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
Trichlorofluoromethane	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
Vinyl chloride	ND	1.0		µg/L	1	4/28/2018 2:35:00 AM	B50915
Xylenes, Total	ND	1.5		µg/L	1	4/28/2018 2:35:00 AM	B50915
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	4/28/2018 2:35:00 AM	B50915
Surr: 4-Bromofluorobenzene	97.2	70-130		%Rec	1	4/28/2018 2:35:00 AM	B50915
Surr: Dibromofluoromethane	101	70-130		%Rec	1	4/28/2018 2:35:00 AM	B50915
Surr: Toluene-d8	96.8	70-130		%Rec	1	4/28/2018 2:35:00 AM	B50915

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1804C42

Date Reported: 5/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-180424

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 4/24/2018 8:18:00 AM

Lab ID: 1804C42-006

Matrix: AQUEOUS

Received Date: 4/25/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
Toluene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
Ethylbenzene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
Naphthalene	ND	2.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
1-Methylnaphthalene	ND	4.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
2-Methylnaphthalene	ND	4.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
Acetone	ND	10		µg/L	1	4/28/2018 2:59:00 AM	B50915
Bromobenzene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
Bromodichloromethane	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
Bromoform	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
Bromomethane	ND	3.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
2-Butanone	ND	10		µg/L	1	4/28/2018 2:59:00 AM	B50915
Carbon disulfide	ND	10		µg/L	1	4/28/2018 2:59:00 AM	B50915
Carbon Tetrachloride	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
Chlorobenzene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
Chloroethane	ND	2.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
Chloroform	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
Chloromethane	ND	3.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
2-Chlorotoluene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
4-Chlorotoluene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
cis-1,2-DCE	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
Dibromochloromethane	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
Dibromomethane	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
1,1-Dichloroethane	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
1,1-Dichloroethene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
1,2-Dichloropropane	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
1,3-Dichloropropane	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
2,2-Dichloropropane	ND	2.0		µg/L	1	4/28/2018 2:59:00 AM	B50915

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1804C42

Date Reported: 5/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-180424

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 4/24/2018 8:18:00 AM

Lab ID: 1804C42-006

Matrix: AQUEOUS

Received Date: 4/25/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
Hexachlorobutadiene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
2-Hexanone	ND	10		µg/L	1	4/28/2018 2:59:00 AM	B50915
Isopropylbenzene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
4-Isopropyltoluene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
4-Methyl-2-pentanone	ND	10		µg/L	1	4/28/2018 2:59:00 AM	B50915
Methylene Chloride	ND	3.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
n-Butylbenzene	ND	3.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
n-Propylbenzene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
sec-Butylbenzene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
Styrene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
tert-Butylbenzene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
trans-1,2-DCE	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
Trichlorofluoromethane	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
Vinyl chloride	ND	1.0		µg/L	1	4/28/2018 2:59:00 AM	B50915
Xylenes, Total	ND	1.5		µg/L	1	4/28/2018 2:59:00 AM	B50915
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	4/28/2018 2:59:00 AM	B50915
Surr: 4-Bromofluorobenzene	97.2	70-130		%Rec	1	4/28/2018 2:59:00 AM	B50915
Surr: Dibromofluoromethane	101	70-130		%Rec	1	4/28/2018 2:59:00 AM	B50915
Surr: Toluene-d8	97.4	70-130		%Rec	1	4/28/2018 2:59:00 AM	B50915

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1804C42

Date Reported: 5/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-180424

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 4/24/2018 8:21:00 AM

Lab ID: 1804C42-007

Matrix: AQUEOUS

Received Date: 4/25/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
Toluene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
Ethylbenzene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
Naphthalene	ND	2.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
1-Methylnaphthalene	ND	4.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
2-Methylnaphthalene	ND	4.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
Acetone	ND	10		µg/L	1	4/28/2018 3:22:00 AM	B50915
Bromobenzene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
Bromodichloromethane	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
Bromoform	4.6	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
Bromomethane	ND	3.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
2-Butanone	ND	10		µg/L	1	4/28/2018 3:22:00 AM	B50915
Carbon disulfide	ND	10		µg/L	1	4/28/2018 3:22:00 AM	B50915
Carbon Tetrachloride	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
Chlorobenzene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
Chloroethane	ND	2.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
Chloroform	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
Chloromethane	ND	3.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
2-Chlorotoluene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
4-Chlorotoluene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
cis-1,2-DCE	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
Dibromochloromethane	1.2	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
Dibromomethane	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
1,1-Dichloroethane	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
1,1-Dichloroethene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
1,2-Dichloropropane	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
1,3-Dichloropropane	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
2,2-Dichloropropane	ND	2.0		µg/L	1	4/28/2018 3:22:00 AM	B50915

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1804C42

Date Reported: 5/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-180424

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 4/24/2018 8:21:00 AM

Lab ID: 1804C42-007

Matrix: AQUEOUS

Received Date: 4/25/2018 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
Hexachlorobutadiene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
2-Hexanone	ND	10		µg/L	1	4/28/2018 3:22:00 AM	B50915
Isopropylbenzene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
4-Isopropyltoluene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
4-Methyl-2-pentanone	ND	10		µg/L	1	4/28/2018 3:22:00 AM	B50915
Methylene Chloride	ND	3.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
n-Butylbenzene	ND	3.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
n-Propylbenzene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
sec-Butylbenzene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
Styrene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
tert-Butylbenzene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
trans-1,2-DCE	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
Trichlorofluoromethane	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
Vinyl chloride	ND	1.0		µg/L	1	4/28/2018 3:22:00 AM	B50915
Xylenes, Total	ND	1.5		µg/L	1	4/28/2018 3:22:00 AM	B50915
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	4/28/2018 3:22:00 AM	B50915
Surr: 4-Bromofluorobenzene	99.2	70-130		%Rec	1	4/28/2018 3:22:00 AM	B50915
Surr: Dibromofluoromethane	101	70-130		%Rec	1	4/28/2018 3:22:00 AM	B50915
Surr: Toluene-d8	96.0	70-130		%Rec	1	4/28/2018 3:22:00 AM	B50915

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1804C42

01-May-18

Client: City of Las Cruces
Project: JSP Joint Superfund Center Monthly Analysis

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R50915		RunNo: 50915							
Prep Date:	Analysis Date: 4/27/2018		SeqNo: 1652968		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	110	70	130			
Toluene	21	1.0	20.00	0	107	70	130			
Chlorobenzene	21	1.0	20.00	0	106	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	117	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	108	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.1	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.8		10.00		97.6	70	130			

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R50915		RunNo: 50915							
Prep Date:	Analysis Date: 4/27/2018		SeqNo: 1652969		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1804C42

01-May-18

Client: City of Las Cruces
Project: JSP Joint Superfund Center Monthly Analysis

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R50915	RunNo:	50915					
Prep Date:		Analysis Date:	4/27/2018	SeqNo:	1652969	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1804C42

01-May-18

Client: City of Las Cruces
Project: JSP Joint Superfund Center Monthly Analysis

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R50915		RunNo: 50915							
Prep Date:	Analysis Date: 4/27/2018		SeqNo: 1652969		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		108	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.5	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.6		10.00		96.1	70	130			

Sample ID 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: B50915		RunNo: 50915							
Prep Date:	Analysis Date: 4/28/2018		SeqNo: 1653005		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130			
Toluene	21	1.0	20.00	0	104	70	130			
Chlorobenzene	21	1.0	20.00	0	105	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	109	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	103	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.1	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.2	70	130			
Surr: Toluene-d8	9.7		10.00		97.2	70	130			

Sample ID rb2	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: B50915		RunNo: 50915							
Prep Date:	Analysis Date: 4/28/2018		SeqNo: 1653006		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1804C42

01-May-18

Client: City of Las Cruces
Project: JSP Joint Superfund Center Monthly Analysis

Sample ID: rb2	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: B50915	RunNo: 50915
Prep Date:	Analysis Date: 4/28/2018	SeqNo: 1653006 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1804C42

01-May-18

Client: City of Las Cruces
Project: JSP Joint Superfund Center Monthly Analysis

Sample ID	rb2	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	B50915	RunNo:	50915					
Prep Date:		Analysis Date:	4/28/2018	SeqNo:	1653006	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.9	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.7		10.00		96.5	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

Client Name: City of Las Cruces

Work Order Number: 1804C42

RcptNo: 1

Received By: Erin Melendrez

4/25/2018 9:05:00 AM

EM

Completed By: Ashley Gallegos

4/25/2018 10:28:41 AM

AG

Reviewed By: ENM

4/25/18

Labeled by: MW 4/25/18

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
5. Sample(s) in proper container(s)? Yes No
6. Sufficient sample volume for indicated test(s)? Yes No
7. Are samples (except VOA and ONG) properly preserved? Yes No
8. Was preservative added to bottles? Yes No NA
9. VOA vials have zero headspace? Yes No No VOA Vials
10. Were any sample containers received broken? Yes No
11. Does paperwork match bottle labels?
 (Note discrepancies on chain of custody) Yes No
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Is it clear what analyses were requested? Yes No
14. Were all holding times able to be met?
 (If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 Adjusted? mw 4/25/18 (unless noted)
 Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
 Mailing Address: 70.0 Boy 20008
Las Cruces N.M. 87004
 Phone #: 575-528-3604
 email or Fax#: lucrc@las-cruces.nm.gov (575) 528-3600
 QA/QC Packaged
 Standard Level 4 (Full Validation)
 Accreditation
 NELAP Other
 EDD (Type) EXCELL

Turn-Around Time:

Standard Rush

Project Name:

JSP Joint Superfund Center
Monthly Analysis

Project #:

CRC JSP: Griggs Walnut

Project Manager:

Luis Guerra
575-528-3609

Sampler: Madison Park

On Ice: Yes No

Sample Temperature: 1.8

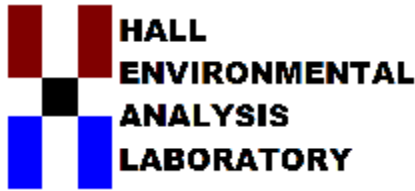
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No
4/24/18	0810	Purging Water	CRC 18-180424	3-40ml Vials	HgCl ₂	-001
	0810	Purging Water	CRC 18-180424 DAP			-002
	0856	Purging Water	CRC 18-180424			-003
	0815	Purging Water	CRC 18-180424			-004
	0818	Purging Water	CRC 18-180424			-005
	0818	Purging Water	CRC 18-180424			-006
4/24/18	1821	Purging Water	CRC 18-180424	3-40ml Vials	HgCl ₂	-007

BTEX + MTBE + TMBs (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCBs	8260B (VOA) VOA	8270 (Semi-VOA)
									X	
									X	
									X	
									X	
									X	
									X	
									X	

Analysis Request

Date: 4/24/18 Time: 1500 Relinquished by: Jaden Ryan
 Date: 4/25/18 Time: 0905 Received by: [Signature]
 Remarks: Send results to: Luis Guerra luaguerra@las-cruces.nm.gov
Joshua P. Sandoval: jpsandoval@las-cruces.nm.gov
Send VOA to CRC 10 Luis Guerra

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 30, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3635

FAX (575) 528-3513

RE: JSP Joint Superfund Center Monthly Analysis

OrderNo.: 1805A75

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 2 sample(s) on 5/18/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLC AS1-180517**Project:** JSP Joint Superfund Center Monthly Ana**Collection Date:** 5/17/2018 9:12:00 AM**Lab ID:** 1805A75-001**Matrix:** AIR**Received Date:** 5/18/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
Toluene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
Ethylbenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
Methyl tert-butyl ether (MTBE)	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
1,2,4-Trimethylbenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
1,3,5-Trimethylbenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
1,2-Dichloroethane (EDC)	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
1,2-Dibromoethane (EDB)	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
Naphthalene	ND	0.20	0.20		µg/L	1	5/29/2018 11:23:55 AM
1-Methylnaphthalene	ND	0.40	0.40		µg/L	1	5/29/2018 11:23:55 AM
2-Methylnaphthalene	ND	0.40	0.40		µg/L	1	5/29/2018 11:23:55 AM
Acetone	ND	1.0	1.0		µg/L	1	5/29/2018 11:23:55 AM
Bromobenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
Bromodichloromethane	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
Bromoform	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
Bromomethane	ND	0.20	0.20		µg/L	1	5/29/2018 11:23:55 AM
2-Butanone	ND	1.0	1.0		µg/L	1	5/29/2018 11:23:55 AM
Carbon disulfide	ND	1.0	1.0		µg/L	1	5/29/2018 11:23:55 AM
Carbon tetrachloride	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
Chlorobenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
Chloroethane	ND	0.20	0.20		µg/L	1	5/29/2018 11:23:55 AM
Chloroform	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
Chloromethane	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
2-Chlorotoluene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
4-Chlorotoluene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
cis-1,2-DCE	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
cis-1,3-Dichloropropene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
1,2-Dibromo-3-chloropropane	ND	0.20	0.20		µg/L	1	5/29/2018 11:23:55 AM
Dibromochloromethane	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
Dibromomethane	ND	0.20	0.20		µg/L	1	5/29/2018 11:23:55 AM
1,2-Dichlorobenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
1,3-Dichlorobenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
1,4-Dichlorobenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
Dichlorodifluoromethane	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
1,1-Dichloroethane	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
1,1-Dichloroethene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
1,2-Dichloropropane	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
1,3-Dichloropropane	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
2,2-Dichloropropane	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
1,1-Dichloropropene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLC AS1-180517**Project:** JSP Joint Superfund Center Monthly Ana**Collection Date:** 5/17/2018 9:12:00 AM**Lab ID:** 1805A75-001**Matrix:** AIR**Received Date:** 5/18/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Hexachlorobutadiene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
2-Hexanone	ND	1.0	1.0		µg/L	1	5/29/2018 11:23:55 AM
Isopropylbenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
4-Isopropyltoluene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
4-Methyl-2-pentanone	ND	1.0	1.0		µg/L	1	5/29/2018 11:23:55 AM
Methylene chloride	ND	0.30	0.30		µg/L	1	5/29/2018 11:23:55 AM
n-Butylbenzene	ND	0.30	0.30		µg/L	1	5/29/2018 11:23:55 AM
n-Propylbenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
sec-Butylbenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
Styrene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
tert-Butylbenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
1,1,1,2-Tetrachloroethane	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
1,1,2,2-Tetrachloroethane	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
Tetrachloroethene (PCE)	0.084	0.050	0.050		µg/L	1	5/29/2018 11:23:55 AM
trans-1,2-DCE	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
trans-1,3-Dichloropropene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
1,2,3-Trichlorobenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
1,2,4-Trichlorobenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
1,1,1-Trichloroethane	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
1,1,2-Trichloroethane	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
Trichloroethene (TCE)	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
Trichlorofluoromethane	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
1,2,3-Trichloropropane	ND	0.20	0.20		µg/L	1	5/29/2018 11:23:55 AM
Vinyl chloride	ND	0.10	0.10		µg/L	1	5/29/2018 11:23:55 AM
Xylenes, Total	ND	0.15	0.15		µg/L	1	5/29/2018 11:23:55 AM
Surr: Dibromofluoromethane	96.9	0	70-130		%Rec	1	5/29/2018 11:23:55 AM
Surr: 1,2-Dichloroethane-d4	94.2	0	70-130		%Rec	1	5/29/2018 11:23:55 AM
Surr: Toluene-d8	96.6	0	70-130		%Rec	1	5/29/2018 11:23:55 AM
Surr: 4-Bromofluorobenzene	114	0	70-130		%Rec	1	5/29/2018 11:23:55 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 2 of 6
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLC AS2-180517**Project:** JSP Joint Superfund Center Monthly Ana**Collection Date:** 5/17/2018 9:14:00 AM**Lab ID:** 1805A75-002**Matrix:** AIR**Received Date:** 5/18/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
Toluene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
Ethylbenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
Methyl tert-butyl ether (MTBE)	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
1,2,4-Trimethylbenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
1,3,5-Trimethylbenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
1,2-Dichloroethane (EDC)	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
1,2-Dibromoethane (EDB)	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
Naphthalene	ND	0.20	0.20		µg/L	1	5/29/2018 11:53:07 AM
1-Methylnaphthalene	ND	0.40	0.40		µg/L	1	5/29/2018 11:53:07 AM
2-Methylnaphthalene	ND	0.40	0.40		µg/L	1	5/29/2018 11:53:07 AM
Acetone	ND	1.0	1.0		µg/L	1	5/29/2018 11:53:07 AM
Bromobenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
Bromodichloromethane	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
Bromoform	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
Bromomethane	ND	0.20	0.20		µg/L	1	5/29/2018 11:53:07 AM
2-Butanone	ND	1.0	1.0		µg/L	1	5/29/2018 11:53:07 AM
Carbon disulfide	ND	1.0	1.0		µg/L	1	5/29/2018 11:53:07 AM
Carbon tetrachloride	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
Chlorobenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
Chloroethane	ND	0.20	0.20		µg/L	1	5/29/2018 11:53:07 AM
Chloroform	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
Chloromethane	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
2-Chlorotoluene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
4-Chlorotoluene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
cis-1,2-DCE	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
cis-1,3-Dichloropropene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
1,2-Dibromo-3-chloropropane	ND	0.20	0.20		µg/L	1	5/29/2018 11:53:07 AM
Dibromochloromethane	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
Dibromomethane	ND	0.20	0.20		µg/L	1	5/29/2018 11:53:07 AM
1,2-Dichlorobenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
1,3-Dichlorobenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
1,4-Dichlorobenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
Dichlorodifluoromethane	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
1,1-Dichloroethane	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
1,1-Dichloroethene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
1,2-Dichloropropane	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
1,3-Dichloropropane	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
2,2-Dichloropropane	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
1,1-Dichloropropene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLC AS2-180517**Project:** JSP Joint Superfund Center Monthly Ana**Collection Date:** 5/17/2018 9:14:00 AM**Lab ID:** 1805A75-002**Matrix:** AIR**Received Date:** 5/18/2018 9:15:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Hexachlorobutadiene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
2-Hexanone	ND	1.0	1.0		µg/L	1	5/29/2018 11:53:07 AM
Isopropylbenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
4-Isopropyltoluene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
4-Methyl-2-pentanone	ND	1.0	1.0		µg/L	1	5/29/2018 11:53:07 AM
Methylene chloride	ND	0.30	0.30		µg/L	1	5/29/2018 11:53:07 AM
n-Butylbenzene	ND	0.30	0.30		µg/L	1	5/29/2018 11:53:07 AM
n-Propylbenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
sec-Butylbenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
Styrene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
tert-Butylbenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
1,1,1,2-Tetrachloroethane	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
1,1,2,2-Tetrachloroethane	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
Tetrachloroethene (PCE)	0.098	0.050	0.050		µg/L	1	5/29/2018 11:53:07 AM
trans-1,2-DCE	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
trans-1,3-Dichloropropene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
1,2,3-Trichlorobenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
1,2,4-Trichlorobenzene	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
1,1,1-Trichloroethane	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
1,1,2-Trichloroethane	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
Trichloroethene (TCE)	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
Trichlorofluoromethane	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
1,2,3-Trichloropropane	ND	0.20	0.20		µg/L	1	5/29/2018 11:53:07 AM
Vinyl chloride	ND	0.10	0.10		µg/L	1	5/29/2018 11:53:07 AM
Xylenes, Total	ND	0.15	0.15		µg/L	1	5/29/2018 11:53:07 AM
Surr: Dibromofluoromethane	100	0	70-130		%Rec	1	5/29/2018 11:53:07 AM
Surr: 1,2-Dichloroethane-d4	91.5	0	70-130		%Rec	1	5/29/2018 11:53:07 AM
Surr: Toluene-d8	99.8	0	70-130		%Rec	1	5/29/2018 11:53:07 AM
Surr: 4-Bromofluorobenzene	119	0	70-130		%Rec	1	5/29/2018 11:53:07 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1805A75

30-May-18

Client: City of Las Cruces
Project: JSP Joint Superfund Center Monthly Analysis

Sample ID 1805a75-001a dup		SampType: DUP		TestCode: EPA Method 8260B: Volatiles						
Client ID: CLC AS1-180517		Batch ID: W51584		RunNo: 51584						
Prep Date:		Analysis Date: 5/29/2018		SeqNo: 1681633 Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.10						0	20	
Toluene	ND	0.10						0	20	
Ethylbenzene	ND	0.10						0	20	
Methyl tert-butyl ether (MTBE)	ND	0.10						0	20	
1,2,4-Trimethylbenzene	ND	0.10						0	20	
1,3,5-Trimethylbenzene	ND	0.10						0	20	
1,2-Dichloroethane (EDC)	ND	0.10						0	20	
1,2-Dibromoethane (EDB)	ND	0.10						0	20	
Naphthalene	ND	0.20						0	20	
1-Methylnaphthalene	ND	0.40						0	20	
2-Methylnaphthalene	ND	0.40						0	20	
Acetone	ND	1.0						0	20	
Bromobenzene	ND	0.10						0	20	
Bromodichloromethane	ND	0.10						0	20	
Bromoform	ND	0.10						0	20	
Bromomethane	ND	0.20						0	20	
2-Butanone	ND	1.0						0	20	
Carbon disulfide	ND	1.0						0	20	
Carbon tetrachloride	ND	0.10						0	20	
Chlorobenzene	ND	0.10						0	20	
Chloroethane	ND	0.20						0	20	
Chloroform	ND	0.10						0	20	
Chloromethane	ND	0.10						0	20	
2-Chlorotoluene	ND	0.10						0	20	
4-Chlorotoluene	ND	0.10						0	20	
cis-1,2-DCE	ND	0.10						0	20	
cis-1,3-Dichloropropene	ND	0.10						0	20	
1,2-Dibromo-3-chloropropane	ND	0.20						0	20	
Dibromochloromethane	ND	0.10						0	20	
Dibromomethane	ND	0.20						0	20	
1,2-Dichlorobenzene	ND	0.10						0	20	
1,3-Dichlorobenzene	ND	0.10						0	20	
1,4-Dichlorobenzene	ND	0.10						0	20	
Dichlorodifluoromethane	ND	0.10						0	20	
1,1-Dichloroethane	ND	0.10						0	20	
1,1-Dichloroethene	ND	0.10						0	20	
1,2-Dichloropropane	ND	0.10						0	20	
1,3-Dichloropropane	ND	0.10						0	20	
2,2-Dichloropropane	ND	0.10						0	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1805A75

30-May-18

Client: City of Las Cruces
Project: JSP Joint Superfund Center Monthly Analysis

Sample ID 1805a75-001a dup		SampType: DUP		TestCode: EPA Method 8260B: Volatiles						
Client ID: CLC AS1-180517		Batch ID: W51584		RunNo: 51584						
Prep Date:		Analysis Date: 5/29/2018		SeqNo: 1681633 Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.10						0	20	
Hexachlorobutadiene	ND	0.10						0	20	
2-Hexanone	ND	1.0						0	20	
Isopropylbenzene	ND	0.10						0	20	
4-Isopropyltoluene	ND	0.10						0	20	
4-Methyl-2-pentanone	ND	1.0						0	20	
Methylene chloride	ND	0.30						0	20	
n-Butylbenzene	ND	0.30						0	20	
n-Propylbenzene	ND	0.10						0	20	
sec-Butylbenzene	ND	0.10						0	20	
Styrene	ND	0.10						0	20	
tert-Butylbenzene	ND	0.10						0	20	
1,1,1,2-Tetrachloroethane	ND	0.10						0	20	
1,1,2,2-Tetrachloroethane	ND	0.10						0	20	
Tetrachloroethene (PCE)	0.10	0.10						18.3	20	
trans-1,2-DCE	ND	0.10						0	20	
trans-1,3-Dichloropropene	ND	0.10						0	20	
1,2,3-Trichlorobenzene	ND	0.10						0	20	
1,2,4-Trichlorobenzene	ND	0.10						0	20	
1,1,1-Trichloroethane	ND	0.10						0	20	
1,1,2-Trichloroethane	ND	0.10						0	20	
Trichloroethene (TCE)	ND	0.10						0	20	
Trichlorofluoromethane	ND	0.10						0	20	
1,2,3-Trichloropropane	ND	0.20						0	20	
Vinyl chloride	ND	0.10						0	20	
Xylenes, Total	ND	0.15						0	20	
Surr: Dibromofluoromethane	0.98		1.000		97.8	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	0.93		1.000		93.0	70	130	0	0	
Surr: Toluene-d8	1.0		1.000		100	70	130	0	0	
Surr: 4-Bromofluorobenzene	1.1		1.000		114	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1805A75

RcptNo: 1

Received By: Michelle Garcia 5/18/2018 9:15:00 AM

Michelle Garcia

Completed By: Ashley Gallegos 5/21/2018 8:50:23 AM

AG

Reviewed By: IMO

5/21/18

Labeled by: JTS 05/21/18

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: JTS

Special Handling (if applicable)

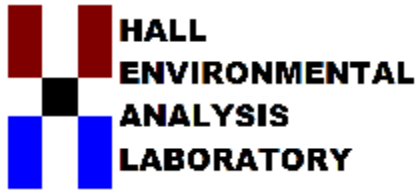
15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	NA	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 23, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP Joint Superfund Center Monthly Analysis

OrderNo.: 1805A77

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 5/18/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1805A77

Date Reported: 5/23/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-180517

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 5/17/2018 8:14:00 AM

Lab ID: 1805A77-001

Matrix: AQUEOUS

Received Date: 5/18/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
Toluene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
Ethylbenzene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
Naphthalene	ND	2.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
1-Methylnaphthalene	ND	4.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
2-Methylnaphthalene	ND	4.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
Acetone	ND	10		µg/L	1	5/22/2018 3:20:00 PM	R51422
Bromobenzene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
Bromodichloromethane	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
Bromoform	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
Bromomethane	ND	3.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
2-Butanone	ND	10		µg/L	1	5/22/2018 3:20:00 PM	R51422
Carbon disulfide	ND	10		µg/L	1	5/22/2018 3:20:00 PM	R51422
Carbon Tetrachloride	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
Chlorobenzene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
Chloroethane	ND	2.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
Chloroform	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
Chloromethane	ND	3.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
2-Chlorotoluene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
4-Chlorotoluene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
cis-1,2-DCE	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
Dibromochloromethane	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
Dibromomethane	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
1,1-Dichloroethane	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
1,1-Dichloroethene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
1,2-Dichloropropane	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
1,3-Dichloropropane	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
2,2-Dichloropropane	ND	2.0		µg/L	1	5/22/2018 3:20:00 PM	R51422

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1805A77

Date Reported: 5/23/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-180517

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 5/17/2018 8:14:00 AM

Lab ID: 1805A77-001

Matrix: AQUEOUS

Received Date: 5/18/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
Hexachlorobutadiene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
2-Hexanone	ND	10		µg/L	1	5/22/2018 3:20:00 PM	R51422
Isopropylbenzene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
4-Isopropyltoluene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
4-Methyl-2-pentanone	ND	10		µg/L	1	5/22/2018 3:20:00 PM	R51422
Methylene Chloride	ND	3.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
n-Butylbenzene	ND	3.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
n-Propylbenzene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
sec-Butylbenzene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
Styrene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
tert-Butylbenzene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
Tetrachloroethene (PCE)	11	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
trans-1,2-DCE	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
Trichlorofluoromethane	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
Vinyl chloride	ND	1.0		µg/L	1	5/22/2018 3:20:00 PM	R51422
Xylenes, Total	ND	1.5		µg/L	1	5/22/2018 3:20:00 PM	R51422
Surr: 1,2-Dichloroethane-d4	120	70-130		%Rec	1	5/22/2018 3:20:00 PM	R51422
Surr: 4-Bromofluorobenzene	116	70-130		%Rec	1	5/22/2018 3:20:00 PM	R51422
Surr: Dibromofluoromethane	117	70-130		%Rec	1	5/22/2018 3:20:00 PM	R51422
Surr: Toluene-d8	110	70-130		%Rec	1	5/22/2018 3:20:00 PM	R51422

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1805A77

Date Reported: 5/23/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-180517

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 5/17/2018 8:38:00 AM

Lab ID: 1805A77-002

Matrix: AQUEOUS

Received Date: 5/18/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
Toluene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
Ethylbenzene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
Naphthalene	ND	2.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
1-Methylnaphthalene	ND	4.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
2-Methylnaphthalene	ND	4.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
Acetone	ND	10		µg/L	1	5/22/2018 3:43:00 PM	R51422
Bromobenzene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
Bromodichloromethane	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
Bromoform	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
Bromomethane	ND	3.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
2-Butanone	ND	10		µg/L	1	5/22/2018 3:43:00 PM	R51422
Carbon disulfide	ND	10		µg/L	1	5/22/2018 3:43:00 PM	R51422
Carbon Tetrachloride	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
Chlorobenzene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
Chloroethane	ND	2.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
Chloroform	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
Chloromethane	ND	3.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
2-Chlorotoluene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
4-Chlorotoluene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
cis-1,2-DCE	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
Dibromochloromethane	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
Dibromomethane	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
1,1-Dichloroethane	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
1,1-Dichloroethene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
1,2-Dichloropropane	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
1,3-Dichloropropane	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
2,2-Dichloropropane	ND	2.0		µg/L	1	5/22/2018 3:43:00 PM	R51422

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1805A77

Date Reported: 5/23/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-180517

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 5/17/2018 8:38:00 AM

Lab ID: 1805A77-002

Matrix: AQUEOUS

Received Date: 5/18/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
Hexachlorobutadiene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
2-Hexanone	ND	10		µg/L	1	5/22/2018 3:43:00 PM	R51422
Isopropylbenzene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
4-Isopropyltoluene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
4-Methyl-2-pentanone	ND	10		µg/L	1	5/22/2018 3:43:00 PM	R51422
Methylene Chloride	ND	3.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
n-Butylbenzene	ND	3.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
n-Propylbenzene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
sec-Butylbenzene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
Styrene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
tert-Butylbenzene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
Tetrachloroethene (PCE)	17	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
trans-1,2-DCE	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
Trichlorofluoromethane	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
Vinyl chloride	ND	1.0		µg/L	1	5/22/2018 3:43:00 PM	R51422
Xylenes, Total	ND	1.5		µg/L	1	5/22/2018 3:43:00 PM	R51422
Surr: 1,2-Dichloroethane-d4	117	70-130		%Rec	1	5/22/2018 3:43:00 PM	R51422
Surr: 4-Bromofluorobenzene	115	70-130		%Rec	1	5/22/2018 3:43:00 PM	R51422
Surr: Dibromofluoromethane	116	70-130		%Rec	1	5/22/2018 3:43:00 PM	R51422
Surr: Toluene-d8	114	70-130		%Rec	1	5/22/2018 3:43:00 PM	R51422

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLC 27-180517 Dup**Project:** JSP Joint Superfund Center Monthly Ana**Collection Date:** 5/17/2018 8:38:00 AM**Lab ID:** 1805A77-003**Matrix:** AQUEOUS**Received Date:** 5/18/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
Toluene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
Ethylbenzene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
Naphthalene	ND	2.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
1-Methylnaphthalene	ND	4.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
2-Methylnaphthalene	ND	4.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
Acetone	ND	10		µg/L	1	5/22/2018 4:07:00 PM	R51422
Bromobenzene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
Bromodichloromethane	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
Bromoform	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
Bromomethane	ND	3.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
2-Butanone	ND	10		µg/L	1	5/22/2018 4:07:00 PM	R51422
Carbon disulfide	ND	10		µg/L	1	5/22/2018 4:07:00 PM	R51422
Carbon Tetrachloride	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
Chlorobenzene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
Chloroethane	ND	2.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
Chloroform	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
Chloromethane	ND	3.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
2-Chlorotoluene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
4-Chlorotoluene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
cis-1,2-DCE	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
Dibromochloromethane	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
Dibromomethane	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
1,1-Dichloroethane	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
1,1-Dichloroethene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
1,2-Dichloropropane	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
1,3-Dichloropropane	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
2,2-Dichloropropane	ND	2.0		µg/L	1	5/22/2018 4:07:00 PM	R51422

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1805A77

Date Reported: 5/23/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-180517 Dup

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 5/17/2018 8:38:00 AM

Lab ID: 1805A77-003

Matrix: AQUEOUS

Received Date: 5/18/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
Hexachlorobutadiene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
2-Hexanone	ND	10		µg/L	1	5/22/2018 4:07:00 PM	R51422
Isopropylbenzene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
4-Isopropyltoluene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
4-Methyl-2-pentanone	ND	10		µg/L	1	5/22/2018 4:07:00 PM	R51422
Methylene Chloride	ND	3.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
n-Butylbenzene	ND	3.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
n-Propylbenzene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
sec-Butylbenzene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
Styrene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
tert-Butylbenzene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
Tetrachloroethene (PCE)	17	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
trans-1,2-DCE	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
Trichlorofluoromethane	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
Vinyl chloride	ND	1.0		µg/L	1	5/22/2018 4:07:00 PM	R51422
Xylenes, Total	ND	1.5		µg/L	1	5/22/2018 4:07:00 PM	R51422
Surr: 1,2-Dichloroethane-d4	117	70-130		%Rec	1	5/22/2018 4:07:00 PM	R51422
Surr: 4-Bromofluorobenzene	114	70-130		%Rec	1	5/22/2018 4:07:00 PM	R51422
Surr: Dibromofluoromethane	115	70-130		%Rec	1	5/22/2018 4:07:00 PM	R51422
Surr: Toluene-d8	113	70-130		%Rec	1	5/22/2018 4:07:00 PM	R51422

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1805A77

Date Reported: 5/23/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-180517

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 5/17/2018 8:55:00 AM

Lab ID: 1805A77-004

Matrix: AQUEOUS

Received Date: 5/18/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
Toluene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
Ethylbenzene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
Naphthalene	ND	2.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
1-Methylnaphthalene	ND	4.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
2-Methylnaphthalene	ND	4.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
Acetone	ND	10		µg/L	1	5/22/2018 4:31:00 PM	R51422
Bromobenzene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
Bromodichloromethane	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
Bromoform	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
Bromomethane	ND	3.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
2-Butanone	ND	10		µg/L	1	5/22/2018 4:31:00 PM	R51422
Carbon disulfide	ND	10		µg/L	1	5/22/2018 4:31:00 PM	R51422
Carbon Tetrachloride	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
Chlorobenzene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
Chloroethane	ND	2.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
Chloroform	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
Chloromethane	ND	3.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
2-Chlorotoluene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
4-Chlorotoluene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
cis-1,2-DCE	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
Dibromochloromethane	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
Dibromomethane	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
1,1-Dichloroethane	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
1,1-Dichloroethene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
1,2-Dichloropropane	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
1,3-Dichloropropane	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
2,2-Dichloropropane	ND	2.0		µg/L	1	5/22/2018 4:31:00 PM	R51422

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1805A77

Date Reported: 5/23/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-180517

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 5/17/2018 8:55:00 AM

Lab ID: 1805A77-004

Matrix: AQUEOUS

Received Date: 5/18/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
Hexachlorobutadiene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
2-Hexanone	ND	10		µg/L	1	5/22/2018 4:31:00 PM	R51422
Isopropylbenzene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
4-Isopropyltoluene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
4-Methyl-2-pentanone	ND	10		µg/L	1	5/22/2018 4:31:00 PM	R51422
Methylene Chloride	ND	3.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
n-Butylbenzene	ND	3.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
n-Propylbenzene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
sec-Butylbenzene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
Styrene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
tert-Butylbenzene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
Tetrachloroethene (PCE)	14	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
trans-1,2-DCE	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
Trichlorofluoromethane	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
Vinyl chloride	ND	1.0		µg/L	1	5/22/2018 4:31:00 PM	R51422
Xylenes, Total	ND	1.5		µg/L	1	5/22/2018 4:31:00 PM	R51422
Surr: 1,2-Dichloroethane-d4	116	70-130		%Rec	1	5/22/2018 4:31:00 PM	R51422
Surr: 4-Bromofluorobenzene	115	70-130		%Rec	1	5/22/2018 4:31:00 PM	R51422
Surr: Dibromofluoromethane	115	70-130		%Rec	1	5/22/2018 4:31:00 PM	R51422
Surr: Toluene-d8	114	70-130		%Rec	1	5/22/2018 4:31:00 PM	R51422

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1805A77

Date Reported: 5/23/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-180517

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 5/17/2018 8:58:00 AM

Lab ID: 1805A77-005

Matrix: AQUEOUS

Received Date: 5/18/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
Toluene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
Ethylbenzene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
Naphthalene	ND	2.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
1-Methylnaphthalene	ND	4.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
2-Methylnaphthalene	ND	4.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
Acetone	ND	10		µg/L	1	5/22/2018 4:55:00 PM	R51422
Bromobenzene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
Bromodichloromethane	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
Bromoform	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
Bromomethane	ND	3.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
2-Butanone	ND	10		µg/L	1	5/22/2018 4:55:00 PM	R51422
Carbon disulfide	ND	10		µg/L	1	5/22/2018 4:55:00 PM	R51422
Carbon Tetrachloride	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
Chlorobenzene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
Chloroethane	ND	2.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
Chloroform	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
Chloromethane	ND	3.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
2-Chlorotoluene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
4-Chlorotoluene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
cis-1,2-DCE	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
Dibromochloromethane	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
Dibromomethane	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
1,1-Dichloroethane	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
1,1-Dichloroethene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
1,2-Dichloropropane	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
1,3-Dichloropropane	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
2,2-Dichloropropane	ND	2.0		µg/L	1	5/22/2018 4:55:00 PM	R51422

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1805A77

Date Reported: 5/23/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-180517

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 5/17/2018 8:58:00 AM

Lab ID: 1805A77-005

Matrix: AQUEOUS

Received Date: 5/18/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
Hexachlorobutadiene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
2-Hexanone	ND	10		µg/L	1	5/22/2018 4:55:00 PM	R51422
Isopropylbenzene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
4-Isopropyltoluene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
4-Methyl-2-pentanone	ND	10		µg/L	1	5/22/2018 4:55:00 PM	R51422
Methylene Chloride	ND	3.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
n-Butylbenzene	ND	3.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
n-Propylbenzene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
sec-Butylbenzene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
Styrene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
tert-Butylbenzene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
trans-1,2-DCE	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
Trichlorofluoromethane	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
Vinyl chloride	ND	1.0		µg/L	1	5/22/2018 4:55:00 PM	R51422
Xylenes, Total	ND	1.5		µg/L	1	5/22/2018 4:55:00 PM	R51422
Surr: 1,2-Dichloroethane-d4	118	70-130		%Rec	1	5/22/2018 4:55:00 PM	R51422
Surr: 4-Bromofluorobenzene	115	70-130		%Rec	1	5/22/2018 4:55:00 PM	R51422
Surr: Dibromofluoromethane	116	70-130		%Rec	1	5/22/2018 4:55:00 PM	R51422
Surr: Toluene-d8	114	70-130		%Rec	1	5/22/2018 4:55:00 PM	R51422

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1805A77

Date Reported: 5/23/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-180517

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 5/17/2018 9:00:00 AM

Lab ID: 1805A77-006

Matrix: AQUEOUS

Received Date: 5/18/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
Toluene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
Ethylbenzene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
Naphthalene	ND	2.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
1-Methylnaphthalene	ND	4.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
2-Methylnaphthalene	ND	4.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
Acetone	ND	10		µg/L	1	5/22/2018 5:19:00 PM	R51422
Bromobenzene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
Bromodichloromethane	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
Bromoform	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
Bromomethane	ND	3.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
2-Butanone	ND	10		µg/L	1	5/22/2018 5:19:00 PM	R51422
Carbon disulfide	ND	10		µg/L	1	5/22/2018 5:19:00 PM	R51422
Carbon Tetrachloride	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
Chlorobenzene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
Chloroethane	ND	2.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
Chloroform	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
Chloromethane	ND	3.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
2-Chlorotoluene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
4-Chlorotoluene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
cis-1,2-DCE	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
Dibromochloromethane	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
Dibromomethane	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
1,1-Dichloroethane	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
1,1-Dichloroethene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
1,2-Dichloropropane	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
1,3-Dichloropropane	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
2,2-Dichloropropane	ND	2.0		µg/L	1	5/22/2018 5:19:00 PM	R51422

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1805A77

Date Reported: 5/23/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-180517

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 5/17/2018 9:00:00 AM

Lab ID: 1805A77-006

Matrix: AQUEOUS

Received Date: 5/18/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
Hexachlorobutadiene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
2-Hexanone	ND	10		µg/L	1	5/22/2018 5:19:00 PM	R51422
Isopropylbenzene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
4-Isopropyltoluene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
4-Methyl-2-pentanone	ND	10		µg/L	1	5/22/2018 5:19:00 PM	R51422
Methylene Chloride	ND	3.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
n-Butylbenzene	ND	3.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
n-Propylbenzene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
sec-Butylbenzene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
Styrene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
tert-Butylbenzene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
trans-1,2-DCE	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
Trichlorofluoromethane	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
Vinyl chloride	ND	1.0		µg/L	1	5/22/2018 5:19:00 PM	R51422
Xylenes, Total	ND	1.5		µg/L	1	5/22/2018 5:19:00 PM	R51422
Surr: 1,2-Dichloroethane-d4	114	70-130		%Rec	1	5/22/2018 5:19:00 PM	R51422
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	1	5/22/2018 5:19:00 PM	R51422
Surr: Dibromofluoromethane	117	70-130		%Rec	1	5/22/2018 5:19:00 PM	R51422
Surr: Toluene-d8	113	70-130		%Rec	1	5/22/2018 5:19:00 PM	R51422

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1805A77

Date Reported: 5/23/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-180517

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 5/17/2018 9:06:00 AM

Lab ID: 1805A77-007

Matrix: AQUEOUS

Received Date: 5/18/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
Toluene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
Ethylbenzene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
Naphthalene	ND	2.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
1-Methylnaphthalene	ND	4.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
2-Methylnaphthalene	ND	4.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
Acetone	ND	10		µg/L	1	5/22/2018 5:43:00 PM	R51422
Bromobenzene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
Bromodichloromethane	2.8	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
Bromoform	5.0	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
Bromomethane	ND	3.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
2-Butanone	ND	10		µg/L	1	5/22/2018 5:43:00 PM	R51422
Carbon disulfide	ND	10		µg/L	1	5/22/2018 5:43:00 PM	R51422
Carbon Tetrachloride	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
Chlorobenzene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
Chloroethane	ND	2.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
Chloroform	1.3	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
Chloromethane	ND	3.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
2-Chlorotoluene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
4-Chlorotoluene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
cis-1,2-DCE	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
Dibromochloromethane	4.5	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
Dibromomethane	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
1,1-Dichloroethane	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
1,1-Dichloroethene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
1,2-Dichloropropane	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
1,3-Dichloropropane	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
2,2-Dichloropropane	ND	2.0		µg/L	1	5/22/2018 5:43:00 PM	R51422

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1805A77

Date Reported: 5/23/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-180517

Project: JSP Joint Superfund Center Monthly Ana

Collection Date: 5/17/2018 9:06:00 AM

Lab ID: 1805A77-007

Matrix: AQUEOUS

Received Date: 5/18/2018 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
Hexachlorobutadiene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
2-Hexanone	ND	10		µg/L	1	5/22/2018 5:43:00 PM	R51422
Isopropylbenzene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
4-Isopropyltoluene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
4-Methyl-2-pentanone	ND	10		µg/L	1	5/22/2018 5:43:00 PM	R51422
Methylene Chloride	ND	3.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
n-Butylbenzene	ND	3.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
n-Propylbenzene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
sec-Butylbenzene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
Styrene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
tert-Butylbenzene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
trans-1,2-DCE	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
Trichlorofluoromethane	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
Vinyl chloride	ND	1.0		µg/L	1	5/22/2018 5:43:00 PM	R51422
Xylenes, Total	ND	1.5		µg/L	1	5/22/2018 5:43:00 PM	R51422
Surr: 1,2-Dichloroethane-d4	115	70-130		%Rec	1	5/22/2018 5:43:00 PM	R51422
Surr: 4-Bromofluorobenzene	116	70-130		%Rec	1	5/22/2018 5:43:00 PM	R51422
Surr: Dibromofluoromethane	116	70-130		%Rec	1	5/22/2018 5:43:00 PM	R51422
Surr: Toluene-d8	114	70-130		%Rec	1	5/22/2018 5:43:00 PM	R51422

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1805A77

23-May-18

Client: City of Las Cruces
Project: JSP Joint Superfund Center Monthly Analysis

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R51422		RunNo: 51422							
Prep Date:	Analysis Date: 5/22/2018		SeqNo: 1674376		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	114	70	130			
Toluene	23	1.0	20.00	0	117	70	130			
Chlorobenzene	23	1.0	20.00	0	116	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	116	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	111	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		115	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		114	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	11		10.00		115	70	130			

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R51422		RunNo: 51422							
Prep Date:	Analysis Date: 5/22/2018		SeqNo: 1674377		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1805A77

23-May-18

Client: City of Las Cruces

Project: JSP Joint Superfund Center Monthly Analysis

Sample ID	rb	SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID:	R51422		RunNo:	51422				
Prep Date:		Analysis Date:	5/22/2018		SeqNo:	1674377	Units:	µg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1805A77

23-May-18

Client: City of Las Cruces
Project: JSP Joint Superfund Center Monthly Analysis

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R51422		RunNo: 51422							
Prep Date:	Analysis Date: 5/22/2018		SeqNo: 1674377		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		113	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		118	70	130			
Surr: Dibromofluoromethane	11		10.00		115	70	130			
Surr: Toluene-d8	11		10.00		113	70	130			

Sample ID 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: B51422		RunNo: 51422							
Prep Date:	Analysis Date: 5/22/2018		SeqNo: 1674893		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	11		10.00		111	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		117	70	130			
Surr: Dibromofluoromethane	11		10.00		114	70	130			
Surr: Toluene-d8	11		10.00		113	70	130			

Sample ID rb2	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: B51422		RunNo: 51422							
Prep Date:	Analysis Date: 5/22/2018		SeqNo: 1674894		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	11		10.00		113	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		116	70	130			
Surr: Dibromofluoromethane	11		10.00		114	70	130			
Surr: Toluene-d8	11		10.00		113	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1805A77

RcptNo: 1

Received By: Michelle Garcia 5/18/2018 9:15:00 AM

Michelle Garcia

Completed By: Ashley Gallegos 5/21/2018 9:15:40 AM

AG

Reviewed By: IMO 5/21/18

Labeled by: JB 05/21/18

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: 12
 (<2 or >12 unless noted)
 Adjusted? NO
 Checked by: JB 05/21/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
 Mailing Address: P.O. Box 20800
Las Cruces N.M. 88004
 Phone #: 575-528-3604
 email or Fax#: lquerrero@las-cruces.org (575) 528-3600
 QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation
 NELAP Other _____
 EDD (Type) EXCEL

Turn-Around Time:
 Standard Rush
 Project Name:
JSP - Joint Superfund Center
Monthly Analysis
 Project #:
CRC JSP: Griegs Walnut
 Project Manager:
Luis Guerra
575-528-3609
 Sampler: Yadira Ryan
 On Ice: Yes No
 Sample Temperature: 10

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
5-17-18	1814	Drinking Water	CRC 18-180517	3-40ml Vials Hg, Cd, Pb		1805A17
	1838		CRC 27-180517			-001
	1838		CRC 27-180517 DWP			-002
	1855		CRC 29-180517			-003
	1858		CRC C1-180517			-004
	1900		CRC C2-180517			-005
5-17-18	1906	Drinking Water	CRC ESA-180517	3-40ml Vials Hg, Cd, Pb		-006
						-007

Date: 5-17-18 Time: 1800
 Relinquished by: Yadira Ryan
 Date: 5-17-18 Time: 1800
 Relinquished by: Yadira Ryan
 Received by: [Signature] Date: 05/17/18 Time: 0915
 Received by: Feder Date: Feder

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VA) VDC	8270 (Semi-VOA)	Air Pollution (V or M)
									X		
									X		
									X		
									X		
									X		
									X		
									X		
									X		

Remarks: Send Results to:
Luis Guerra: lquerrero@las-cruces.org
Joanna Penabaz: jpenabaz@las-cruces.org
(Send invoice to CRC c/o Luis Guerra)

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 26, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP Joint Superfund Project Monthly Analysis

OrderNo.: 1806A41

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 6/15/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1806A41

Date Reported: 6/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC18-180614

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 6/14/2018 8:13:00 AM

Lab ID: 1806A41-001

Matrix: AQUEOUS

Received Date: 6/15/2018 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
Toluene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
Ethylbenzene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
Naphthalene	ND	2.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
1-Methylnaphthalene	ND	4.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
2-Methylnaphthalene	ND	4.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
Acetone	ND	10		µg/L	1	6/22/2018 7:32:00 AM	B52236
Bromobenzene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
Bromodichloromethane	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
Bromoform	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
Bromomethane	ND	3.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
2-Butanone	ND	10		µg/L	1	6/22/2018 7:32:00 AM	B52236
Carbon disulfide	ND	10		µg/L	1	6/22/2018 7:32:00 AM	B52236
Carbon Tetrachloride	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
Chlorobenzene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
Chloroethane	ND	2.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
Chloroform	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
Chloromethane	ND	3.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
2-Chlorotoluene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
4-Chlorotoluene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
cis-1,2-DCE	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
Dibromochloromethane	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
Dibromomethane	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
1,1-Dichloroethane	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
1,1-Dichloroethene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
1,2-Dichloropropane	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
1,3-Dichloropropane	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
2,2-Dichloropropane	ND	2.0		µg/L	1	6/22/2018 7:32:00 AM	B52236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1806A41

Date Reported: 6/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC18-180614

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 6/14/2018 8:13:00 AM

Lab ID: 1806A41-001

Matrix: AQUEOUS

Received Date: 6/15/2018 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
Hexachlorobutadiene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
2-Hexanone	ND	10		µg/L	1	6/22/2018 7:32:00 AM	B52236
Isopropylbenzene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
4-Isopropyltoluene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
4-Methyl-2-pentanone	ND	10		µg/L	1	6/22/2018 7:32:00 AM	B52236
Methylene Chloride	ND	3.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
n-Butylbenzene	ND	3.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
n-Propylbenzene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
sec-Butylbenzene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
Styrene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
tert-Butylbenzene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
Tetrachloroethene (PCE)	9.8	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
trans-1,2-DCE	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
Trichlorofluoromethane	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
Vinyl chloride	ND	1.0		µg/L	1	6/22/2018 7:32:00 AM	B52236
Xylenes, Total	ND	1.5		µg/L	1	6/22/2018 7:32:00 AM	B52236
Surr: 1,2-Dichloroethane-d4	97.0	70-130		%Rec	1	6/22/2018 7:32:00 AM	B52236
Surr: 4-Bromofluorobenzene	123	70-130		%Rec	1	6/22/2018 7:32:00 AM	B52236
Surr: Dibromofluoromethane	89.7	70-130		%Rec	1	6/22/2018 7:32:00 AM	B52236
Surr: Toluene-d8	94.3	70-130		%Rec	1	6/22/2018 7:32:00 AM	B52236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1806A41

Date Reported: 6/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC27-180614

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 6/14/2018 8:43:00 AM

Lab ID: 1806A41-002

Matrix: AQUEOUS

Received Date: 6/15/2018 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
Toluene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
Ethylbenzene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
Naphthalene	ND	2.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
1-Methylnaphthalene	ND	4.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
2-Methylnaphthalene	ND	4.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
Acetone	ND	10		µg/L	1	6/22/2018 7:56:00 AM	B52236
Bromobenzene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
Bromodichloromethane	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
Bromoform	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
Bromomethane	ND	3.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
2-Butanone	ND	10		µg/L	1	6/22/2018 7:56:00 AM	B52236
Carbon disulfide	ND	10		µg/L	1	6/22/2018 7:56:00 AM	B52236
Carbon Tetrachloride	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
Chlorobenzene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
Chloroethane	ND	2.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
Chloroform	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
Chloromethane	ND	3.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
2-Chlorotoluene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
4-Chlorotoluene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
cis-1,2-DCE	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
Dibromochloromethane	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
Dibromomethane	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
1,1-Dichloroethane	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
1,1-Dichloroethene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
1,2-Dichloropropane	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
1,3-Dichloropropane	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
2,2-Dichloropropane	ND	2.0		µg/L	1	6/22/2018 7:56:00 AM	B52236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1806A41

Date Reported: 6/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC27-180614

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 6/14/2018 8:43:00 AM

Lab ID: 1806A41-002

Matrix: AQUEOUS

Received Date: 6/15/2018 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
Hexachlorobutadiene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
2-Hexanone	ND	10		µg/L	1	6/22/2018 7:56:00 AM	B52236
Isopropylbenzene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
4-Isopropyltoluene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
4-Methyl-2-pentanone	ND	10		µg/L	1	6/22/2018 7:56:00 AM	B52236
Methylene Chloride	ND	3.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
n-Butylbenzene	ND	3.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
n-Propylbenzene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
sec-Butylbenzene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
Styrene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
tert-Butylbenzene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
Tetrachloroethene (PCE)	13	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
trans-1,2-DCE	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
Trichlorofluoromethane	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
Vinyl chloride	ND	1.0		µg/L	1	6/22/2018 7:56:00 AM	B52236
Xylenes, Total	ND	1.5		µg/L	1	6/22/2018 7:56:00 AM	B52236
Surr: 1,2-Dichloroethane-d4	94.9	70-130		%Rec	1	6/22/2018 7:56:00 AM	B52236
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	6/22/2018 7:56:00 AM	B52236
Surr: Dibromofluoromethane	88.6	70-130		%Rec	1	6/22/2018 7:56:00 AM	B52236
Surr: Toluene-d8	92.5	70-130		%Rec	1	6/22/2018 7:56:00 AM	B52236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1806A41

Date Reported: 6/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCIS1-180614

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 6/14/2018 8:17:00 AM

Lab ID: 1806A41-003

Matrix: AQUEOUS

Received Date: 6/15/2018 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
Toluene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
Ethylbenzene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
Naphthalene	ND	2.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
1-Methylnaphthalene	ND	4.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
2-Methylnaphthalene	ND	4.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
Acetone	ND	10		µg/L	1	6/22/2018 8:20:00 AM	B52236
Bromobenzene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
Bromodichloromethane	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
Bromoform	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
Bromomethane	ND	3.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
2-Butanone	ND	10		µg/L	1	6/22/2018 8:20:00 AM	B52236
Carbon disulfide	ND	10		µg/L	1	6/22/2018 8:20:00 AM	B52236
Carbon Tetrachloride	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
Chlorobenzene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
Chloroethane	ND	2.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
Chloroform	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
Chloromethane	ND	3.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
2-Chlorotoluene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
4-Chlorotoluene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
cis-1,2-DCE	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
Dibromochloromethane	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
Dibromomethane	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
1,1-Dichloroethane	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
1,1-Dichloroethene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
1,2-Dichloropropane	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
1,3-Dichloropropane	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
2,2-Dichloropropane	ND	2.0		µg/L	1	6/22/2018 8:20:00 AM	B52236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1806A41

Date Reported: 6/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCIS1-180614

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 6/14/2018 8:17:00 AM

Lab ID: 1806A41-003

Matrix: AQUEOUS

Received Date: 6/15/2018 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
Hexachlorobutadiene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
2-Hexanone	ND	10		µg/L	1	6/22/2018 8:20:00 AM	B52236
Isopropylbenzene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
4-Isopropyltoluene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
4-Methyl-2-pentanone	ND	10		µg/L	1	6/22/2018 8:20:00 AM	B52236
Methylene Chloride	ND	3.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
n-Butylbenzene	ND	3.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
n-Propylbenzene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
sec-Butylbenzene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
Styrene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
tert-Butylbenzene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
Tetrachloroethene (PCE)	12	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
trans-1,2-DCE	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
Trichlorofluoromethane	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
Vinyl chloride	ND	1.0		µg/L	1	6/22/2018 8:20:00 AM	B52236
Xylenes, Total	ND	1.5		µg/L	1	6/22/2018 8:20:00 AM	B52236
Surr: 1,2-Dichloroethane-d4	96.3	70-130		%Rec	1	6/22/2018 8:20:00 AM	B52236
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	1	6/22/2018 8:20:00 AM	B52236
Surr: Dibromofluoromethane	90.6	70-130		%Rec	1	6/22/2018 8:20:00 AM	B52236
Surr: Toluene-d8	92.3	70-130		%Rec	1	6/22/2018 8:20:00 AM	B52236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1806A41

Date Reported: 6/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCC1-180614

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 6/14/2018 8:19:00 AM

Lab ID: 1806A41-004

Matrix: AQUEOUS

Received Date: 6/15/2018 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
Toluene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
Ethylbenzene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
Naphthalene	ND	2.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
1-Methylnaphthalene	ND	4.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
2-Methylnaphthalene	ND	4.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
Acetone	ND	10		µg/L	1	6/22/2018 8:44:00 AM	B52236
Bromobenzene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
Bromodichloromethane	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
Bromoform	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
Bromomethane	ND	3.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
2-Butanone	ND	10		µg/L	1	6/22/2018 8:44:00 AM	B52236
Carbon disulfide	ND	10		µg/L	1	6/22/2018 8:44:00 AM	B52236
Carbon Tetrachloride	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
Chlorobenzene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
Chloroethane	ND	2.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
Chloroform	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
Chloromethane	ND	3.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
2-Chlorotoluene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
4-Chlorotoluene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
cis-1,2-DCE	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
Dibromochloromethane	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
Dibromomethane	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
1,1-Dichloroethane	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
1,1-Dichloroethene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
1,2-Dichloropropane	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
1,3-Dichloropropane	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
2,2-Dichloropropane	ND	2.0		µg/L	1	6/22/2018 8:44:00 AM	B52236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1806A41

Date Reported: 6/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCC1-180614

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 6/14/2018 8:19:00 AM

Lab ID: 1806A41-004

Matrix: AQUEOUS

Received Date: 6/15/2018 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
Hexachlorobutadiene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
2-Hexanone	ND	10		µg/L	1	6/22/2018 8:44:00 AM	B52236
Isopropylbenzene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
4-Isopropyltoluene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
4-Methyl-2-pentanone	ND	10		µg/L	1	6/22/2018 8:44:00 AM	B52236
Methylene Chloride	ND	3.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
n-Butylbenzene	ND	3.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
n-Propylbenzene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
sec-Butylbenzene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
Styrene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
tert-Butylbenzene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
trans-1,2-DCE	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
Trichlorofluoromethane	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
Vinyl chloride	ND	1.0		µg/L	1	6/22/2018 8:44:00 AM	B52236
Xylenes, Total	ND	1.5		µg/L	1	6/22/2018 8:44:00 AM	B52236
Surr: 1,2-Dichloroethane-d4	95.7	70-130		%Rec	1	6/22/2018 8:44:00 AM	B52236
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	6/22/2018 8:44:00 AM	B52236
Surr: Dibromofluoromethane	92.0	70-130		%Rec	1	6/22/2018 8:44:00 AM	B52236
Surr: Toluene-d8	91.6	70-130		%Rec	1	6/22/2018 8:44:00 AM	B52236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1806A41

Date Reported: 6/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCC1-180614-Dupe

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 6/14/2018 8:20:00 AM

Lab ID: 1806A41-005

Matrix: AQUEOUS

Received Date: 6/15/2018 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
Toluene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
Ethylbenzene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
Naphthalene	ND	2.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
1-Methylnaphthalene	ND	4.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
2-Methylnaphthalene	ND	4.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
Acetone	ND	10		µg/L	1	6/22/2018 9:08:00 AM	B52236
Bromobenzene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
Bromodichloromethane	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
Bromoform	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
Bromomethane	ND	3.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
2-Butanone	ND	10		µg/L	1	6/22/2018 9:08:00 AM	B52236
Carbon disulfide	ND	10		µg/L	1	6/22/2018 9:08:00 AM	B52236
Carbon Tetrachloride	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
Chlorobenzene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
Chloroethane	ND	2.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
Chloroform	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
Chloromethane	ND	3.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
2-Chlorotoluene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
4-Chlorotoluene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
cis-1,2-DCE	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
Dibromochloromethane	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
Dibromomethane	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
1,1-Dichloroethane	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
1,1-Dichloroethene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
1,2-Dichloropropane	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
1,3-Dichloropropane	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
2,2-Dichloropropane	ND	2.0		µg/L	1	6/22/2018 9:08:00 AM	B52236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1806A41

Date Reported: 6/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCC1-180614-Dupe

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 6/14/2018 8:20:00 AM

Lab ID: 1806A41-005

Matrix: AQUEOUS

Received Date: 6/15/2018 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
Hexachlorobutadiene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
2-Hexanone	ND	10		µg/L	1	6/22/2018 9:08:00 AM	B52236
Isopropylbenzene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
4-Isopropyltoluene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
4-Methyl-2-pentanone	ND	10		µg/L	1	6/22/2018 9:08:00 AM	B52236
Methylene Chloride	ND	3.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
n-Butylbenzene	ND	3.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
n-Propylbenzene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
sec-Butylbenzene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
Styrene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
tert-Butylbenzene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
trans-1,2-DCE	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
Trichlorofluoromethane	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
Vinyl chloride	ND	1.0		µg/L	1	6/22/2018 9:08:00 AM	B52236
Xylenes, Total	ND	1.5		µg/L	1	6/22/2018 9:08:00 AM	B52236
Surr: 1,2-Dichloroethane-d4	96.3	70-130		%Rec	1	6/22/2018 9:08:00 AM	B52236
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	6/22/2018 9:08:00 AM	B52236
Surr: Dibromofluoromethane	92.6	70-130		%Rec	1	6/22/2018 9:08:00 AM	B52236
Surr: Toluene-d8	92.6	70-130		%Rec	1	6/22/2018 9:08:00 AM	B52236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1806A41

Date Reported: 6/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCC2-180614

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 6/14/2018 8:23:00 AM

Lab ID: 1806A41-006

Matrix: AQUEOUS

Received Date: 6/15/2018 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
Toluene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
Ethylbenzene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
Naphthalene	ND	2.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
1-Methylnaphthalene	ND	4.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
2-Methylnaphthalene	ND	4.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
Acetone	ND	10		µg/L	1	6/22/2018 9:32:00 AM	B52236
Bromobenzene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
Bromodichloromethane	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
Bromoform	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
Bromomethane	ND	3.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
2-Butanone	ND	10		µg/L	1	6/22/2018 9:32:00 AM	B52236
Carbon disulfide	ND	10		µg/L	1	6/22/2018 9:32:00 AM	B52236
Carbon Tetrachloride	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
Chlorobenzene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
Chloroethane	ND	2.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
Chloroform	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
Chloromethane	ND	3.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
2-Chlorotoluene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
4-Chlorotoluene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
cis-1,2-DCE	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
Dibromochloromethane	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
Dibromomethane	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
1,1-Dichloroethane	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
1,1-Dichloroethene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
1,2-Dichloropropane	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
1,3-Dichloropropane	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
2,2-Dichloropropane	ND	2.0		µg/L	1	6/22/2018 9:32:00 AM	B52236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1806A41

Date Reported: 6/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCC2-180614

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 6/14/2018 8:23:00 AM

Lab ID: 1806A41-006

Matrix: AQUEOUS

Received Date: 6/15/2018 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
Hexachlorobutadiene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
2-Hexanone	ND	10		µg/L	1	6/22/2018 9:32:00 AM	B52236
Isopropylbenzene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
4-Isopropyltoluene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
4-Methyl-2-pentanone	ND	10		µg/L	1	6/22/2018 9:32:00 AM	B52236
Methylene Chloride	ND	3.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
n-Butylbenzene	ND	3.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
n-Propylbenzene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
sec-Butylbenzene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
Styrene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
tert-Butylbenzene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
trans-1,2-DCE	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
Trichlorofluoromethane	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
Vinyl chloride	ND	1.0		µg/L	1	6/22/2018 9:32:00 AM	B52236
Xylenes, Total	ND	1.5		µg/L	1	6/22/2018 9:32:00 AM	B52236
Surr: 1,2-Dichloroethane-d4	94.7	70-130		%Rec	1	6/22/2018 9:32:00 AM	B52236
Surr: 4-Bromofluorobenzene	117	70-130		%Rec	1	6/22/2018 9:32:00 AM	B52236
Surr: Dibromofluoromethane	93.1	70-130		%Rec	1	6/22/2018 9:32:00 AM	B52236
Surr: Toluene-d8	78.6	70-130		%Rec	1	6/22/2018 9:32:00 AM	B52236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1806A41

Date Reported: 6/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCES1-180614

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 6/14/2018 8:25:00 AM

Lab ID: 1806A41-007

Matrix: AQUEOUS

Received Date: 6/15/2018 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
Toluene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
Ethylbenzene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
Naphthalene	ND	2.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
1-Methylnaphthalene	ND	4.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
2-Methylnaphthalene	ND	4.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
Acetone	ND	10		µg/L	1	6/22/2018 9:56:00 AM	B52236
Bromobenzene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
Bromodichloromethane	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
Bromoform	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
Bromomethane	ND	3.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
2-Butanone	ND	10		µg/L	1	6/22/2018 9:56:00 AM	B52236
Carbon disulfide	ND	10		µg/L	1	6/22/2018 9:56:00 AM	B52236
Carbon Tetrachloride	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
Chlorobenzene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
Chloroethane	ND	2.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
Chloroform	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
Chloromethane	ND	3.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
2-Chlorotoluene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
4-Chlorotoluene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
cis-1,2-DCE	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
Dibromochloromethane	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
Dibromomethane	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
1,1-Dichloroethane	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
1,1-Dichloroethene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
1,2-Dichloropropane	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
1,3-Dichloropropane	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
2,2-Dichloropropane	ND	2.0		µg/L	1	6/22/2018 9:56:00 AM	B52236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1806A41

Date Reported: 6/26/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCES1-180614

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 6/14/2018 8:25:00 AM

Lab ID: 1806A41-007

Matrix: AQUEOUS

Received Date: 6/15/2018 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
Hexachlorobutadiene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
2-Hexanone	ND	10		µg/L	1	6/22/2018 9:56:00 AM	B52236
Isopropylbenzene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
4-Isopropyltoluene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
4-Methyl-2-pentanone	ND	10		µg/L	1	6/22/2018 9:56:00 AM	B52236
Methylene Chloride	ND	3.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
n-Butylbenzene	ND	3.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
n-Propylbenzene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
sec-Butylbenzene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
Styrene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
tert-Butylbenzene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
trans-1,2-DCE	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
Trichlorofluoromethane	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
Vinyl chloride	ND	1.0		µg/L	1	6/22/2018 9:56:00 AM	B52236
Xylenes, Total	ND	1.5		µg/L	1	6/22/2018 9:56:00 AM	B52236
Surr: 1,2-Dichloroethane-d4	97.0	70-130		%Rec	1	6/22/2018 9:56:00 AM	B52236
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	6/22/2018 9:56:00 AM	B52236
Surr: Dibromofluoromethane	89.9	70-130		%Rec	1	6/22/2018 9:56:00 AM	B52236
Surr: Toluene-d8	97.4	70-130		%Rec	1	6/22/2018 9:56:00 AM	B52236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1806A41

26-Jun-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Monthly Analysis

Sample ID 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: B52236		RunNo: 52236							
Prep Date:	Analysis Date: 6/22/2018		SeqNo: 1711792		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.0	70	130			
Toluene	19	1.0	20.00	0	95.3	70	130			
Chlorobenzene	18	1.0	20.00	0	91.7	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	99.4	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	92.4	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.6	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	9.2		10.00		91.5	70	130			
Surr: Toluene-d8	9.4		10.00		94.3	70	130			

Sample ID rb3	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: B52236		RunNo: 52236							
Prep Date:	Analysis Date: 6/22/2018		SeqNo: 1711793		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1806A41

26-Jun-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Monthly Analysis

Sample ID	rb3	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	B52236	RunNo:	52236					
Prep Date:		Analysis Date:	6/22/2018	SeqNo:	1711793	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1806A41

26-Jun-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Monthly Analysis

Sample ID: rb3	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: B52236		RunNo: 52236							
Prep Date:	Analysis Date: 6/22/2018		SeqNo: 1711793		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.0	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	9.1		10.00		90.7	70	130			
Surr: Toluene-d8	9.4		10.00		93.5	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1806A41

RcptNo: 1

Received By: Jazzmine Burkhead 6/15/2018 9:10:00 AM

Completed By: Ashley Gallegos 6/17/2018 1:10:55 PM

Reviewed By: JMO 6/18/18

Jazzmine Burkhead

AG

labeled by: ENM 6/18/18

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
5. Sample(s) in proper container(s)? Yes No
6. Sufficient sample volume for indicated test(s)? Yes No
7. Are samples (except VOA and ONG) properly preserved? Yes No
8. Was preservative added to bottles? Yes No NA
9. VOA vials have zero headspace? Yes No No VOA Vials
10. Were any sample containers received broken? Yes No
11. Does paperwork match bottle labels? Yes No
- (Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Is it clear what analyses were requested? Yes No
14. Were all holding times able to be met? Yes No
- (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____

(3 or 2 unless noted)

Adjusted: _____

Checked by: _____

ENM 6/18/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:		Date:	
By Whom:		Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:			
Client Instructions:			

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.3	Good	Not Present			

Chain-of-Custody Record

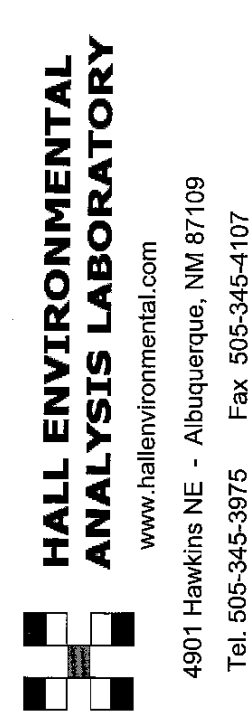
Client: City of Las Cruces
Water Quality Lab
 Mailing Address: P.O. Box 2000
Las Cruces, NM 88004
 Phone #: 575-528-3604
 email or Fax#: lguerra@las-cruces.org 575-528-3604
 QA/QC Package: Level 4 (Full Validation)
 Standard Other
 Accreditation
 NELAP Other
 EDD (Type) EXCEL

Turn-Around Time:
 Standard Rush
 Project Name:
JSP - Joint Superfund Project
Monthly Analysis
 Project #:
CLC-SSP Criggs-Walnut

Project Manager:
Luis Guerra
575-528-3609
 Sampler: Luis Guerra
 On Ice: Yes No
 Sample Temperature: 43

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No
6-14-18	8:13	^{Drinking} Water	CLC18-180614	3-10m Vials	HgCl ₂	-001
6-14-18	8:43		CLC27-180614			-002
6-14-18	8:17		CLCE51-180614			-003
6-14-18	8:19		CLCC1-180614			-004
6-14-18	8:20		CLCC1-180614-Dup			-005
6-14-18	8:23		CLCC2-180614			-006
6-14-18	8:25	^{Drinking} Water	CLCE51-180614	3-10m Vials	HgCl ₂	-007

Date: 6-14-18 Time: 1500
 Relinquished by: [Signature]
 Date: 6-14-18 Time: 09:10
 Received by: [Signature]
 Date: 06/19/18 Time: 09:10



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

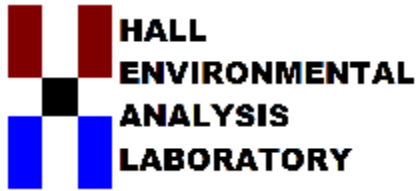
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX + MTBE + TMBs (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F ⁻ , Cl ⁻ , NO ₃ ⁻ , NO ₂ ⁻ , PO ₄ ⁻ , SO ₄ ⁻)	8081 Pesticides / 8082 PCBs	8260B (VOA) VOC	8270 (Semi-VOA)	Air Bubbles (Y or N)
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Remarks: Send Results to:
Luis Guerra: lguerra@las-cruces.org
Soshua Rosenblatt: jrosenblatt@las-cruces.org
(Send Invoices to CLC c/o Luis Guerra)

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 21, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: CLC Joint Superfund Project Monthly Analysis

OrderNo.: 1806A42

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/15/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1806A42

Date Reported: 6/21/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCAS1-180614

Project: CLC Joint Superfund Project Monthly An

Collection Date: 6/14/2018 8:26:00 AM

Lab ID: 1806A42-001

Matrix: AIR

Received Date: 6/15/2018 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
Toluene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
Ethylbenzene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
Naphthalene	ND	0.20		µg/L	1	6/20/2018 12:28:19 PM	C52119
1-Methylnaphthalene	ND	0.40		µg/L	1	6/20/2018 12:28:19 PM	C52119
2-Methylnaphthalene	ND	0.40		µg/L	1	6/20/2018 12:28:19 PM	C52119
Acetone	ND	1.0		µg/L	1	6/20/2018 12:28:19 PM	C52119
Bromobenzene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
Bromodichloromethane	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
Bromoform	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
Bromomethane	ND	0.20		µg/L	1	6/20/2018 12:28:19 PM	C52119
2-Butanone	ND	1.0		µg/L	1	6/20/2018 12:28:19 PM	C52119
Carbon disulfide	ND	1.0		µg/L	1	6/20/2018 12:28:19 PM	C52119
Carbon tetrachloride	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
Chlorobenzene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
Chloroethane	ND	0.20		µg/L	1	6/20/2018 12:28:19 PM	C52119
Chloroform	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
Chloromethane	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
2-Chlorotoluene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
4-Chlorotoluene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
cis-1,2-DCE	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	6/20/2018 12:28:19 PM	C52119
Dibromochloromethane	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
Dibromomethane	ND	0.20		µg/L	1	6/20/2018 12:28:19 PM	C52119
1,2-Dichlorobenzene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
1,3-Dichlorobenzene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
1,4-Dichlorobenzene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
Dichlorodifluoromethane	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
1,1-Dichloroethane	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
1,1-Dichloroethene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
1,2-Dichloropropane	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
1,3-Dichloropropane	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
2,2-Dichloropropane	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 1 of 4
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1806A42

Date Reported: 6/21/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCAS1-180614

Project: CLC Joint Superfund Project Monthly An

Collection Date: 6/14/2018 8:26:00 AM

Lab ID: 1806A42-001

Matrix: AIR

Received Date: 6/15/2018 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
Hexachlorobutadiene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
2-Hexanone	ND	1.0		µg/L	1	6/20/2018 12:28:19 PM	C52119
Isopropylbenzene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
4-Isopropyltoluene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
4-Methyl-2-pentanone	ND	1.0		µg/L	1	6/20/2018 12:28:19 PM	C52119
Methylene chloride	ND	0.30		µg/L	1	6/20/2018 12:28:19 PM	C52119
n-Butylbenzene	ND	0.30		µg/L	1	6/20/2018 12:28:19 PM	C52119
n-Propylbenzene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
sec-Butylbenzene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
Styrene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
tert-Butylbenzene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
Tetrachloroethene (PCE)	0.15	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
trans-1,2-DCE	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
1,1,1-Trichloroethane	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
1,1,2-Trichloroethane	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
Trichloroethene (TCE)	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
Trichlorofluoromethane	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
1,2,3-Trichloropropane	ND	0.20		µg/L	1	6/20/2018 12:28:19 PM	C52119
Vinyl chloride	ND	0.10		µg/L	1	6/20/2018 12:28:19 PM	C52119
Xylenes, Total	ND	0.15		µg/L	1	6/20/2018 12:28:19 PM	C52119
Surr: Dibromofluoromethane	92.6	70-130		%Rec	1	6/20/2018 12:28:19 PM	C52119
Surr: 1,2-Dichloroethane-d4	90.9	70-130		%Rec	1	6/20/2018 12:28:19 PM	C52119
Surr: Toluene-d8	103	70-130		%Rec	1	6/20/2018 12:28:19 PM	C52119
Surr: 4-Bromofluorobenzene	114	70-130		%Rec	1	6/20/2018 12:28:19 PM	C52119

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1806A42

Date Reported: 6/21/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCAS2-180614

Project: CLC Joint Superfund Project Monthly An

Collection Date: 6/14/2018 8:28:00 AM

Lab ID: 1806A42-002

Matrix: AIR

Received Date: 6/15/2018 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
Toluene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
Ethylbenzene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
Naphthalene	ND	0.20		µg/L	1	6/20/2018 12:57:40 PM	C52119
1-Methylnaphthalene	ND	0.40		µg/L	1	6/20/2018 12:57:40 PM	C52119
2-Methylnaphthalene	ND	0.40		µg/L	1	6/20/2018 12:57:40 PM	C52119
Acetone	ND	1.0		µg/L	1	6/20/2018 12:57:40 PM	C52119
Bromobenzene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
Bromodichloromethane	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
Bromoform	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
Bromomethane	ND	0.20		µg/L	1	6/20/2018 12:57:40 PM	C52119
2-Butanone	ND	1.0		µg/L	1	6/20/2018 12:57:40 PM	C52119
Carbon disulfide	ND	1.0		µg/L	1	6/20/2018 12:57:40 PM	C52119
Carbon tetrachloride	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
Chlorobenzene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
Chloroethane	ND	0.20		µg/L	1	6/20/2018 12:57:40 PM	C52119
Chloroform	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
Chloromethane	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
2-Chlorotoluene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
4-Chlorotoluene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
cis-1,2-DCE	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	6/20/2018 12:57:40 PM	C52119
Dibromochloromethane	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
Dibromomethane	ND	0.20		µg/L	1	6/20/2018 12:57:40 PM	C52119
1,2-Dichlorobenzene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
1,3-Dichlorobenzene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
1,4-Dichlorobenzene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
Dichlorodifluoromethane	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
1,1-Dichloroethane	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
1,1-Dichloroethene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
1,2-Dichloropropane	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
1,3-Dichloropropane	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
2,2-Dichloropropane	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 3 of 4
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1806A42

Date Reported: 6/21/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCAS2-180614

Project: CLC Joint Superfund Project Monthly An

Collection Date: 6/14/2018 8:28:00 AM

Lab ID: 1806A42-002

Matrix: AIR

Received Date: 6/15/2018 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
Hexachlorobutadiene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
2-Hexanone	ND	1.0		µg/L	1	6/20/2018 12:57:40 PM	C52119
Isopropylbenzene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
4-Isopropyltoluene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
4-Methyl-2-pentanone	ND	1.0		µg/L	1	6/20/2018 12:57:40 PM	C52119
Methylene chloride	ND	0.30		µg/L	1	6/20/2018 12:57:40 PM	C52119
n-Butylbenzene	ND	0.30		µg/L	1	6/20/2018 12:57:40 PM	C52119
n-Propylbenzene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
sec-Butylbenzene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
Styrene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
tert-Butylbenzene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
Tetrachloroethene (PCE)	0.15	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
trans-1,2-DCE	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
1,1,1-Trichloroethane	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
1,1,2-Trichloroethane	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
Trichloroethene (TCE)	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
Trichlorofluoromethane	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
1,2,3-Trichloropropane	ND	0.20		µg/L	1	6/20/2018 12:57:40 PM	C52119
Vinyl chloride	ND	0.10		µg/L	1	6/20/2018 12:57:40 PM	C52119
Xylenes, Total	ND	0.15		µg/L	1	6/20/2018 12:57:40 PM	C52119
Surr: Dibromofluoromethane	93.3	70-130		%Rec	1	6/20/2018 12:57:40 PM	C52119
Surr: 1,2-Dichloroethane-d4	96.8	70-130		%Rec	1	6/20/2018 12:57:40 PM	C52119
Surr: Toluene-d8	103	70-130		%Rec	1	6/20/2018 12:57:40 PM	C52119
Surr: 4-Bromofluorobenzene	116	70-130		%Rec	1	6/20/2018 12:57:40 PM	C52119

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: City of Las Cruces Work Order Number: 1806A42 RcptNo: 1

Received By: Jazzmine Burkhead 6/15/2018 9:10:00 AM

Completed By: Ashley Gallegos 6/17/2018 1:20:25 PM

Reviewed By: JMO 6/18/18

Jazzmine Burkhead
AG
 Labeled by: ENM 6/18/18

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
5. Sample(s) in proper container(s)? Yes No
6. Sufficient sample volume for indicated test(s)? Yes No
7. Are samples (except VOA and ONG) properly preserved? Yes No
8. Was preservative added to bottles? Yes No NA
9. VOA vials have zero headspace? Yes No No VOA Vials
10. Were any sample containers received broken? Yes No
11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Is it clear what analyses were requested? Yes No
14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

ENM 6/18/18

Special Handling (if applicable)

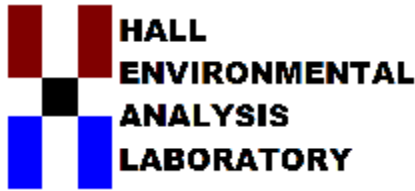
15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	NA	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 18, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP Joint Superfund Project Monthly Analysis

OrderNo.: 1807703

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 7/13/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1807703

Date Reported: 7/18/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-180712

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 7/12/2018 8:12:00 AM

Lab ID: 1807703-001

Matrix: AQUEOUS

Received Date: 7/13/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
Toluene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
Ethylbenzene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
Naphthalene	ND	2.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
1-Methylnaphthalene	ND	4.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
2-Methylnaphthalene	ND	4.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
Acetone	ND	10		µg/L	1	7/17/2018 6:09:00 PM	R52775
Bromobenzene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
Bromodichloromethane	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
Bromoform	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
Bromomethane	ND	3.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
2-Butanone	ND	10		µg/L	1	7/17/2018 6:09:00 PM	R52775
Carbon disulfide	ND	10		µg/L	1	7/17/2018 6:09:00 PM	R52775
Carbon Tetrachloride	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
Chlorobenzene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
Chloroethane	ND	2.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
Chloroform	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
Chloromethane	ND	3.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
2-Chlorotoluene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
4-Chlorotoluene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
cis-1,2-DCE	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
Dibromochloromethane	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
Dibromomethane	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
1,1-Dichloroethane	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
1,1-Dichloroethene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
1,2-Dichloropropane	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
1,3-Dichloropropane	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
2,2-Dichloropropane	ND	2.0		µg/L	1	7/17/2018 6:09:00 PM	R52775

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1807703

Date Reported: 7/18/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-180712

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 7/12/2018 8:12:00 AM

Lab ID: 1807703-001

Matrix: AQUEOUS

Received Date: 7/13/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
Hexachlorobutadiene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
2-Hexanone	ND	10		µg/L	1	7/17/2018 6:09:00 PM	R52775
Isopropylbenzene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
4-Isopropyltoluene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
4-Methyl-2-pentanone	ND	10		µg/L	1	7/17/2018 6:09:00 PM	R52775
Methylene Chloride	ND	3.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
n-Butylbenzene	ND	3.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
n-Propylbenzene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
sec-Butylbenzene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
Styrene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
tert-Butylbenzene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
Tetrachloroethene (PCE)	8.5	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
trans-1,2-DCE	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
Trichlorofluoromethane	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
Vinyl chloride	ND	1.0		µg/L	1	7/17/2018 6:09:00 PM	R52775
Xylenes, Total	ND	1.5		µg/L	1	7/17/2018 6:09:00 PM	R52775
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	7/17/2018 6:09:00 PM	R52775
Surr: 4-Bromofluorobenzene	99.8	70-130		%Rec	1	7/17/2018 6:09:00 PM	R52775
Surr: Dibromofluoromethane	99.1	70-130		%Rec	1	7/17/2018 6:09:00 PM	R52775
Surr: Toluene-d8	92.1	70-130		%Rec	1	7/17/2018 6:09:00 PM	R52775

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1807703

Date Reported: 7/18/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-180712

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 7/12/2018 8:46:00 AM

Lab ID: 1807703-002

Matrix: AQUEOUS

Received Date: 7/13/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
Toluene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
Ethylbenzene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
Naphthalene	ND	2.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
1-Methylnaphthalene	ND	4.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
2-Methylnaphthalene	ND	4.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
Acetone	ND	10		µg/L	1	7/17/2018 7:25:00 PM	R52775
Bromobenzene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
Bromodichloromethane	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
Bromoform	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
Bromomethane	ND	3.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
2-Butanone	ND	10		µg/L	1	7/17/2018 7:25:00 PM	R52775
Carbon disulfide	ND	10		µg/L	1	7/17/2018 7:25:00 PM	R52775
Carbon Tetrachloride	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
Chlorobenzene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
Chloroethane	ND	2.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
Chloroform	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
Chloromethane	ND	3.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
2-Chlorotoluene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
4-Chlorotoluene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
cis-1,2-DCE	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
Dibromochloromethane	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
Dibromomethane	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
1,1-Dichloroethane	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
1,1-Dichloroethene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
1,2-Dichloropropane	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
1,3-Dichloropropane	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
2,2-Dichloropropane	ND	2.0		µg/L	1	7/17/2018 7:25:00 PM	R52775

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1807703

Date Reported: 7/18/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-180712

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 7/12/2018 8:46:00 AM

Lab ID: 1807703-002

Matrix: AQUEOUS

Received Date: 7/13/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
Hexachlorobutadiene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
2-Hexanone	ND	10		µg/L	1	7/17/2018 7:25:00 PM	R52775
Isopropylbenzene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
4-Isopropyltoluene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
4-Methyl-2-pentanone	ND	10		µg/L	1	7/17/2018 7:25:00 PM	R52775
Methylene Chloride	ND	3.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
n-Butylbenzene	ND	3.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
n-Propylbenzene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
sec-Butylbenzene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
Styrene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
tert-Butylbenzene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
Tetrachloroethene (PCE)	14	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
trans-1,2-DCE	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
Trichlorofluoromethane	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
Vinyl chloride	ND	1.0		µg/L	1	7/17/2018 7:25:00 PM	R52775
Xylenes, Total	ND	1.5		µg/L	1	7/17/2018 7:25:00 PM	R52775
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	7/17/2018 7:25:00 PM	R52775
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	7/17/2018 7:25:00 PM	R52775
Surr: Dibromofluoromethane	98.7	70-130		%Rec	1	7/17/2018 7:25:00 PM	R52775
Surr: Toluene-d8	89.7	70-130		%Rec	1	7/17/2018 7:25:00 PM	R52775

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1807703

Date Reported: 7/18/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-180712

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 7/12/2018 8:17:00 AM

Lab ID: 1807703-003

Matrix: AQUEOUS

Received Date: 7/13/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
Toluene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
Ethylbenzene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
Naphthalene	ND	2.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
1-Methylnaphthalene	ND	4.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
2-Methylnaphthalene	ND	4.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
Acetone	ND	10		µg/L	1	7/17/2018 7:50:00 PM	R52775
Bromobenzene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
Bromodichloromethane	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
Bromoform	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
Bromomethane	ND	3.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
2-Butanone	ND	10		µg/L	1	7/17/2018 7:50:00 PM	R52775
Carbon disulfide	ND	10		µg/L	1	7/17/2018 7:50:00 PM	R52775
Carbon Tetrachloride	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
Chlorobenzene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
Chloroethane	ND	2.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
Chloroform	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
Chloromethane	ND	3.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
2-Chlorotoluene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
4-Chlorotoluene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
cis-1,2-DCE	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
Dibromochloromethane	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
Dibromomethane	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
1,1-Dichloroethane	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
1,1-Dichloroethene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
1,2-Dichloropropane	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
1,3-Dichloropropane	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
2,2-Dichloropropane	ND	2.0		µg/L	1	7/17/2018 7:50:00 PM	R52775

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1807703

Date Reported: 7/18/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-180712

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 7/12/2018 8:17:00 AM

Lab ID: 1807703-003

Matrix: AQUEOUS

Received Date: 7/13/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
Hexachlorobutadiene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
2-Hexanone	ND	10		µg/L	1	7/17/2018 7:50:00 PM	R52775
Isopropylbenzene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
4-Isopropyltoluene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
4-Methyl-2-pentanone	ND	10		µg/L	1	7/17/2018 7:50:00 PM	R52775
Methylene Chloride	ND	3.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
n-Butylbenzene	ND	3.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
n-Propylbenzene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
sec-Butylbenzene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
Styrene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
tert-Butylbenzene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
Tetrachloroethene (PCE)	11	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
trans-1,2-DCE	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
Trichlorofluoromethane	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
Vinyl chloride	ND	1.0		µg/L	1	7/17/2018 7:50:00 PM	R52775
Xylenes, Total	ND	1.5		µg/L	1	7/17/2018 7:50:00 PM	R52775
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	7/17/2018 7:50:00 PM	R52775
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	7/17/2018 7:50:00 PM	R52775
Surr: Dibromofluoromethane	103	70-130		%Rec	1	7/17/2018 7:50:00 PM	R52775
Surr: Toluene-d8	90.3	70-130		%Rec	1	7/17/2018 7:50:00 PM	R52775

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1807703

Date Reported: 7/18/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-180712

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 7/12/2018 8:19:00 AM

Lab ID: 1807703-004

Matrix: AQUEOUS

Received Date: 7/13/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
Toluene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
Ethylbenzene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
Naphthalene	ND	2.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
1-Methylnaphthalene	ND	4.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
2-Methylnaphthalene	ND	4.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
Acetone	ND	10		µg/L	1	7/17/2018 8:14:00 PM	R52775
Bromobenzene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
Bromodichloromethane	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
Bromoform	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
Bromomethane	ND	3.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
2-Butanone	ND	10		µg/L	1	7/17/2018 8:14:00 PM	R52775
Carbon disulfide	ND	10		µg/L	1	7/17/2018 8:14:00 PM	R52775
Carbon Tetrachloride	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
Chlorobenzene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
Chloroethane	ND	2.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
Chloroform	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
Chloromethane	ND	3.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
2-Chlorotoluene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
4-Chlorotoluene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
cis-1,2-DCE	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
Dibromochloromethane	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
Dibromomethane	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
1,1-Dichloroethane	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
1,1-Dichloroethene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
1,2-Dichloropropane	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
1,3-Dichloropropane	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
2,2-Dichloropropane	ND	2.0		µg/L	1	7/17/2018 8:14:00 PM	R52775

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1807703

Date Reported: 7/18/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-180712

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 7/12/2018 8:19:00 AM

Lab ID: 1807703-004

Matrix: AQUEOUS

Received Date: 7/13/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
Hexachlorobutadiene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
2-Hexanone	ND	10		µg/L	1	7/17/2018 8:14:00 PM	R52775
Isopropylbenzene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
4-Isopropyltoluene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
4-Methyl-2-pentanone	ND	10		µg/L	1	7/17/2018 8:14:00 PM	R52775
Methylene Chloride	ND	3.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
n-Butylbenzene	ND	3.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
n-Propylbenzene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
sec-Butylbenzene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
Styrene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
tert-Butylbenzene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
trans-1,2-DCE	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
Trichlorofluoromethane	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
Vinyl chloride	ND	1.0		µg/L	1	7/17/2018 8:14:00 PM	R52775
Xylenes, Total	ND	1.5		µg/L	1	7/17/2018 8:14:00 PM	R52775
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	7/17/2018 8:14:00 PM	R52775
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	7/17/2018 8:14:00 PM	R52775
Surr: Dibromofluoromethane	102	70-130		%Rec	1	7/17/2018 8:14:00 PM	R52775
Surr: Toluene-d8	91.0	70-130		%Rec	1	7/17/2018 8:14:00 PM	R52775

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1807703

Date Reported: 7/18/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-180712

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 7/12/2018 8:22:00 AM

Lab ID: 1807703-005

Matrix: AQUEOUS

Received Date: 7/13/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
Toluene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
Ethylbenzene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
Naphthalene	ND	2.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
1-Methylnaphthalene	ND	4.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
2-Methylnaphthalene	ND	4.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
Acetone	ND	10		µg/L	1	7/17/2018 8:39:00 PM	R52775
Bromobenzene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
Bromodichloromethane	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
Bromoform	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
Bromomethane	ND	3.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
2-Butanone	ND	10		µg/L	1	7/17/2018 8:39:00 PM	R52775
Carbon disulfide	ND	10		µg/L	1	7/17/2018 8:39:00 PM	R52775
Carbon Tetrachloride	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
Chlorobenzene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
Chloroethane	ND	2.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
Chloroform	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
Chloromethane	ND	3.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
2-Chlorotoluene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
4-Chlorotoluene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
cis-1,2-DCE	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
Dibromochloromethane	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
Dibromomethane	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
1,1-Dichloroethane	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
1,1-Dichloroethene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
1,2-Dichloropropane	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
1,3-Dichloropropane	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
2,2-Dichloropropane	ND	2.0		µg/L	1	7/17/2018 8:39:00 PM	R52775

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1807703

Date Reported: 7/18/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-180712

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 7/12/2018 8:22:00 AM

Lab ID: 1807703-005

Matrix: AQUEOUS

Received Date: 7/13/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
Hexachlorobutadiene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
2-Hexanone	ND	10		µg/L	1	7/17/2018 8:39:00 PM	R52775
Isopropylbenzene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
4-Isopropyltoluene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
4-Methyl-2-pentanone	ND	10		µg/L	1	7/17/2018 8:39:00 PM	R52775
Methylene Chloride	ND	3.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
n-Butylbenzene	ND	3.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
n-Propylbenzene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
sec-Butylbenzene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
Styrene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
tert-Butylbenzene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
trans-1,2-DCE	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
Trichlorofluoromethane	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
Vinyl chloride	ND	1.0		µg/L	1	7/17/2018 8:39:00 PM	R52775
Xylenes, Total	ND	1.5		µg/L	1	7/17/2018 8:39:00 PM	R52775
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	7/17/2018 8:39:00 PM	R52775
Surr: 4-Bromofluorobenzene	99.4	70-130		%Rec	1	7/17/2018 8:39:00 PM	R52775
Surr: Dibromofluoromethane	99.0	70-130		%Rec	1	7/17/2018 8:39:00 PM	R52775
Surr: Toluene-d8	90.1	70-130		%Rec	1	7/17/2018 8:39:00 PM	R52775

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1807703

Date Reported: 7/18/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-180712Dup

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 7/12/2018 8:24:00 AM

Lab ID: 1807703-006

Matrix: AQUEOUS

Received Date: 7/13/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
Toluene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
Ethylbenzene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
Naphthalene	ND	2.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
1-Methylnaphthalene	ND	4.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
2-Methylnaphthalene	ND	4.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
Acetone	ND	10		µg/L	1	7/17/2018 9:03:00 PM	R52775
Bromobenzene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
Bromodichloromethane	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
Bromoform	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
Bromomethane	ND	3.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
2-Butanone	ND	10		µg/L	1	7/17/2018 9:03:00 PM	R52775
Carbon disulfide	ND	10		µg/L	1	7/17/2018 9:03:00 PM	R52775
Carbon Tetrachloride	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
Chlorobenzene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
Chloroethane	ND	2.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
Chloroform	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
Chloromethane	ND	3.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
2-Chlorotoluene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
4-Chlorotoluene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
cis-1,2-DCE	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
Dibromochloromethane	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
Dibromomethane	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
1,1-Dichloroethane	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
1,1-Dichloroethene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
1,2-Dichloropropane	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
1,3-Dichloropropane	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
2,2-Dichloropropane	ND	2.0		µg/L	1	7/17/2018 9:03:00 PM	R52775

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1807703

Date Reported: 7/18/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-180712Dup

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 7/12/2018 8:24:00 AM

Lab ID: 1807703-006

Matrix: AQUEOUS

Received Date: 7/13/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
Hexachlorobutadiene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
2-Hexanone	ND	10		µg/L	1	7/17/2018 9:03:00 PM	R52775
Isopropylbenzene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
4-Isopropyltoluene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
4-Methyl-2-pentanone	ND	10		µg/L	1	7/17/2018 9:03:00 PM	R52775
Methylene Chloride	ND	3.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
n-Butylbenzene	ND	3.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
n-Propylbenzene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
sec-Butylbenzene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
Styrene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
tert-Butylbenzene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
trans-1,2-DCE	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
Trichlorofluoromethane	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
Vinyl chloride	ND	1.0		µg/L	1	7/17/2018 9:03:00 PM	R52775
Xylenes, Total	ND	1.5		µg/L	1	7/17/2018 9:03:00 PM	R52775
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	7/17/2018 9:03:00 PM	R52775
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	7/17/2018 9:03:00 PM	R52775
Surr: Dibromofluoromethane	101	70-130		%Rec	1	7/17/2018 9:03:00 PM	R52775
Surr: Toluene-d8	91.0	70-130		%Rec	1	7/17/2018 9:03:00 PM	R52775

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1807703

Date Reported: 7/18/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-180712

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 7/12/2018 8:26:00 AM

Lab ID: 1807703-007

Matrix: AQUEOUS

Received Date: 7/13/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
Toluene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
Ethylbenzene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
Naphthalene	ND	2.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
1-Methylnaphthalene	ND	4.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
2-Methylnaphthalene	ND	4.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
Acetone	ND	10		µg/L	1	7/17/2018 9:28:00 PM	R52775
Bromobenzene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
Bromodichloromethane	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
Bromoform	5.1	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
Bromomethane	ND	3.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
2-Butanone	ND	10		µg/L	1	7/17/2018 9:28:00 PM	R52775
Carbon disulfide	ND	10		µg/L	1	7/17/2018 9:28:00 PM	R52775
Carbon Tetrachloride	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
Chlorobenzene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
Chloroethane	ND	2.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
Chloroform	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
Chloromethane	ND	3.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
2-Chlorotoluene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
4-Chlorotoluene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
cis-1,2-DCE	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
Dibromochloromethane	1.8	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
Dibromomethane	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
1,2-Dichlorobenzene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
1,3-Dichlorobenzene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
1,4-Dichlorobenzene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
Dichlorodifluoromethane	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
1,1-Dichloroethane	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
1,1-Dichloroethene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
1,2-Dichloropropane	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
1,3-Dichloropropane	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
2,2-Dichloropropane	ND	2.0		µg/L	1	7/17/2018 9:28:00 PM	R52775

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1807703

Date Reported: 7/18/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-180712

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 7/12/2018 8:26:00 AM

Lab ID: 1807703-007

Matrix: AQUEOUS

Received Date: 7/13/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
Hexachlorobutadiene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
2-Hexanone	ND	10		µg/L	1	7/17/2018 9:28:00 PM	R52775
Isopropylbenzene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
4-Isopropyltoluene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
4-Methyl-2-pentanone	ND	10		µg/L	1	7/17/2018 9:28:00 PM	R52775
Methylene Chloride	ND	3.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
n-Butylbenzene	ND	3.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
n-Propylbenzene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
sec-Butylbenzene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
Styrene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
tert-Butylbenzene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
trans-1,2-DCE	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
1,1,1-Trichloroethane	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
1,1,2-Trichloroethane	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
Trichloroethene (TCE)	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
Trichlorofluoromethane	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
1,2,3-Trichloropropane	ND	2.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
Vinyl chloride	ND	1.0		µg/L	1	7/17/2018 9:28:00 PM	R52775
Xylenes, Total	ND	1.5		µg/L	1	7/17/2018 9:28:00 PM	R52775
Surr: 1,2-Dichloroethane-d4	99.7	70-130		%Rec	1	7/17/2018 9:28:00 PM	R52775
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	7/17/2018 9:28:00 PM	R52775
Surr: Dibromofluoromethane	99.1	70-130		%Rec	1	7/17/2018 9:28:00 PM	R52775
Surr: Toluene-d8	91.1	70-130		%Rec	1	7/17/2018 9:28:00 PM	R52775

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1807703

18-Jul-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Monthly Analysis

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R52775		RunNo: 52775							
Prep Date:	Analysis Date: 7/17/2018		SeqNo: 1733540				Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130			
Toluene	19	1.0	20.00	0	95.0	70	130			
Chlorobenzene	19	1.0	20.00	0	94.5	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	109	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	98.3	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.9	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.7	70	130			
Surr: Toluene-d8	9.1		10.00		90.8	70	130			

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R52775		RunNo: 52775							
Prep Date:	Analysis Date: 7/17/2018		SeqNo: 1733542				Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1807703

18-Jul-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Monthly Analysis

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R52775	RunNo:	52775					
Prep Date:		Analysis Date:	7/17/2018	SeqNo:	1733542	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1807703

18-Jul-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Monthly Analysis

Sample ID	rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R52775		RunNo: 52775						
Prep Date:		Analysis Date: 7/17/2018		SeqNo: 1733542		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.3	70	130			
Surr: Toluene-d8	9.1		10.00		90.8	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1807703

RcptNo: 1

Received By: **Isaiah Ortiz** 7/13/2018 8:45:00 AM *IO*

Completed By: **Ashley Gallegos** 7/13/2018 9:52:51 AM *AG*

Reviewed By: **IO** 7/13/18

Labeled by: JAB 07/13/18

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

JAB 07/13/18
 # of preserved bottles checked for pH: _____
 (2 or 12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
 Mailing Address: P.O. Box 20000
Las Cruces N.M. 88004
 Phone #: 575-528-3004
 email or Fax#: luis.guerra@las-cruces.org / 575-528-3000
 QA/QC Packaged
 Standard Level 4 (Full Validation)
 Accreditation
 NELAP Other
 EDD (Type) EXCEL

Turn-Around Time:
 Standard Rush
 Project Name:
5P-Joint Superfund Project
Monthly Analysis
 Project #:
CRC JSR Griags-W/cont
 Project Manager:
Luis Guerra (575) 528-3009

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
7-12-18	1812	DRAINING WATER	CRC 18-180712	8-40ml Vials	HgCl ₂	-001
	1846		CRC 27-180712			-002
	1817		CRC 154-180712			-003
	1819		CRC C1-180712			-004
	1822		CRC C2-180712			-005
	1824		CRC C2-180712 DUP			-006
7-12-18	1824	DRAINING WATER	CRC E51-180712	8-40ml Vials	HgCl ₂	-007

Date: 7-12-18 Time: 1500 Relinquished by: Adrian Ryan
 Date: 7-13-18 Time: 8:15 Received by: F. G. Fedex
 Date: 7-13-18 Time: 8:15 Received by: F. G. Fedex

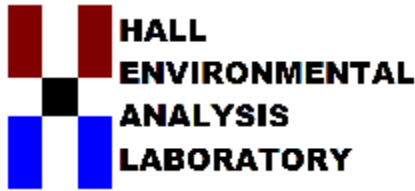


HALL ENVIRONMENTAL ANALYSIS LABORATORY
 www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request											
BTEX + MTBE + TMBs (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAHs (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F ⁻ , Cl ⁻ , NO ₃ ⁻ , NO ₂ ⁻ , PO ₄ ³⁻ , SO ₄ ²⁻)	8081 Pesticides / 8082 PCBs	8260B (VOC) VOC	8270 (Semi-VOC)	Air Bubbles (Y or N)

Remarks: Send Results to:
Luis Guerra guerra@las-cruces.org
Joshua Peralta jps@hallenv.com
(Send Invoice to CRC c/o Luis Guerra)

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 19, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP Joint Superfund Project Monthly Analysis

OrderNo.: 1807782

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/13/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1807782

Date Reported: 7/19/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS1- 180712

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 7/12/2018 8:31:00 AM

Lab ID: 1807782-001

Matrix: AIR

Received Date: 7/13/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
Toluene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
Ethylbenzene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
Naphthalene	ND	0.20		µg/L	1	7/18/2018 11:02:32 AM	W52804
1-Methylnaphthalene	ND	0.40		µg/L	1	7/18/2018 11:02:32 AM	W52804
2-Methylnaphthalene	ND	0.40		µg/L	1	7/18/2018 11:02:32 AM	W52804
Acetone	ND	1.0		µg/L	1	7/18/2018 11:02:32 AM	W52804
Bromobenzene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
Bromodichloromethane	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
Bromoform	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
Bromomethane	ND	0.20		µg/L	1	7/18/2018 11:02:32 AM	W52804
2-Butanone	ND	1.0		µg/L	1	7/18/2018 11:02:32 AM	W52804
Carbon disulfide	ND	1.0		µg/L	1	7/18/2018 11:02:32 AM	W52804
Carbon tetrachloride	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
Chlorobenzene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
Chloroethane	ND	0.20		µg/L	1	7/18/2018 11:02:32 AM	W52804
Chloroform	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
Chloromethane	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
2-Chlorotoluene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
4-Chlorotoluene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
cis-1,2-DCE	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	7/18/2018 11:02:32 AM	W52804
Dibromochloromethane	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
Dibromomethane	ND	0.20		µg/L	1	7/18/2018 11:02:32 AM	W52804
1,2-Dichlorobenzene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
1,3-Dichlorobenzene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
1,4-Dichlorobenzene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
Dichlorodifluoromethane	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
1,1-Dichloroethane	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
1,1-Dichloroethene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
1,2-Dichloropropane	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
1,3-Dichloropropane	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
2,2-Dichloropropane	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 1 of 4
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1807782

Date Reported: 7/19/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS1- 180712

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 7/12/2018 8:31:00 AM

Lab ID: 1807782-001

Matrix: AIR

Received Date: 7/13/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
Hexachlorobutadiene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
2-Hexanone	ND	1.0		µg/L	1	7/18/2018 11:02:32 AM	W52804
Isopropylbenzene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
4-Isopropyltoluene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
4-Methyl-2-pentanone	ND	1.0		µg/L	1	7/18/2018 11:02:32 AM	W52804
Methylene chloride	ND	0.30		µg/L	1	7/18/2018 11:02:32 AM	W52804
n-Butylbenzene	ND	0.30		µg/L	1	7/18/2018 11:02:32 AM	W52804
n-Propylbenzene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
sec-Butylbenzene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
Styrene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
tert-Butylbenzene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
trans-1,2-DCE	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
1,1,1-Trichloroethane	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
1,1,2-Trichloroethane	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
Trichloroethene (TCE)	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
Trichlorofluoromethane	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
1,2,3-Trichloropropane	ND	0.20		µg/L	1	7/18/2018 11:02:32 AM	W52804
Vinyl chloride	ND	0.10		µg/L	1	7/18/2018 11:02:32 AM	W52804
Xylenes, Total	ND	0.15		µg/L	1	7/18/2018 11:02:32 AM	W52804
Surr: Dibromofluoromethane	105	70-130		%Rec	1	7/18/2018 11:02:32 AM	W52804
Surr: 1,2-Dichloroethane-d4	96.7	70-130		%Rec	1	7/18/2018 11:02:32 AM	W52804
Surr: Toluene-d8	100	70-130		%Rec	1	7/18/2018 11:02:32 AM	W52804
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	7/18/2018 11:02:32 AM	W52804

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1807782

Date Reported: 7/19/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS2- 180712

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 7/12/2018 8:34:00 AM

Lab ID: 1807782-002

Matrix: AIR

Received Date: 7/13/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
Toluene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
Ethylbenzene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
Naphthalene	ND	0.20		µg/L	1	7/18/2018 11:31:48 AM	W52804
1-Methylnaphthalene	ND	0.40		µg/L	1	7/18/2018 11:31:48 AM	W52804
2-Methylnaphthalene	ND	0.40		µg/L	1	7/18/2018 11:31:48 AM	W52804
Acetone	ND	1.0		µg/L	1	7/18/2018 11:31:48 AM	W52804
Bromobenzene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
Bromodichloromethane	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
Bromoform	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
Bromomethane	ND	0.20		µg/L	1	7/18/2018 11:31:48 AM	W52804
2-Butanone	ND	1.0		µg/L	1	7/18/2018 11:31:48 AM	W52804
Carbon disulfide	ND	1.0		µg/L	1	7/18/2018 11:31:48 AM	W52804
Carbon tetrachloride	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
Chlorobenzene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
Chloroethane	ND	0.20		µg/L	1	7/18/2018 11:31:48 AM	W52804
Chloroform	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
Chloromethane	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
2-Chlorotoluene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
4-Chlorotoluene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
cis-1,2-DCE	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	7/18/2018 11:31:48 AM	W52804
Dibromochloromethane	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
Dibromomethane	ND	0.20		µg/L	1	7/18/2018 11:31:48 AM	W52804
1,2-Dichlorobenzene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
1,3-Dichlorobenzene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
1,4-Dichlorobenzene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
Dichlorodifluoromethane	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
1,1-Dichloroethane	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
1,1-Dichloroethene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
1,2-Dichloropropane	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
1,3-Dichloropropane	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
2,2-Dichloropropane	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 3 of 4
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1807782

Date Reported: 7/19/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS2- 180712

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 7/12/2018 8:34:00 AM

Lab ID: 1807782-002

Matrix: AIR

Received Date: 7/13/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
Hexachlorobutadiene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
2-Hexanone	ND	1.0		µg/L	1	7/18/2018 11:31:48 AM	W52804
Isopropylbenzene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
4-Isopropyltoluene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
4-Methyl-2-pentanone	ND	1.0		µg/L	1	7/18/2018 11:31:48 AM	W52804
Methylene chloride	ND	0.30		µg/L	1	7/18/2018 11:31:48 AM	W52804
n-Butylbenzene	ND	0.30		µg/L	1	7/18/2018 11:31:48 AM	W52804
n-Propylbenzene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
sec-Butylbenzene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
Styrene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
tert-Butylbenzene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
trans-1,2-DCE	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
1,1,1-Trichloroethane	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
1,1,2-Trichloroethane	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
Trichloroethene (TCE)	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
Trichlorofluoromethane	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
1,2,3-Trichloropropane	ND	0.20		µg/L	1	7/18/2018 11:31:48 AM	W52804
Vinyl chloride	ND	0.10		µg/L	1	7/18/2018 11:31:48 AM	W52804
Xylenes, Total	ND	0.15		µg/L	1	7/18/2018 11:31:48 AM	W52804
Surr: Dibromofluoromethane	108	70-130		%Rec	1	7/18/2018 11:31:48 AM	W52804
Surr: 1,2-Dichloroethane-d4	88.2	70-130		%Rec	1	7/18/2018 11:31:48 AM	W52804
Surr: Toluene-d8	104	70-130		%Rec	1	7/18/2018 11:31:48 AM	W52804
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	7/18/2018 11:31:48 AM	W52804

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1807782

RcptNo: 1

Received By: **Isaiah Ortiz** 7/13/2018 8:45:00 AM *IO*

Completed By: **Isaiah Ortiz** 7/16/2018 9:11:14 AM *IO*

Reviewed By: **ENM** 7/16/18

LB: JAB 07/16/18
Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: JAB 07/16/18

Special Handling (if applicable)

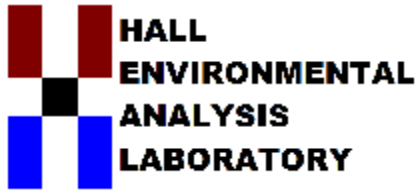
15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	20.7	Good	Not Present			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 22, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP Joint Superfund Project Monthly Analysis

OrderNo.: 1808A83

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 8/16/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1808A83

Date Reported: 8/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC18-180815

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 8/15/2018 8:14:00 AM

Lab ID: 1808A83-001

Matrix: AQUEOUS

Received Date: 8/16/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
Toluene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
Ethylbenzene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
Naphthalene	ND	2.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
1-Methylnaphthalene	ND	4.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
2-Methylnaphthalene	ND	4.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
Acetone	ND	10		µg/L	1	8/21/2018 4:53:08 AM	W53574
Bromobenzene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
Bromodichloromethane	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
Bromoform	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
Bromomethane	ND	3.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
2-Butanone	ND	10		µg/L	1	8/21/2018 4:53:08 AM	W53574
Carbon disulfide	ND	10		µg/L	1	8/21/2018 4:53:08 AM	W53574
Carbon Tetrachloride	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
Chlorobenzene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
Chloroethane	ND	2.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
Chloroform	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
Chloromethane	ND	3.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
2-Chlorotoluene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
4-Chlorotoluene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
cis-1,2-DCE	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
Dibromochloromethane	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
Dibromomethane	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
1,1-Dichloroethane	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
1,1-Dichloroethene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
1,2-Dichloropropane	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
1,3-Dichloropropane	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
2,2-Dichloropropane	ND	2.0		µg/L	1	8/21/2018 4:53:08 AM	W53574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1808A83

Date Reported: 8/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC18-180815

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 8/15/2018 8:14:00 AM

Lab ID: 1808A83-001

Matrix: AQUEOUS

Received Date: 8/16/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
Hexachlorobutadiene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
2-Hexanone	ND	10		µg/L	1	8/21/2018 4:53:08 AM	W53574
Isopropylbenzene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
4-Isopropyltoluene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
4-Methyl-2-pentanone	ND	10		µg/L	1	8/21/2018 4:53:08 AM	W53574
Methylene Chloride	ND	3.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
n-Butylbenzene	ND	3.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
n-Propylbenzene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
sec-Butylbenzene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
Styrene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
tert-Butylbenzene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
Tetrachloroethene (PCE)	8.6	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
trans-1,2-DCE	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
Trichlorofluoromethane	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
Vinyl chloride	ND	1.0		µg/L	1	8/21/2018 4:53:08 AM	W53574
Xylenes, Total	ND	1.5		µg/L	1	8/21/2018 4:53:08 AM	W53574
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	8/21/2018 4:53:08 AM	W53574
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	8/21/2018 4:53:08 AM	W53574
Surr: Dibromofluoromethane	104	70-130		%Rec	1	8/21/2018 4:53:08 AM	W53574
Surr: Toluene-d8	102	70-130		%Rec	1	8/21/2018 4:53:08 AM	W53574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1808A83

Date Reported: 8/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC27-180815

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 8/15/2018 8:46:00 AM

Lab ID: 1808A83-002

Matrix: AQUEOUS

Received Date: 8/16/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
Toluene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
Ethylbenzene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
Naphthalene	ND	2.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
1-Methylnaphthalene	ND	4.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
2-Methylnaphthalene	ND	4.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
Acetone	ND	10		µg/L	1	8/21/2018 5:22:18 AM	W53574
Bromobenzene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
Bromodichloromethane	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
Bromoform	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
Bromomethane	ND	3.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
2-Butanone	ND	10		µg/L	1	8/21/2018 5:22:18 AM	W53574
Carbon disulfide	ND	10		µg/L	1	8/21/2018 5:22:18 AM	W53574
Carbon Tetrachloride	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
Chlorobenzene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
Chloroethane	ND	2.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
Chloroform	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
Chloromethane	ND	3.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
2-Chlorotoluene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
4-Chlorotoluene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
cis-1,2-DCE	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
Dibromochloromethane	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
Dibromomethane	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
1,1-Dichloroethane	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
1,1-Dichloroethene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
1,2-Dichloropropane	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
1,3-Dichloropropane	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
2,2-Dichloropropane	ND	2.0		µg/L	1	8/21/2018 5:22:18 AM	W53574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1808A83

Date Reported: 8/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC27-180815

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 8/15/2018 8:46:00 AM

Lab ID: 1808A83-002

Matrix: AQUEOUS

Received Date: 8/16/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
Hexachlorobutadiene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
2-Hexanone	ND	10		µg/L	1	8/21/2018 5:22:18 AM	W53574
Isopropylbenzene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
4-Isopropyltoluene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
4-Methyl-2-pentanone	ND	10		µg/L	1	8/21/2018 5:22:18 AM	W53574
Methylene Chloride	ND	3.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
n-Butylbenzene	ND	3.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
n-Propylbenzene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
sec-Butylbenzene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
Styrene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
tert-Butylbenzene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
Tetrachloroethene (PCE)	17	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
trans-1,2-DCE	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
Trichlorofluoromethane	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
Vinyl chloride	ND	1.0		µg/L	1	8/21/2018 5:22:18 AM	W53574
Xylenes, Total	ND	1.5		µg/L	1	8/21/2018 5:22:18 AM	W53574
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	8/21/2018 5:22:18 AM	W53574
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	8/21/2018 5:22:18 AM	W53574
Surr: Dibromofluoromethane	102	70-130		%Rec	1	8/21/2018 5:22:18 AM	W53574
Surr: Toluene-d8	103	70-130		%Rec	1	8/21/2018 5:22:18 AM	W53574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1808A83

Date Reported: 8/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCIS1-180815

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 8/15/2018 8:20:00 AM

Lab ID: 1808A83-003

Matrix: AQUEOUS

Received Date: 8/16/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
Toluene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
Ethylbenzene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
Naphthalene	ND	2.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
1-Methylnaphthalene	ND	4.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
2-Methylnaphthalene	ND	4.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
Acetone	ND	10		µg/L	1	8/21/2018 5:51:22 AM	W53574
Bromobenzene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
Bromodichloromethane	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
Bromoform	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
Bromomethane	ND	3.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
2-Butanone	ND	10		µg/L	1	8/21/2018 5:51:22 AM	W53574
Carbon disulfide	ND	10		µg/L	1	8/21/2018 5:51:22 AM	W53574
Carbon Tetrachloride	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
Chlorobenzene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
Chloroethane	ND	2.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
Chloroform	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
Chloromethane	ND	3.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
2-Chlorotoluene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
4-Chlorotoluene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
cis-1,2-DCE	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
Dibromochloromethane	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
Dibromomethane	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
1,1-Dichloroethane	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
1,1-Dichloroethene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
1,2-Dichloropropane	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
1,3-Dichloropropane	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
2,2-Dichloropropane	ND	2.0		µg/L	1	8/21/2018 5:51:22 AM	W53574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1808A83

Date Reported: 8/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCIS1-180815

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 8/15/2018 8:20:00 AM

Lab ID: 1808A83-003

Matrix: AQUEOUS

Received Date: 8/16/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
Hexachlorobutadiene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
2-Hexanone	ND	10		µg/L	1	8/21/2018 5:51:22 AM	W53574
Isopropylbenzene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
4-Isopropyltoluene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
4-Methyl-2-pentanone	ND	10		µg/L	1	8/21/2018 5:51:22 AM	W53574
Methylene Chloride	ND	3.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
n-Butylbenzene	ND	3.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
n-Propylbenzene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
sec-Butylbenzene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
Styrene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
tert-Butylbenzene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
Tetrachloroethene (PCE)	11	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
trans-1,2-DCE	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
Trichlorofluoromethane	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
Vinyl chloride	ND	1.0		µg/L	1	8/21/2018 5:51:22 AM	W53574
Xylenes, Total	ND	1.5		µg/L	1	8/21/2018 5:51:22 AM	W53574
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	8/21/2018 5:51:22 AM	W53574
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	8/21/2018 5:51:22 AM	W53574
Surr: Dibromofluoromethane	107	70-130		%Rec	1	8/21/2018 5:51:22 AM	W53574
Surr: Toluene-d8	100	70-130		%Rec	1	8/21/2018 5:51:22 AM	W53574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1808A83

Date Reported: 8/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCC1-180815

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 8/15/2018 8:23:00 AM

Lab ID: 1808A83-004

Matrix: AQUEOUS

Received Date: 8/16/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
Toluene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
Ethylbenzene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
Naphthalene	ND	2.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
1-Methylnaphthalene	ND	4.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
2-Methylnaphthalene	ND	4.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
Acetone	ND	10		µg/L	1	8/21/2018 6:20:40 AM	W53574
Bromobenzene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
Bromodichloromethane	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
Bromoform	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
Bromomethane	ND	3.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
2-Butanone	ND	10		µg/L	1	8/21/2018 6:20:40 AM	W53574
Carbon disulfide	ND	10		µg/L	1	8/21/2018 6:20:40 AM	W53574
Carbon Tetrachloride	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
Chlorobenzene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
Chloroethane	ND	2.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
Chloroform	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
Chloromethane	ND	3.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
2-Chlorotoluene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
4-Chlorotoluene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
cis-1,2-DCE	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
Dibromochloromethane	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
Dibromomethane	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
1,1-Dichloroethane	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
1,1-Dichloroethene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
1,2-Dichloropropane	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
1,3-Dichloropropane	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
2,2-Dichloropropane	ND	2.0		µg/L	1	8/21/2018 6:20:40 AM	W53574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1808A83

Date Reported: 8/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCC1-180815

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 8/15/2018 8:23:00 AM

Lab ID: 1808A83-004

Matrix: AQUEOUS

Received Date: 8/16/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
Hexachlorobutadiene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
2-Hexanone	ND	10		µg/L	1	8/21/2018 6:20:40 AM	W53574
Isopropylbenzene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
4-Isopropyltoluene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
4-Methyl-2-pentanone	ND	10		µg/L	1	8/21/2018 6:20:40 AM	W53574
Methylene Chloride	ND	3.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
n-Butylbenzene	ND	3.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
n-Propylbenzene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
sec-Butylbenzene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
Styrene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
tert-Butylbenzene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
trans-1,2-DCE	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
Trichlorofluoromethane	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
Vinyl chloride	ND	1.0		µg/L	1	8/21/2018 6:20:40 AM	W53574
Xylenes, Total	ND	1.5		µg/L	1	8/21/2018 6:20:40 AM	W53574
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	8/21/2018 6:20:40 AM	W53574
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	8/21/2018 6:20:40 AM	W53574
Surr: Dibromofluoromethane	104	70-130		%Rec	1	8/21/2018 6:20:40 AM	W53574
Surr: Toluene-d8	97.1	70-130		%Rec	1	8/21/2018 6:20:40 AM	W53574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1808A83

Date Reported: 8/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCC2-180815

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 8/15/2018 8:26:00 AM

Lab ID: 1808A83-005

Matrix: AQUEOUS

Received Date: 8/16/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
Toluene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
Ethylbenzene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
Naphthalene	ND	2.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
1-Methylnaphthalene	ND	4.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
2-Methylnaphthalene	ND	4.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
Acetone	ND	10		µg/L	1	8/21/2018 6:49:47 AM	W53574
Bromobenzene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
Bromodichloromethane	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
Bromoform	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
Bromomethane	ND	3.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
2-Butanone	ND	10		µg/L	1	8/21/2018 6:49:47 AM	W53574
Carbon disulfide	ND	10		µg/L	1	8/21/2018 6:49:47 AM	W53574
Carbon Tetrachloride	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
Chlorobenzene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
Chloroethane	ND	2.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
Chloroform	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
Chloromethane	ND	3.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
2-Chlorotoluene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
4-Chlorotoluene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
cis-1,2-DCE	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
Dibromochloromethane	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
Dibromomethane	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
1,1-Dichloroethane	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
1,1-Dichloroethene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
1,2-Dichloropropane	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
1,3-Dichloropropane	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
2,2-Dichloropropane	ND	2.0		µg/L	1	8/21/2018 6:49:47 AM	W53574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1808A83

Date Reported: 8/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCC2-180815

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 8/15/2018 8:26:00 AM

Lab ID: 1808A83-005

Matrix: AQUEOUS

Received Date: 8/16/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
Hexachlorobutadiene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
2-Hexanone	ND	10		µg/L	1	8/21/2018 6:49:47 AM	W53574
Isopropylbenzene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
4-Isopropyltoluene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
4-Methyl-2-pentanone	ND	10		µg/L	1	8/21/2018 6:49:47 AM	W53574
Methylene Chloride	ND	3.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
n-Butylbenzene	ND	3.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
n-Propylbenzene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
sec-Butylbenzene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
Styrene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
tert-Butylbenzene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
trans-1,2-DCE	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
Trichlorofluoromethane	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
Vinyl chloride	ND	1.0		µg/L	1	8/21/2018 6:49:47 AM	W53574
Xylenes, Total	ND	1.5		µg/L	1	8/21/2018 6:49:47 AM	W53574
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	8/21/2018 6:49:47 AM	W53574
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	8/21/2018 6:49:47 AM	W53574
Surr: Dibromofluoromethane	102	70-130		%Rec	1	8/21/2018 6:49:47 AM	W53574
Surr: Toluene-d8	104	70-130		%Rec	1	8/21/2018 6:49:47 AM	W53574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1808A83

Date Reported: 8/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCES1-180815

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 8/15/2018 8:29:00 AM

Lab ID: 1808A83-006

Matrix: AQUEOUS

Received Date: 8/16/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
Toluene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
Ethylbenzene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
Naphthalene	ND	2.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
1-Methylnaphthalene	ND	4.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
2-Methylnaphthalene	ND	4.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
Acetone	ND	10		µg/L	1	8/21/2018 7:18:48 AM	W53574
Bromobenzene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
Bromodichloromethane	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
Bromoform	9.5	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
Bromomethane	ND	3.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
2-Butanone	ND	10		µg/L	1	8/21/2018 7:18:48 AM	W53574
Carbon disulfide	ND	10		µg/L	1	8/21/2018 7:18:48 AM	W53574
Carbon Tetrachloride	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
Chlorobenzene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
Chloroethane	ND	2.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
Chloroform	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
Chloromethane	ND	3.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
2-Chlorotoluene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
4-Chlorotoluene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
cis-1,2-DCE	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
Dibromochloromethane	2.6	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
Dibromomethane	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
1,1-Dichloroethane	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
1,1-Dichloroethene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
1,2-Dichloropropane	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
1,3-Dichloropropane	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
2,2-Dichloropropane	ND	2.0		µg/L	1	8/21/2018 7:18:48 AM	W53574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1808A83

Date Reported: 8/22/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCES1-180815

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 8/15/2018 8:29:00 AM

Lab ID: 1808A83-006

Matrix: AQUEOUS

Received Date: 8/16/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
Hexachlorobutadiene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
2-Hexanone	ND	10		µg/L	1	8/21/2018 7:18:48 AM	W53574
Isopropylbenzene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
4-Isopropyltoluene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
4-Methyl-2-pentanone	ND	10		µg/L	1	8/21/2018 7:18:48 AM	W53574
Methylene Chloride	ND	3.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
n-Butylbenzene	ND	3.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
n-Propylbenzene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
sec-Butylbenzene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
Styrene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
tert-Butylbenzene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
trans-1,2-DCE	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
Trichlorofluoromethane	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
Vinyl chloride	ND	1.0		µg/L	1	8/21/2018 7:18:48 AM	W53574
Xylenes, Total	ND	1.5		µg/L	1	8/21/2018 7:18:48 AM	W53574
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	8/21/2018 7:18:48 AM	W53574
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	8/21/2018 7:18:48 AM	W53574
Surr: Dibromofluoromethane	102	70-130		%Rec	1	8/21/2018 7:18:48 AM	W53574
Surr: Toluene-d8	95.4	70-130		%Rec	1	8/21/2018 7:18:48 AM	W53574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1808A83

Date Reported: 8/22/2018

CLIENT: City of Las Cruces

Client Sample ID: Trip Blank

Project: JSP Joint Superfund Project Monthly Ana

Collection Date:

Lab ID: 1808A83-007

Matrix: AQUEOUS

Received Date: 8/16/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
Toluene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
Ethylbenzene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
Naphthalene	ND	2.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
1-Methylnaphthalene	ND	4.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
2-Methylnaphthalene	ND	4.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
Acetone	ND	10		µg/L	1	8/21/2018 7:47:50 AM	W53574
Bromobenzene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
Bromodichloromethane	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
Bromoform	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
Bromomethane	ND	3.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
2-Butanone	ND	10		µg/L	1	8/21/2018 7:47:50 AM	W53574
Carbon disulfide	ND	10		µg/L	1	8/21/2018 7:47:50 AM	W53574
Carbon Tetrachloride	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
Chlorobenzene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
Chloroethane	ND	2.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
Chloroform	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
Chloromethane	ND	3.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
2-Chlorotoluene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
4-Chlorotoluene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
cis-1,2-DCE	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
Dibromochloromethane	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
Dibromomethane	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
1,1-Dichloroethane	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
1,1-Dichloroethene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
1,2-Dichloropropane	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
1,3-Dichloropropane	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
2,2-Dichloropropane	ND	2.0		µg/L	1	8/21/2018 7:47:50 AM	W53574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1808A83

Date Reported: 8/22/2018

CLIENT: City of Las Cruces

Client Sample ID: Trip Blank

Project: JSP Joint Superfund Project Monthly Ana

Collection Date:

Lab ID: 1808A83-007

Matrix: AQUEOUS

Received Date: 8/16/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
Hexachlorobutadiene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
2-Hexanone	ND	10		µg/L	1	8/21/2018 7:47:50 AM	W53574
Isopropylbenzene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
4-Isopropyltoluene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
4-Methyl-2-pentanone	ND	10		µg/L	1	8/21/2018 7:47:50 AM	W53574
Methylene Chloride	ND	3.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
n-Butylbenzene	ND	3.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
n-Propylbenzene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
sec-Butylbenzene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
Styrene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
tert-Butylbenzene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
trans-1,2-DCE	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
Trichlorofluoromethane	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
Vinyl chloride	ND	1.0		µg/L	1	8/21/2018 7:47:50 AM	W53574
Xylenes, Total	ND	1.5		µg/L	1	8/21/2018 7:47:50 AM	W53574
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	8/21/2018 7:47:50 AM	W53574
Surr: 4-Bromofluorobenzene	99.6	70-130		%Rec	1	8/21/2018 7:47:50 AM	W53574
Surr: Dibromofluoromethane	106	70-130		%Rec	1	8/21/2018 7:47:50 AM	W53574
Surr: Toluene-d8	102	70-130		%Rec	1	8/21/2018 7:47:50 AM	W53574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1808A83

22-Aug-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Monthly Analysis

Sample ID	rb	SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID:	W53574		RunNo:	53574				
Prep Date:		Analysis Date:	8/20/2018		SeqNo:	1766115	Units:	µg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1808A83

22-Aug-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Monthly Analysis

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: W53574			RunNo: 53574					
Prep Date:		Analysis Date: 8/20/2018			SeqNo: 1766115		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.2	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: W53574			RunNo: 53574					
Prep Date:		Analysis Date: 8/20/2018			SeqNo: 1766116		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	97.0	70	130			
Toluene	19	1.0	20.00	0	97.3	70	130			
Chlorobenzene	19	1.0	20.00	0	95.3	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1808A83

22-Aug-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Monthly Analysis

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES								
Client ID: LCSW	Batch ID: W53574	RunNo: 53574								
Prep Date:	Analysis Date: 8/20/2018	SeqNo: 1766116			Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21	1.0	20.00	0	107	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	97.8	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		111	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
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- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1808A83

RcptNo: 1

Received By: Ashley Gallegos

8/16/2018 9:25:00 AM

AG

Completed By: Ashley Gallegos

8/16/2018 4:16:49 PM

AG

Reviewed By: ENM

8/17/18

labeled by:

JAB 08/17/18

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: 8/17/18
 (<2 or >12 unless noted)
 Adjusted? JAB
 Checked by: JAB

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.8	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces
 Water Quality Laboratory
 Mailing Address: P.O. Box 8000
Las Cruces, N.M., 88004
 Phone #: 575-529-3004
 email or Fax#: laurie@las-cruces.org 529-3120

QA/QC Packaged
 Standard Level 4 (Full Validation)
 Accreditation
 NELAP Other
 EDD (Type) EXCEL

Turn-Around Time:
 Standard Rush
 Project Name:
JSP want Superfund Project
Monthly Analysis
 Project #:
01C JSP Griaps Walnut
 Project Manager:
Luis Guerra (575) 529-3409

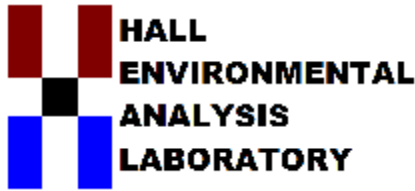
Sampler: Yudira Ruyra
 On Ice: Yes No
 Sample Temperature: 0.8

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
8-15-18	0814	PRIMARY WATER	01C-18-180815	3-40ml Vials	HgCl ₂	1808A83 -001
	0846		01C-18-180815			-002
	0820		01C-18-180815			-003
	0823		01C-18-180815			-004
	0826		01C-18-180815			-005
8-15-18	0829	PRIMARY WATER	01C-18-180815	3-40ml Vials	HgCl ₂	-006
			Tripe Blank	2-40ml	HgCl ₂	-007
			JMS 08/17/18			

Date: 8-15-18 Time: 1500 Relinquished by: Yudira Ruyra
 Date: 8-14-18 Time: 0925 Received by: [Signature]
 Date: 08/14/18 Time: 0925 Received by: [Signature]

Analysis Request
 BTEX + MTBE + TMB's (8021)
 BTEX + MTBE (GRO / DRO / MRO)
 TPH (Method 418.1)
 EDB (Method 504.1)
 PAH's (8310 or 8270 SIMS)
 RCRA 8 Metals
 Anions (F, Cl, NO₃, NO₂, PO₄, SO₄)
 8081 Pesticides / 8082 PCB's
 8260B (VOA) VDC
 8270 (Semi-VOA)
 Air Bubbles (Y or N)

Remarks: Send Results to:
Luis Guerra: lguerra@las-cruces.org
Joshua Papanthaki: jpapanthaki@las-cruces.org
(Send invoice to CMC CFO)



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 22, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP Joint Superfund Project Monthly Analysis

OrderNo.: 1808A84

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 3 sample(s) on 8/16/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1808A84

Date Reported: 8/22/2018

CLIENT: City of Las Cruces

Client Sample ID: AS1-180815

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 8/15/2018 9:20:00 AM

Lab ID: 1808A84-001

Matrix: AIR

Received Date: 8/16/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
Toluene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
Ethylbenzene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
Naphthalene	ND	0.20		µg/L	1	8/20/2018 4:10:00 PM	R53570
1-Methylnaphthalene	ND	0.40		µg/L	1	8/20/2018 4:10:00 PM	R53570
2-Methylnaphthalene	ND	0.40		µg/L	1	8/20/2018 4:10:00 PM	R53570
Acetone	ND	1.0		µg/L	1	8/20/2018 4:10:00 PM	R53570
Bromobenzene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
Bromodichloromethane	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
Bromoform	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
Bromomethane	ND	0.20		µg/L	1	8/20/2018 4:10:00 PM	R53570
2-Butanone	ND	1.0		µg/L	1	8/20/2018 4:10:00 PM	R53570
Carbon disulfide	ND	1.0		µg/L	1	8/20/2018 4:10:00 PM	R53570
Carbon tetrachloride	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
Chlorobenzene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
Chloroethane	ND	0.20		µg/L	1	8/20/2018 4:10:00 PM	R53570
Chloroform	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
Chloromethane	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
2-Chlorotoluene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
4-Chlorotoluene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
cis-1,2-DCE	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	8/20/2018 4:10:00 PM	R53570
Dibromochloromethane	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
Dibromomethane	ND	0.20		µg/L	1	8/20/2018 4:10:00 PM	R53570
1,2-Dichlorobenzene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
1,3-Dichlorobenzene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
1,4-Dichlorobenzene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
Dichlorodifluoromethane	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
1,1-Dichloroethane	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
1,1-Dichloroethene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
1,2-Dichloropropane	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
1,3-Dichloropropane	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
2,2-Dichloropropane	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 1 of 6
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1808A84

Date Reported: 8/22/2018

CLIENT: City of Las Cruces

Client Sample ID: AS1-180815

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 8/15/2018 9:20:00 AM

Lab ID: 1808A84-001

Matrix: AIR

Received Date: 8/16/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
Hexachlorobutadiene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
2-Hexanone	ND	1.0		µg/L	1	8/20/2018 4:10:00 PM	R53570
Isopropylbenzene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
4-Isopropyltoluene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
4-Methyl-2-pentanone	ND	1.0		µg/L	1	8/20/2018 4:10:00 PM	R53570
Methylene chloride	ND	0.30		µg/L	1	8/20/2018 4:10:00 PM	R53570
n-Butylbenzene	ND	0.30		µg/L	1	8/20/2018 4:10:00 PM	R53570
n-Propylbenzene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
sec-Butylbenzene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
Styrene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
tert-Butylbenzene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
Tetrachloroethene (PCE)	0.15	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
trans-1,2-DCE	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
1,1,1-Trichloroethane	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
1,1,2-Trichloroethane	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
Trichloroethene (TCE)	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
Trichlorofluoromethane	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
1,2,3-Trichloropropane	ND	0.20		µg/L	1	8/20/2018 4:10:00 PM	R53570
Vinyl chloride	ND	0.10		µg/L	1	8/20/2018 4:10:00 PM	R53570
Xylenes, Total	ND	0.15		µg/L	1	8/20/2018 4:10:00 PM	R53570
Surr: Dibromofluoromethane	106	70-130		%Rec	1	8/20/2018 4:10:00 PM	R53570
Surr: 1,2-Dichloroethane-d4	94.0	70-130		%Rec	1	8/20/2018 4:10:00 PM	R53570
Surr: Toluene-d8	92.3	70-130		%Rec	1	8/20/2018 4:10:00 PM	R53570
Surr: 4-Bromofluorobenzene	99.8	70-130		%Rec	1	8/20/2018 4:10:00 PM	R53570

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1808A84

Date Reported: 8/22/2018

CLIENT: City of Las Cruces

Client Sample ID: AS2-180218

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 8/15/2018 9:23:00 AM

Lab ID: 1808A84-002

Matrix: AIR

Received Date: 8/16/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
Toluene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
Ethylbenzene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
Naphthalene	ND	0.20		µg/L	1	8/21/2018 2:33:00 PM	R53604
1-Methylnaphthalene	ND	0.40		µg/L	1	8/21/2018 2:33:00 PM	R53604
2-Methylnaphthalene	ND	0.40		µg/L	1	8/21/2018 2:33:00 PM	R53604
Acetone	ND	1.0		µg/L	1	8/21/2018 2:33:00 PM	R53604
Bromobenzene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
Bromodichloromethane	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
Bromoform	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
Bromomethane	ND	0.20		µg/L	1	8/21/2018 2:33:00 PM	R53604
2-Butanone	ND	1.0		µg/L	1	8/21/2018 2:33:00 PM	R53604
Carbon disulfide	ND	1.0		µg/L	1	8/21/2018 2:33:00 PM	R53604
Carbon tetrachloride	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
Chlorobenzene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
Chloroethane	ND	0.20		µg/L	1	8/21/2018 2:33:00 PM	R53604
Chloroform	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
Chloromethane	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
2-Chlorotoluene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
4-Chlorotoluene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
cis-1,2-DCE	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	8/21/2018 2:33:00 PM	R53604
Dibromochloromethane	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
Dibromomethane	ND	0.20		µg/L	1	8/21/2018 2:33:00 PM	R53604
1,2-Dichlorobenzene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
1,3-Dichlorobenzene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
1,4-Dichlorobenzene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
Dichlorodifluoromethane	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
1,1-Dichloroethane	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
1,1-Dichloroethene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
1,2-Dichloropropane	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
1,3-Dichloropropane	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
2,2-Dichloropropane	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	Page 3 of 6
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1808A84

Date Reported: 8/22/2018

CLIENT: City of Las Cruces

Client Sample ID: AS2-180218

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 8/15/2018 9:23:00 AM

Lab ID: 1808A84-002

Matrix: AIR

Received Date: 8/16/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
Hexachlorobutadiene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
2-Hexanone	ND	1.0		µg/L	1	8/21/2018 2:33:00 PM	R53604
Isopropylbenzene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
4-Isopropyltoluene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
4-Methyl-2-pentanone	ND	1.0		µg/L	1	8/21/2018 2:33:00 PM	R53604
Methylene chloride	ND	0.30		µg/L	1	8/21/2018 2:33:00 PM	R53604
n-Butylbenzene	ND	0.30		µg/L	1	8/21/2018 2:33:00 PM	R53604
n-Propylbenzene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
sec-Butylbenzene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
Styrene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
tert-Butylbenzene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
Tetrachloroethene (PCE)	0.13	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
trans-1,2-DCE	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
1,1,1-Trichloroethane	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
1,1,2-Trichloroethane	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
Trichloroethene (TCE)	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
Trichlorofluoromethane	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
1,2,3-Trichloropropane	ND	0.20		µg/L	1	8/21/2018 2:33:00 PM	R53604
Vinyl chloride	ND	0.10		µg/L	1	8/21/2018 2:33:00 PM	R53604
Xylenes, Total	ND	0.15		µg/L	1	8/21/2018 2:33:00 PM	R53604
Surr: Dibromofluoromethane	98.3	70-130		%Rec	1	8/21/2018 2:33:00 PM	R53604
Surr: 1,2-Dichloroethane-d4	96.8	70-130		%Rec	1	8/21/2018 2:33:00 PM	R53604
Surr: Toluene-d8	97.9	70-130		%Rec	1	8/21/2018 2:33:00 PM	R53604
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	8/21/2018 2:33:00 PM	R53604

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1808A84

Date Reported: 8/22/2018

CLIENT: City of Las Cruces

Client Sample ID: AS2-180815 Dup

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 8/15/2018 9:23:00 AM

Lab ID: 1808A84-003

Matrix: AIR

Received Date: 8/16/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
Toluene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
Ethylbenzene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
Naphthalene	ND	0.20		µg/L	1	8/21/2018 3:23:00 PM	R53604
1-Methylnaphthalene	ND	0.40		µg/L	1	8/21/2018 3:23:00 PM	R53604
2-Methylnaphthalene	ND	0.40		µg/L	1	8/21/2018 3:23:00 PM	R53604
Acetone	ND	1.0		µg/L	1	8/21/2018 3:23:00 PM	R53604
Bromobenzene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
Bromodichloromethane	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
Bromoform	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
Bromomethane	ND	0.20		µg/L	1	8/21/2018 3:23:00 PM	R53604
2-Butanone	ND	1.0		µg/L	1	8/21/2018 3:23:00 PM	R53604
Carbon disulfide	ND	1.0		µg/L	1	8/21/2018 3:23:00 PM	R53604
Carbon tetrachloride	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
Chlorobenzene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
Chloroethane	ND	0.20		µg/L	1	8/21/2018 3:23:00 PM	R53604
Chloroform	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
Chloromethane	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
2-Chlorotoluene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
4-Chlorotoluene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
cis-1,2-DCE	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	8/21/2018 3:23:00 PM	R53604
Dibromochloromethane	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
Dibromomethane	ND	0.20		µg/L	1	8/21/2018 3:23:00 PM	R53604
1,2-Dichlorobenzene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
1,3-Dichlorobenzene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
1,4-Dichlorobenzene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
Dichlorodifluoromethane	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
1,1-Dichloroethane	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
1,1-Dichloroethene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
1,2-Dichloropropane	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
1,3-Dichloropropane	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
2,2-Dichloropropane	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1808A84

Date Reported: 8/22/2018

CLIENT: City of Las Cruces

Client Sample ID: AS2-180815 Dup

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 8/15/2018 9:23:00 AM

Lab ID: 1808A84-003

Matrix: AIR

Received Date: 8/16/2018 9:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
Hexachlorobutadiene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
2-Hexanone	ND	1.0		µg/L	1	8/21/2018 3:23:00 PM	R53604
Isopropylbenzene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
4-Isopropyltoluene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
4-Methyl-2-pentanone	ND	1.0		µg/L	1	8/21/2018 3:23:00 PM	R53604
Methylene chloride	ND	0.30		µg/L	1	8/21/2018 3:23:00 PM	R53604
n-Butylbenzene	ND	0.30		µg/L	1	8/21/2018 3:23:00 PM	R53604
n-Propylbenzene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
sec-Butylbenzene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
Styrene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
tert-Butylbenzene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
Tetrachloroethene (PCE)	0.15	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
trans-1,2-DCE	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
1,1,1-Trichloroethane	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
1,1,2-Trichloroethane	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
Trichloroethene (TCE)	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
Trichlorofluoromethane	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
1,2,3-Trichloropropane	ND	0.20		µg/L	1	8/21/2018 3:23:00 PM	R53604
Vinyl chloride	ND	0.10		µg/L	1	8/21/2018 3:23:00 PM	R53604
Xylenes, Total	ND	0.15		µg/L	1	8/21/2018 3:23:00 PM	R53604
Surr: Dibromofluoromethane	96.7	70-130		%Rec	1	8/21/2018 3:23:00 PM	R53604
Surr: 1,2-Dichloroethane-d4	98.6	70-130		%Rec	1	8/21/2018 3:23:00 PM	R53604
Surr: Toluene-d8	96.7	70-130		%Rec	1	8/21/2018 3:23:00 PM	R53604
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	8/21/2018 3:23:00 PM	R53604

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1808A84

RcptNo: 1

Received By: Ashley Gallegos

8/16/2018 9:25:00 AM

AG

Completed By: Ashley Gallegos

8/16/2018 4:12:19 PM

AG

Reviewed By: ENM

8/17/18 Labeled by: JAB 08/17/18

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
5. Sample(s) in proper container(s)? Yes No
6. Sufficient sample volume for indicated test(s)? Yes No
7. Are samples (except VOA and ONG) properly preserved? Yes No
8. Was preservative added to bottles? Yes No NA
9. VOA vials have zero headspace? Yes No No VOA Vials
10. Were any sample containers received broken? Yes No
11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Is it clear what analyses were requested? Yes No
14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

08/17/18

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)

Adjusted? _____

Checked by: JAB

Special Handling (if applicable)

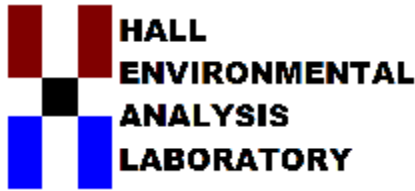
15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	NA	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 04, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP Joint Superfund Project Monthly Analysis

OrderNo.: 1809G80

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 3 sample(s) on 9/27/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1809G80

Date Reported: 10/4/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS1 180926

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 9/26/2018 8:44:00 AM

Lab ID: 1809G80-001

Matrix: AIR

Received Date: 9/27/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
Toluene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
Ethylbenzene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
Naphthalene	ND	0.20		µg/L	1	10/1/2018 11:46:00 AM	R54556
1-Methylnaphthalene	ND	0.40		µg/L	1	10/1/2018 11:46:00 AM	R54556
2-Methylnaphthalene	ND	0.40		µg/L	1	10/1/2018 11:46:00 AM	R54556
Acetone	ND	1.0		µg/L	1	10/1/2018 11:46:00 AM	R54556
Bromobenzene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
Bromodichloromethane	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
Bromoform	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
Bromomethane	ND	0.20		µg/L	1	10/1/2018 11:46:00 AM	R54556
2-Butanone	ND	1.0		µg/L	1	10/1/2018 11:46:00 AM	R54556
Carbon disulfide	ND	1.0		µg/L	1	10/1/2018 11:46:00 AM	R54556
Carbon tetrachloride	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
Chlorobenzene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
Chloroethane	ND	0.20		µg/L	1	10/1/2018 11:46:00 AM	R54556
Chloroform	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
Chloromethane	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
2-Chlorotoluene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
4-Chlorotoluene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
cis-1,2-DCE	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	10/1/2018 11:46:00 AM	R54556
Dibromochloromethane	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
Dibromomethane	ND	0.20		µg/L	1	10/1/2018 11:46:00 AM	R54556
1,2-Dichlorobenzene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
1,3-Dichlorobenzene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
1,4-Dichlorobenzene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
Dichlorodifluoromethane	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
1,1-Dichloroethane	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
1,1-Dichloroethene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
1,2-Dichloropropane	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
1,3-Dichloropropane	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
2,2-Dichloropropane	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 1 of 6
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1809G80

Date Reported: 10/4/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS1 180926

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 9/26/2018 8:44:00 AM

Lab ID: 1809G80-001

Matrix: AIR

Received Date: 9/27/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
Hexachlorobutadiene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
2-Hexanone	ND	1.0		µg/L	1	10/1/2018 11:46:00 AM	R54556
Isopropylbenzene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
4-Isopropyltoluene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
4-Methyl-2-pentanone	ND	1.0		µg/L	1	10/1/2018 11:46:00 AM	R54556
Methylene chloride	ND	0.30		µg/L	1	10/1/2018 11:46:00 AM	R54556
n-Butylbenzene	ND	0.30		µg/L	1	10/1/2018 11:46:00 AM	R54556
n-Propylbenzene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
sec-Butylbenzene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
Styrene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
tert-Butylbenzene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
trans-1,2-DCE	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
1,1,1-Trichloroethane	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
1,1,2-Trichloroethane	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
Trichloroethene (TCE)	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
Trichlorofluoromethane	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
1,2,3-Trichloropropane	ND	0.20		µg/L	1	10/1/2018 11:46:00 AM	R54556
Vinyl chloride	ND	0.10		µg/L	1	10/1/2018 11:46:00 AM	R54556
Xylenes, Total	ND	0.15		µg/L	1	10/1/2018 11:46:00 AM	R54556
Surr: Dibromofluoromethane	106	70-130		%Rec	1	10/1/2018 11:46:00 AM	R54556
Surr: 1,2-Dichloroethane-d4	98.0	70-130		%Rec	1	10/1/2018 11:46:00 AM	R54556
Surr: Toluene-d8	99.9	70-130		%Rec	1	10/1/2018 11:46:00 AM	R54556
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	10/1/2018 11:46:00 AM	R54556

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1809G80

Date Reported: 10/4/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS1 180926 DUP

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 9/26/2018 8:44:00 AM

Lab ID: 1809G80-002

Matrix: AIR

Received Date: 9/27/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
Toluene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
Ethylbenzene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
Naphthalene	ND	0.20		µg/L	1	10/1/2018 12:34:00 PM	R54556
1-Methylnaphthalene	ND	0.40		µg/L	1	10/1/2018 12:34:00 PM	R54556
2-Methylnaphthalene	ND	0.40		µg/L	1	10/1/2018 12:34:00 PM	R54556
Acetone	ND	1.0		µg/L	1	10/1/2018 12:34:00 PM	R54556
Bromobenzene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
Bromodichloromethane	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
Bromoform	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
Bromomethane	ND	0.20		µg/L	1	10/1/2018 12:34:00 PM	R54556
2-Butanone	ND	1.0		µg/L	1	10/1/2018 12:34:00 PM	R54556
Carbon disulfide	ND	1.0		µg/L	1	10/1/2018 12:34:00 PM	R54556
Carbon tetrachloride	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
Chlorobenzene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
Chloroethane	ND	0.20		µg/L	1	10/1/2018 12:34:00 PM	R54556
Chloroform	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
Chloromethane	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
2-Chlorotoluene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
4-Chlorotoluene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
cis-1,2-DCE	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	10/1/2018 12:34:00 PM	R54556
Dibromochloromethane	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
Dibromomethane	ND	0.20		µg/L	1	10/1/2018 12:34:00 PM	R54556
1,2-Dichlorobenzene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
1,3-Dichlorobenzene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
1,4-Dichlorobenzene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
Dichlorodifluoromethane	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
1,1-Dichloroethane	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
1,1-Dichloroethene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
1,2-Dichloropropane	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
1,3-Dichloropropane	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
2,2-Dichloropropane	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 3 of 6
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1809G80

Date Reported: 10/4/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS1 180926 DUP

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 9/26/2018 8:44:00 AM

Lab ID: 1809G80-002

Matrix: AIR

Received Date: 9/27/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
Hexachlorobutadiene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
2-Hexanone	ND	1.0		µg/L	1	10/1/2018 12:34:00 PM	R54556
Isopropylbenzene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
4-Isopropyltoluene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
4-Methyl-2-pentanone	ND	1.0		µg/L	1	10/1/2018 12:34:00 PM	R54556
Methylene chloride	ND	0.30		µg/L	1	10/1/2018 12:34:00 PM	R54556
n-Butylbenzene	ND	0.30		µg/L	1	10/1/2018 12:34:00 PM	R54556
n-Propylbenzene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
sec-Butylbenzene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
Styrene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
tert-Butylbenzene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
Tetrachloroethene (PCE)	0.20	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
trans-1,2-DCE	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
1,1,1-Trichloroethane	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
1,1,2-Trichloroethane	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
Trichloroethene (TCE)	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
Trichlorofluoromethane	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
1,2,3-Trichloropropane	ND	0.20		µg/L	1	10/1/2018 12:34:00 PM	R54556
Vinyl chloride	ND	0.10		µg/L	1	10/1/2018 12:34:00 PM	R54556
Xylenes, Total	ND	0.15		µg/L	1	10/1/2018 12:34:00 PM	R54556
Surr: Dibromofluoromethane	109	70-130		%Rec	1	10/1/2018 12:34:00 PM	R54556
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	10/1/2018 12:34:00 PM	R54556
Surr: Toluene-d8	97.3	70-130		%Rec	1	10/1/2018 12:34:00 PM	R54556
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	10/1/2018 12:34:00 PM	R54556

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1809G80

Date Reported: 10/4/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS2 180926

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 9/26/2018 8:47:00 AM

Lab ID: 1809G80-003

Matrix: AIR

Received Date: 9/27/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
Toluene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
Ethylbenzene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
Naphthalene	ND	0.20		µg/L	1	10/1/2018 12:58:00 PM	R54556
1-Methylnaphthalene	ND	0.40		µg/L	1	10/1/2018 12:58:00 PM	R54556
2-Methylnaphthalene	ND	0.40		µg/L	1	10/1/2018 12:58:00 PM	R54556
Acetone	ND	1.0		µg/L	1	10/1/2018 12:58:00 PM	R54556
Bromobenzene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
Bromodichloromethane	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
Bromoform	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
Bromomethane	ND	0.20		µg/L	1	10/1/2018 12:58:00 PM	R54556
2-Butanone	ND	1.0		µg/L	1	10/1/2018 12:58:00 PM	R54556
Carbon disulfide	ND	1.0		µg/L	1	10/1/2018 12:58:00 PM	R54556
Carbon tetrachloride	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
Chlorobenzene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
Chloroethane	ND	0.20		µg/L	1	10/1/2018 12:58:00 PM	R54556
Chloroform	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
Chloromethane	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
2-Chlorotoluene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
4-Chlorotoluene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
cis-1,2-DCE	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	10/1/2018 12:58:00 PM	R54556
Dibromochloromethane	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
Dibromomethane	ND	0.20		µg/L	1	10/1/2018 12:58:00 PM	R54556
1,2-Dichlorobenzene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
1,3-Dichlorobenzene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
1,4-Dichlorobenzene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
Dichlorodifluoromethane	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
1,1-Dichloroethane	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
1,1-Dichloroethene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
1,2-Dichloropropane	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
1,3-Dichloropropane	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
2,2-Dichloropropane	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 5 of 6
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1809G80

Date Reported: 10/4/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS2 180926

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 9/26/2018 8:47:00 AM

Lab ID: 1809G80-003

Matrix: AIR

Received Date: 9/27/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
Hexachlorobutadiene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
2-Hexanone	ND	1.0		µg/L	1	10/1/2018 12:58:00 PM	R54556
Isopropylbenzene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
4-Isopropyltoluene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
4-Methyl-2-pentanone	ND	1.0		µg/L	1	10/1/2018 12:58:00 PM	R54556
Methylene chloride	ND	0.30		µg/L	1	10/1/2018 12:58:00 PM	R54556
n-Butylbenzene	ND	0.30		µg/L	1	10/1/2018 12:58:00 PM	R54556
n-Propylbenzene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
sec-Butylbenzene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
Styrene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
tert-Butylbenzene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
Tetrachloroethene (PCE)	0.20	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
trans-1,2-DCE	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
1,1,1-Trichloroethane	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
1,1,2-Trichloroethane	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
Trichloroethene (TCE)	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
Trichlorofluoromethane	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
1,2,3-Trichloropropane	ND	0.20		µg/L	1	10/1/2018 12:58:00 PM	R54556
Vinyl chloride	ND	0.10		µg/L	1	10/1/2018 12:58:00 PM	R54556
Xylenes, Total	ND	0.15		µg/L	1	10/1/2018 12:58:00 PM	R54556
Surr: Dibromofluoromethane	109	70-130		%Rec	1	10/1/2018 12:58:00 PM	R54556
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	10/1/2018 12:58:00 PM	R54556
Surr: Toluene-d8	96.2	70-130		%Rec	1	10/1/2018 12:58:00 PM	R54556
Surr: 4-Bromofluorobenzene	98.3	70-130		%Rec	1	10/1/2018 12:58:00 PM	R54556

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: **City of Las Cruces**

Work Order Number: **1809G80**

RcptNo: 1

Received By: **Erin Melendrez** **9/27/2018 8:55:00 AM** *EM*

Completed By: **Erin Melendrez** **9/28/2018 8:38:23 AM** *EM*

Reviewed By: *JC 9-28-18*

LB: ENM 9/28/18

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
5. Sample(s) in proper container(s)? Yes No
6. Sufficient sample volume for indicated test(s)? Yes No
7. Are samples (except VOA and ONG) properly preserved? Yes No
8. Was preservative added to bottles? Yes No NA
9. VOA vials have zero headspace? Yes No No VOA Vials
10. Were any sample containers received broken? Yes No
11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Is it clear what analyses were requested? Yes No
14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (2 or 12 unless noted)
 Adjusted? _____
 Checked by: _____

ENM 9/28/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	N/A	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
 Mailing Address: P.O. Box 20000
Las Cruces N.M. 88004
 Phone #: 575-528-3604
 email or Fax#: lguerrero@las-cruces.org (575) 528-3604
 QA/QC Package: Standard Level 4 (Full Validation)

Accreditation
 NELAP Other
 EDD (Type) EXCELL

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
12-18-18	0847	AIR	CNC ASL 180926	Teal Bag	None	1809G180
12-18-18	0844	AIR	CNC ASL 180926 Dup	Teal Bag	None	-002
12-18-18	0847	AIR	CNC ASL 180926	Teal Bag	None	-003

Date: 20-18 Time: 1500
 Relinquished by: Jadun Lynn
 Date: 20-18 Time: 1500
 Relinquished by: Jadun Lynn

Turn-Around Time: Standard Rush
 Project Name: JSP - Vant Superfund Project
Monthly Analysis
 Project #: CNC JSP Griags Walnut
 Project Manager: Luis Guerra (575) 528-3009

Sampler: Yadira Ruiz
 On Ice: Yes No
 Sample Temperature: NA

Analysis Request	BTX + MTBE + TMB's (8021)	BTX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOC) VDC	8270 (Semi-VOC)	Air Bubbles (Y or N)
										X		
										X		
										X		

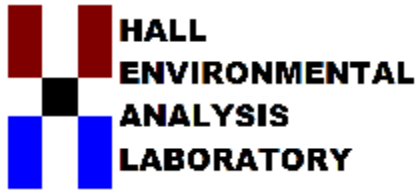
Received by: [Signature] Date: 12/18/18 Time: 0855
 Received by: [Signature] Date: 12/18/18 Time: 0855

Remarks: Sent Results to:
Luis Guerra lguerra@las-cruces.org
Joshua Rosenblatt jrosenblatt@las-cruces.org
Send Invoice to CNC c/o Luis Guerra



HALL ENVIRONMENTAL ANALYSIS LABORATORY
 www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly noted on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 01, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP Joint Superfund Project Monthly Analysis

OrderNo.: 1809G83

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 6 sample(s) on 9/27/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1809G83

Date Reported: 10/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 18- 180926

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 9/26/2018 8:11:00 AM

Lab ID: 1809G83-001

Matrix: AQUEOUS

Received Date: 9/27/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
Toluene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
Ethylbenzene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
Naphthalene	ND	2.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
1-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
2-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
Acetone	ND	10		µg/L	1	9/29/2018 3:02:00 AM	B54526
Bromobenzene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
Bromodichloromethane	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
Bromoform	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
Bromomethane	ND	3.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
2-Butanone	ND	10		µg/L	1	9/29/2018 3:02:00 AM	B54526
Carbon disulfide	ND	10		µg/L	1	9/29/2018 3:02:00 AM	B54526
Carbon Tetrachloride	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
Chlorobenzene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
Chloroethane	ND	2.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
Chloroform	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
Chloromethane	ND	3.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
2-Chlorotoluene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
4-Chlorotoluene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
cis-1,2-DCE	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
Dibromochloromethane	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
Dibromomethane	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
1,1-Dichloroethane	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
1,1-Dichloroethene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
1,2-Dichloropropane	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
1,3-Dichloropropane	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
2,2-Dichloropropane	ND	2.0		µg/L	1	9/29/2018 3:02:00 AM	B54526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1809G83

Date Reported: 10/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 18- 180926

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 9/26/2018 8:11:00 AM

Lab ID: 1809G83-001

Matrix: AQUEOUS

Received Date: 9/27/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
Hexachlorobutadiene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
2-Hexanone	ND	10		µg/L	1	9/29/2018 3:02:00 AM	B54526
Isopropylbenzene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
4-Isopropyltoluene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
4-Methyl-2-pentanone	ND	10		µg/L	1	9/29/2018 3:02:00 AM	B54526
Methylene Chloride	ND	3.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
n-Butylbenzene	ND	3.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
n-Propylbenzene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
sec-Butylbenzene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
Styrene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
tert-Butylbenzene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
Tetrachloroethene (PCE)	9.3	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
trans-1,2-DCE	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
Trichlorofluoromethane	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
Vinyl chloride	ND	1.0		µg/L	1	9/29/2018 3:02:00 AM	B54526
Xylenes, Total	ND	1.5		µg/L	1	9/29/2018 3:02:00 AM	B54526
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	9/29/2018 3:02:00 AM	B54526
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	9/29/2018 3:02:00 AM	B54526
Surr: Dibromofluoromethane	106	70-130		%Rec	1	9/29/2018 3:02:00 AM	B54526
Surr: Toluene-d8	97.6	70-130		%Rec	1	9/29/2018 3:02:00 AM	B54526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1809G83

Date Reported: 10/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 27- 180926

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 9/26/2018 9:00:00 AM

Lab ID: 1809G83-002

Matrix: AQUEOUS

Received Date: 9/27/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
Toluene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
Ethylbenzene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
Naphthalene	ND	2.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
1-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
2-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
Acetone	ND	10		µg/L	1	9/29/2018 3:26:00 AM	B54526
Bromobenzene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
Bromodichloromethane	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
Bromoform	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
Bromomethane	ND	3.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
2-Butanone	ND	10		µg/L	1	9/29/2018 3:26:00 AM	B54526
Carbon disulfide	ND	10		µg/L	1	9/29/2018 3:26:00 AM	B54526
Carbon Tetrachloride	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
Chlorobenzene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
Chloroethane	ND	2.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
Chloroform	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
Chloromethane	ND	3.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
2-Chlorotoluene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
4-Chlorotoluene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
cis-1,2-DCE	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
Dibromochloromethane	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
Dibromomethane	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
1,1-Dichloroethane	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
1,1-Dichloroethene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
1,2-Dichloropropane	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
1,3-Dichloropropane	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
2,2-Dichloropropane	ND	2.0		µg/L	1	9/29/2018 3:26:00 AM	B54526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1809G83

Date Reported: 10/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 27- 180926

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 9/26/2018 9:00:00 AM

Lab ID: 1809G83-002

Matrix: AQUEOUS

Received Date: 9/27/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
Hexachlorobutadiene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
2-Hexanone	ND	10		µg/L	1	9/29/2018 3:26:00 AM	B54526
Isopropylbenzene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
4-Isopropyltoluene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
4-Methyl-2-pentanone	ND	10		µg/L	1	9/29/2018 3:26:00 AM	B54526
Methylene Chloride	ND	3.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
n-Butylbenzene	ND	3.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
n-Propylbenzene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
sec-Butylbenzene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
Styrene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
tert-Butylbenzene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
Tetrachloroethene (PCE)	16	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
trans-1,2-DCE	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
Trichlorofluoromethane	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
Vinyl chloride	ND	1.0		µg/L	1	9/29/2018 3:26:00 AM	B54526
Xylenes, Total	ND	1.5		µg/L	1	9/29/2018 3:26:00 AM	B54526
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	9/29/2018 3:26:00 AM	B54526
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	9/29/2018 3:26:00 AM	B54526
Surr: Dibromofluoromethane	105	70-130		%Rec	1	9/29/2018 3:26:00 AM	B54526
Surr: Toluene-d8	98.0	70-130		%Rec	1	9/29/2018 3:26:00 AM	B54526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1809G83

Date Reported: 10/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1- 180926

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 9/26/2018 8:30:00 AM

Lab ID: 1809G83-003

Matrix: AQUEOUS

Received Date: 9/27/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
Toluene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
Ethylbenzene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
Naphthalene	ND	2.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
1-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
2-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
Acetone	ND	10		µg/L	1	9/29/2018 3:49:00 AM	B54526
Bromobenzene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
Bromodichloromethane	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
Bromoform	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
Bromomethane	ND	3.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
2-Butanone	ND	10		µg/L	1	9/29/2018 3:49:00 AM	B54526
Carbon disulfide	ND	10		µg/L	1	9/29/2018 3:49:00 AM	B54526
Carbon Tetrachloride	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
Chlorobenzene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
Chloroethane	ND	2.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
Chloroform	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
Chloromethane	ND	3.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
2-Chlorotoluene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
4-Chlorotoluene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
cis-1,2-DCE	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
Dibromochloromethane	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
Dibromomethane	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
1,1-Dichloroethane	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
1,1-Dichloroethene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
1,2-Dichloropropane	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
1,3-Dichloropropane	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
2,2-Dichloropropane	ND	2.0		µg/L	1	9/29/2018 3:49:00 AM	B54526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1809G83

Date Reported: 10/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1- 180926

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 9/26/2018 8:30:00 AM

Lab ID: 1809G83-003

Matrix: AQUEOUS

Received Date: 9/27/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
Hexachlorobutadiene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
2-Hexanone	ND	10		µg/L	1	9/29/2018 3:49:00 AM	B54526
Isopropylbenzene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
4-Isopropyltoluene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
4-Methyl-2-pentanone	ND	10		µg/L	1	9/29/2018 3:49:00 AM	B54526
Methylene Chloride	ND	3.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
n-Butylbenzene	ND	3.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
n-Propylbenzene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
sec-Butylbenzene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
Styrene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
tert-Butylbenzene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
Tetrachloroethene (PCE)	13	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
trans-1,2-DCE	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
Trichlorofluoromethane	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
Vinyl chloride	ND	1.0		µg/L	1	9/29/2018 3:49:00 AM	B54526
Xylenes, Total	ND	1.5		µg/L	1	9/29/2018 3:49:00 AM	B54526
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	9/29/2018 3:49:00 AM	B54526
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	9/29/2018 3:49:00 AM	B54526
Surr: Dibromofluoromethane	108	70-130		%Rec	1	9/29/2018 3:49:00 AM	B54526
Surr: Toluene-d8	96.9	70-130		%Rec	1	9/29/2018 3:49:00 AM	B54526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1809G83

Date Reported: 10/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C1- 180926

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 9/26/2018 8:34:00 AM

Lab ID: 1809G83-004

Matrix: AQUEOUS

Received Date: 9/27/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
Toluene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
Ethylbenzene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
Naphthalene	ND	2.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
1-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
2-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
Acetone	ND	10		µg/L	1	9/29/2018 4:13:00 AM	B54526
Bromobenzene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
Bromodichloromethane	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
Bromoform	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
Bromomethane	ND	3.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
2-Butanone	ND	10		µg/L	1	9/29/2018 4:13:00 AM	B54526
Carbon disulfide	ND	10		µg/L	1	9/29/2018 4:13:00 AM	B54526
Carbon Tetrachloride	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
Chlorobenzene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
Chloroethane	ND	2.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
Chloroform	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
Chloromethane	ND	3.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
2-Chlorotoluene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
4-Chlorotoluene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
cis-1,2-DCE	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
Dibromochloromethane	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
Dibromomethane	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
1,1-Dichloroethane	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
1,1-Dichloroethene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
1,2-Dichloropropane	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
1,3-Dichloropropane	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
2,2-Dichloropropane	ND	2.0		µg/L	1	9/29/2018 4:13:00 AM	B54526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1809G83

Date Reported: 10/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C1- 180926

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 9/26/2018 8:34:00 AM

Lab ID: 1809G83-004

Matrix: AQUEOUS

Received Date: 9/27/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
Hexachlorobutadiene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
2-Hexanone	ND	10		µg/L	1	9/29/2018 4:13:00 AM	B54526
Isopropylbenzene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
4-Isopropyltoluene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
4-Methyl-2-pentanone	ND	10		µg/L	1	9/29/2018 4:13:00 AM	B54526
Methylene Chloride	ND	3.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
n-Butylbenzene	ND	3.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
n-Propylbenzene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
sec-Butylbenzene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
Styrene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
tert-Butylbenzene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
trans-1,2-DCE	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
Trichlorofluoromethane	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
Vinyl chloride	ND	1.0		µg/L	1	9/29/2018 4:13:00 AM	B54526
Xylenes, Total	ND	1.5		µg/L	1	9/29/2018 4:13:00 AM	B54526
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	9/29/2018 4:13:00 AM	B54526
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	9/29/2018 4:13:00 AM	B54526
Surr: Dibromofluoromethane	104	70-130		%Rec	1	9/29/2018 4:13:00 AM	B54526
Surr: Toluene-d8	98.1	70-130		%Rec	1	9/29/2018 4:13:00 AM	B54526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1809G83

Date Reported: 10/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C2- 180926

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 9/26/2018 8:37:00 AM

Lab ID: 1809G83-005

Matrix: AQUEOUS

Received Date: 9/27/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
Toluene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
Ethylbenzene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
Naphthalene	ND	2.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
1-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
2-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
Acetone	ND	10		µg/L	1	9/29/2018 4:37:00 AM	B54526
Bromobenzene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
Bromodichloromethane	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
Bromoform	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
Bromomethane	ND	3.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
2-Butanone	ND	10		µg/L	1	9/29/2018 4:37:00 AM	B54526
Carbon disulfide	ND	10		µg/L	1	9/29/2018 4:37:00 AM	B54526
Carbon Tetrachloride	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
Chlorobenzene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
Chloroethane	ND	2.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
Chloroform	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
Chloromethane	ND	3.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
2-Chlorotoluene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
4-Chlorotoluene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
cis-1,2-DCE	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
Dibromochloromethane	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
Dibromomethane	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
1,1-Dichloroethane	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
1,1-Dichloroethene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
1,2-Dichloropropane	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
1,3-Dichloropropane	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
2,2-Dichloropropane	ND	2.0		µg/L	1	9/29/2018 4:37:00 AM	B54526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1809G83

Date Reported: 10/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C2- 180926

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 9/26/2018 8:37:00 AM

Lab ID: 1809G83-005

Matrix: AQUEOUS

Received Date: 9/27/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
Hexachlorobutadiene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
2-Hexanone	ND	10		µg/L	1	9/29/2018 4:37:00 AM	B54526
Isopropylbenzene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
4-Isopropyltoluene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
4-Methyl-2-pentanone	ND	10		µg/L	1	9/29/2018 4:37:00 AM	B54526
Methylene Chloride	ND	3.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
n-Butylbenzene	ND	3.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
n-Propylbenzene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
sec-Butylbenzene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
Styrene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
tert-Butylbenzene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
trans-1,2-DCE	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
Trichlorofluoromethane	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
Vinyl chloride	ND	1.0		µg/L	1	9/29/2018 4:37:00 AM	B54526
Xylenes, Total	ND	1.5		µg/L	1	9/29/2018 4:37:00 AM	B54526
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	9/29/2018 4:37:00 AM	B54526
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	9/29/2018 4:37:00 AM	B54526
Surr: Dibromofluoromethane	106	70-130		%Rec	1	9/29/2018 4:37:00 AM	B54526
Surr: Toluene-d8	98.8	70-130		%Rec	1	9/29/2018 4:37:00 AM	B54526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1809G83

Date Reported: 10/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1- 180926

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 9/26/2018 8:40:00 AM

Lab ID: 1809G83-006

Matrix: AQUEOUS

Received Date: 9/27/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
Toluene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
Ethylbenzene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
Naphthalene	ND	2.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
1-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
2-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
Acetone	ND	10		µg/L	1	9/29/2018 5:01:00 AM	B54526
Bromobenzene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
Bromodichloromethane	2.9	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
Bromoform	3.0	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
Bromomethane	ND	3.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
2-Butanone	ND	10		µg/L	1	9/29/2018 5:01:00 AM	B54526
Carbon disulfide	ND	10		µg/L	1	9/29/2018 5:01:00 AM	B54526
Carbon Tetrachloride	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
Chlorobenzene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
Chloroethane	ND	2.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
Chloroform	1.3	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
Chloromethane	ND	3.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
2-Chlorotoluene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
4-Chlorotoluene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
cis-1,2-DCE	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
Dibromochloromethane	3.9	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
Dibromomethane	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
1,1-Dichloroethane	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
1,1-Dichloroethene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
1,2-Dichloropropane	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
1,3-Dichloropropane	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
2,2-Dichloropropane	ND	2.0		µg/L	1	9/29/2018 5:01:00 AM	B54526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1809G83

Date Reported: 10/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1- 180926

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 9/26/2018 8:40:00 AM

Lab ID: 1809G83-006

Matrix: AQUEOUS

Received Date: 9/27/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
Hexachlorobutadiene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
2-Hexanone	ND	10		µg/L	1	9/29/2018 5:01:00 AM	B54526
Isopropylbenzene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
4-Isopropyltoluene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
4-Methyl-2-pentanone	ND	10		µg/L	1	9/29/2018 5:01:00 AM	B54526
Methylene Chloride	ND	3.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
n-Butylbenzene	ND	3.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
n-Propylbenzene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
sec-Butylbenzene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
Styrene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
tert-Butylbenzene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
trans-1,2-DCE	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
Trichlorofluoromethane	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
Vinyl chloride	ND	1.0		µg/L	1	9/29/2018 5:01:00 AM	B54526
Xylenes, Total	ND	1.5		µg/L	1	9/29/2018 5:01:00 AM	B54526
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	9/29/2018 5:01:00 AM	B54526
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	9/29/2018 5:01:00 AM	B54526
Surr: Dibromofluoromethane	106	70-130		%Rec	1	9/29/2018 5:01:00 AM	B54526
Surr: Toluene-d8	95.6	70-130		%Rec	1	9/29/2018 5:01:00 AM	B54526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1809G83

01-Oct-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Monthly Analysis

Sample ID 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: B54526		RunNo: 54526							
Prep Date:	Analysis Date: 9/28/2018		SeqNo: 1807460		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	21	1.0	20.00	0	104	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	114	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	99.1	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	9.9		10.00		99.1	70	130			

Sample ID rb2	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: B54526		RunNo: 54526							
Prep Date:	Analysis Date: 9/28/2018		SeqNo: 1807461		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1809G83

01-Oct-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Monthly Analysis

Sample ID	rb2	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	B54526	RunNo:	54526					
Prep Date:		Analysis Date:	9/28/2018	SeqNo:	1807461	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1809G83

01-Oct-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Monthly Analysis

Sample ID: rb2	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: B54526		RunNo: 54526							
Prep Date:	Analysis Date: 9/28/2018		SeqNo: 1807461		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	9.9		10.00		98.9	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **City of Las Cruces**

Work Order Number: **1809G83**

RcptNo: 1

Received By: **Erin Melendrez** **9/27/2018 8:55:00 AM** *EM*

Completed By: **Erin Melendrez** **9/28/2018 8:49:02 AM** *EM*

Reviewed By: *JC 9.28.18*
LB: ENM 9/28/18

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
5. Sample(s) in proper container(s)? Yes No
6. Sufficient sample volume for indicated test(s)? Yes No
7. Are samples (except VOA and ONG) properly preserved? Yes No
8. Was preservative added to bottles? Yes No NA
9. VOA vials have zero headspace? Yes No No VOA Vials
10. Were any sample containers received broken? Yes No
11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Is it clear what analyses were requested? Yes No
14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

ENM 9/28/18

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.9	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
 Mailing Address: RD. Box 20000
Las Cruces, N.M. 88004
 Phone #: 575-528-3604
 email or Fax#: 575-528-3604
 QA/QC Package: Standard Level 4 (Full Validation)
 Accreditation NELAP Other
 EDD (Type) EUCCEL

Project Name: JSP-Joint Superfund Project
 Project #: Monthly Analysis
 Project Manager: Luís Guzmán (575) 528-3609
 Sampler: Yadira Bryan
 On Ice: Yes No
 Sample Temperature: 10 C

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No
9-26-18	1811	Droving Water	CNC 18-180926	3-40ml Vials	HgCl ₂	1809G83
	0900		CNC 27-180926			-001
	0830		CNC T54 180926			-002
	0834		CNC C1 180926			-003
	0837		CNC C2 180926			-004
9-26-18	0840	Droving Water	CNC E54 180926	3-40ml Vials	HgCl ₂	-005
						-006

Turn-Around Time: Standard Rush
 Received by: Luís Date: 9/27/18 Time: 0855
 Relinquished by: Yadira Bryan Date: 9/27/18 Time: 0855
 Received by: Luís Date: 9/27/18 Time: 0855

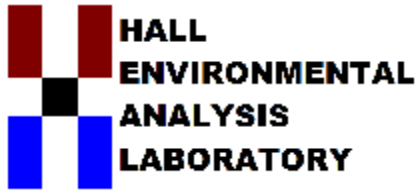
Remarks: Sand Results to: Luis Guzman Iguerra @ las-cruces.org
Yadira Ponceblatte jrosenblatt@las-cruces.org
Sand invoice to Alejandro Luis Guzman



HALL ENVIRONMENTAL ANALYSIS LABORATORY
 www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request	
BTEX + MTBE + TMB's (8021)	
BTEX + MTBE + TPH (Gas only)	
TPH 8015B (GRO / DRO / MRO)	
TPH (Method 418.1)	
EDB (Method 504.1)	
PAH's (8310 or 8270 SIMS)	
RCRA 8 Metals	
Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	
8081 Pesticides / 8082 PCBs	
8260B (VOC) VDL	X
8270 (Semi-VOC)	X
Air Bubbles (Y or N)	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

November 01, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP Joint Superfund Project Monthly Analysis

OrderNo.: 1810D57

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 2 sample(s) on 10/26/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1810D57

Date Reported: 11/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS1 181025

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 10/25/2018 9:10:00 AM

Lab ID: 1810D57-001

Matrix: AIR

Received Date: 10/26/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
Toluene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
Ethylbenzene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
Naphthalene	ND	0.20		µg/L	1	10/30/2018 12:14:15 PM	A55277
1-Methylnaphthalene	ND	0.40		µg/L	1	10/30/2018 12:14:15 PM	A55277
2-Methylnaphthalene	ND	0.40		µg/L	1	10/30/2018 12:14:15 PM	A55277
Acetone	ND	1.0		µg/L	1	10/30/2018 12:14:15 PM	A55277
Bromobenzene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
Bromodichloromethane	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
Bromoform	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
Bromomethane	ND	0.20		µg/L	1	10/30/2018 12:14:15 PM	A55277
2-Butanone	ND	1.0		µg/L	1	10/30/2018 12:14:15 PM	A55277
Carbon disulfide	ND	1.0		µg/L	1	10/30/2018 12:14:15 PM	A55277
Carbon tetrachloride	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
Chlorobenzene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
Chloroethane	ND	0.20		µg/L	1	10/30/2018 12:14:15 PM	A55277
Chloroform	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
Chloromethane	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
2-Chlorotoluene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
4-Chlorotoluene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
cis-1,2-DCE	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	10/30/2018 12:14:15 PM	A55277
Dibromochloromethane	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
Dibromomethane	ND	0.20		µg/L	1	10/30/2018 12:14:15 PM	A55277
1,2-Dichlorobenzene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
1,3-Dichlorobenzene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
1,4-Dichlorobenzene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
Dichlorodifluoromethane	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
1,1-Dichloroethane	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
1,1-Dichloroethene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
1,2-Dichloropropane	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
1,3-Dichloropropane	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
2,2-Dichloropropane	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 1 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1810D57

Date Reported: 11/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS1 181025

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 10/25/2018 9:10:00 AM

Lab ID: 1810D57-001

Matrix: AIR

Received Date: 10/26/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
Hexachlorobutadiene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
2-Hexanone	ND	1.0		µg/L	1	10/30/2018 12:14:15 PM	A55277
Isopropylbenzene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
4-Isopropyltoluene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
4-Methyl-2-pentanone	ND	1.0		µg/L	1	10/30/2018 12:14:15 PM	A55277
Methylene chloride	ND	0.30		µg/L	1	10/30/2018 12:14:15 PM	A55277
n-Butylbenzene	ND	0.30		µg/L	1	10/30/2018 12:14:15 PM	A55277
n-Propylbenzene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
sec-Butylbenzene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
Styrene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
tert-Butylbenzene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
Tetrachloroethene (PCE)	0.17	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
trans-1,2-DCE	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
1,1,1-Trichloroethane	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
1,1,2-Trichloroethane	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
Trichloroethene (TCE)	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
Trichlorofluoromethane	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
1,2,3-Trichloropropane	ND	0.20		µg/L	1	10/30/2018 12:14:15 PM	A55277
Vinyl chloride	ND	0.10		µg/L	1	10/30/2018 12:14:15 PM	A55277
Xylenes, Total	ND	0.15		µg/L	1	10/30/2018 12:14:15 PM	A55277
Surr: Dibromofluoromethane	98.5	70-130		%Rec	1	10/30/2018 12:14:15 PM	A55277
Surr: 1,2-Dichloroethane-d4	90.6	70-130		%Rec	1	10/30/2018 12:14:15 PM	A55277
Surr: Toluene-d8	102	70-130		%Rec	1	10/30/2018 12:14:15 PM	A55277
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	10/30/2018 12:14:15 PM	A55277

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 2 of 4
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1810D57

Date Reported: 11/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS2 181025

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 10/25/2018 9:12:00 AM

Lab ID: 1810D57-002

Matrix: AIR

Received Date: 10/26/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
Toluene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
Ethylbenzene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
Naphthalene	ND	0.20		µg/L	1	10/30/2018 12:44:02 PM	A55277
1-Methylnaphthalene	ND	0.40		µg/L	1	10/30/2018 12:44:02 PM	A55277
2-Methylnaphthalene	ND	0.40		µg/L	1	10/30/2018 12:44:02 PM	A55277
Acetone	ND	1.0		µg/L	1	10/30/2018 12:44:02 PM	A55277
Bromobenzene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
Bromodichloromethane	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
Bromoform	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
Bromomethane	ND	0.20		µg/L	1	10/30/2018 12:44:02 PM	A55277
2-Butanone	ND	1.0		µg/L	1	10/30/2018 12:44:02 PM	A55277
Carbon disulfide	ND	1.0		µg/L	1	10/30/2018 12:44:02 PM	A55277
Carbon tetrachloride	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
Chlorobenzene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
Chloroethane	ND	0.20		µg/L	1	10/30/2018 12:44:02 PM	A55277
Chloroform	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
Chloromethane	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
2-Chlorotoluene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
4-Chlorotoluene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
cis-1,2-DCE	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	10/30/2018 12:44:02 PM	A55277
Dibromochloromethane	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
Dibromomethane	ND	0.20		µg/L	1	10/30/2018 12:44:02 PM	A55277
1,2-Dichlorobenzene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
1,3-Dichlorobenzene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
1,4-Dichlorobenzene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
Dichlorodifluoromethane	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
1,1-Dichloroethane	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
1,1-Dichloroethene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
1,2-Dichloropropane	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
1,3-Dichloropropane	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
2,2-Dichloropropane	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	Page 3 of 4
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1810D57

Date Reported: 11/1/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS2 181025

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 10/25/2018 9:12:00 AM

Lab ID: 1810D57-002

Matrix: AIR

Received Date: 10/26/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
Hexachlorobutadiene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
2-Hexanone	ND	1.0		µg/L	1	10/30/2018 12:44:02 PM	A55277
Isopropylbenzene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
4-Isopropyltoluene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
4-Methyl-2-pentanone	ND	1.0		µg/L	1	10/30/2018 12:44:02 PM	A55277
Methylene chloride	ND	0.30		µg/L	1	10/30/2018 12:44:02 PM	A55277
n-Butylbenzene	ND	0.30		µg/L	1	10/30/2018 12:44:02 PM	A55277
n-Propylbenzene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
sec-Butylbenzene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
Styrene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
tert-Butylbenzene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
Tetrachloroethene (PCE)	0.18	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
trans-1,2-DCE	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
1,1,1-Trichloroethane	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
1,1,2-Trichloroethane	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
Trichloroethene (TCE)	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
Trichlorofluoromethane	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
1,2,3-Trichloropropane	ND	0.20		µg/L	1	10/30/2018 12:44:02 PM	A55277
Vinyl chloride	ND	0.10		µg/L	1	10/30/2018 12:44:02 PM	A55277
Xylenes, Total	ND	0.15		µg/L	1	10/30/2018 12:44:02 PM	A55277
Surr: Dibromofluoromethane	102	70-130		%Rec	1	10/30/2018 12:44:02 PM	A55277
Surr: 1,2-Dichloroethane-d4	95.1	70-130		%Rec	1	10/30/2018 12:44:02 PM	A55277
Surr: Toluene-d8	101	70-130		%Rec	1	10/30/2018 12:44:02 PM	A55277
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	10/30/2018 12:44:02 PM	A55277

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1810D57

RcptNo: 1

Received By: Victoria Zellar 10/26/2018 8:45:00 AM

Victoria Zellar

Completed By: Anne Thorne 10/26/2018 10:43:01 AM

Anne Thorne

Reviewed By: *JAB 10/26/18*

Labeled by: *AT 10/26/18*

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present

2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA

4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA

5. Sample(s) in proper container(s)? Yes No

6. Sufficient sample volume for indicated test(s)? Yes No

7. Are samples (except VOA and ONG) properly preserved? Yes No

8. Was preservative added to bottles? Yes No NA

9. VOA vials have zero headspace? Yes No No VOA Vials

10. Were any sample containers received broken? Yes No

11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)

12. Are matrices correctly identified on Chain of Custody? Yes No

13. Is it clear what analyses were requested? Yes No

14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____ (<2 or >12 unless noted) Adjusted? _____ Checked by: _____

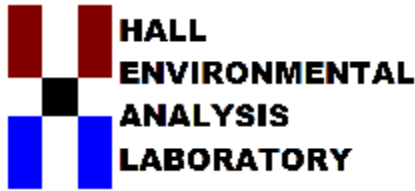
Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____	Date: _____
By Whom: _____	Via: <input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding: _____	
Client Instructions: _____	

16. Additional remarks:

17. **Cooler Information**



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

November 02, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP Joint Superfund Project Monthly Analysis

OrderNo.: 1810D96

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 10/26/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1810D96

Date Reported: 11/2/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-181025

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 10/25/2018 8:13:00 AM

Lab ID: 1810D96-001

Matrix: AQUEOUS

Received Date: 10/26/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
Toluene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
Ethylbenzene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
Naphthalene	ND	2.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
1-Methylnaphthalene	ND	4.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
2-Methylnaphthalene	ND	4.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
Acetone	ND	10		µg/L	1	10/30/2018 5:11:05 PM	A55274
Bromobenzene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
Bromodichloromethane	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
Bromoform	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
Bromomethane	ND	3.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
2-Butanone	ND	10		µg/L	1	10/30/2018 5:11:05 PM	A55274
Carbon disulfide	ND	10		µg/L	1	10/30/2018 5:11:05 PM	A55274
Carbon Tetrachloride	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
Chlorobenzene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
Chloroethane	ND	2.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
Chloroform	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
Chloromethane	ND	3.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
2-Chlorotoluene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
4-Chlorotoluene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
cis-1,2-DCE	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
Dibromochloromethane	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
Dibromomethane	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
1,1-Dichloroethane	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
1,1-Dichloroethene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
1,2-Dichloropropane	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
1,3-Dichloropropane	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
2,2-Dichloropropane	ND	2.0		µg/L	1	10/30/2018 5:11:05 PM	A55274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1810D96

Date Reported: 11/2/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-181025

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 10/25/2018 8:13:00 AM

Lab ID: 1810D96-001

Matrix: AQUEOUS

Received Date: 10/26/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
Hexachlorobutadiene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
2-Hexanone	ND	10		µg/L	1	10/30/2018 5:11:05 PM	A55274
Isopropylbenzene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
4-Isopropyltoluene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
4-Methyl-2-pentanone	ND	10		µg/L	1	10/30/2018 5:11:05 PM	A55274
Methylene Chloride	ND	3.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
n-Butylbenzene	ND	3.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
n-Propylbenzene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
sec-Butylbenzene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
Styrene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
tert-Butylbenzene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
trans-1,2-DCE	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
Trichlorofluoromethane	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
Vinyl chloride	ND	1.0		µg/L	1	10/30/2018 5:11:05 PM	A55274
Xylenes, Total	ND	1.5		µg/L	1	10/30/2018 5:11:05 PM	A55274
Surr: 1,2-Dichloroethane-d4	87.9	70-130		%Rec	1	10/30/2018 5:11:05 PM	A55274
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	10/30/2018 5:11:05 PM	A55274
Surr: Dibromofluoromethane	90.4	70-130		%Rec	1	10/30/2018 5:11:05 PM	A55274
Surr: Toluene-d8	97.1	70-130		%Rec	1	10/30/2018 5:11:05 PM	A55274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1810D96

Date Reported: 11/2/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-181025

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 10/25/2018 8:25:00 AM

Lab ID: 1810D96-002

Matrix: AQUEOUS

Received Date: 10/26/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
Toluene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
Ethylbenzene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
Naphthalene	ND	2.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
1-Methylnaphthalene	ND	4.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
2-Methylnaphthalene	ND	4.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
Acetone	ND	10		µg/L	1	10/30/2018 6:36:51 PM	A55274
Bromobenzene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
Bromodichloromethane	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
Bromoform	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
Bromomethane	ND	3.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
2-Butanone	ND	10		µg/L	1	10/30/2018 6:36:51 PM	A55274
Carbon disulfide	ND	10		µg/L	1	10/30/2018 6:36:51 PM	A55274
Carbon Tetrachloride	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
Chlorobenzene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
Chloroethane	ND	2.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
Chloroform	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
Chloromethane	ND	3.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
2-Chlorotoluene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
4-Chlorotoluene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
cis-1,2-DCE	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
Dibromochloromethane	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
Dibromomethane	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
1,1-Dichloroethane	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
1,1-Dichloroethene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
1,2-Dichloropropane	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
1,3-Dichloropropane	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
2,2-Dichloropropane	ND	2.0		µg/L	1	10/30/2018 6:36:51 PM	A55274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1810D96

Date Reported: 11/2/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-181025

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 10/25/2018 8:25:00 AM

Lab ID: 1810D96-002

Matrix: AQUEOUS

Received Date: 10/26/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
Hexachlorobutadiene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
2-Hexanone	ND	10		µg/L	1	10/30/2018 6:36:51 PM	A55274
Isopropylbenzene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
4-Isopropyltoluene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
4-Methyl-2-pentanone	ND	10		µg/L	1	10/30/2018 6:36:51 PM	A55274
Methylene Chloride	ND	3.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
n-Butylbenzene	ND	3.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
n-Propylbenzene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
sec-Butylbenzene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
Styrene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
tert-Butylbenzene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
Tetrachloroethene (PCE)	14	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
trans-1,2-DCE	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
Trichlorofluoromethane	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
Vinyl chloride	ND	1.0		µg/L	1	10/30/2018 6:36:51 PM	A55274
Xylenes, Total	ND	1.5		µg/L	1	10/30/2018 6:36:51 PM	A55274
Surr: 1,2-Dichloroethane-d4	85.1	70-130		%Rec	1	10/30/2018 6:36:51 PM	A55274
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	10/30/2018 6:36:51 PM	A55274
Surr: Dibromofluoromethane	89.3	70-130		%Rec	1	10/30/2018 6:36:51 PM	A55274
Surr: Toluene-d8	97.0	70-130		%Rec	1	10/30/2018 6:36:51 PM	A55274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1810D96

Date Reported: 11/2/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-181025

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 10/25/2018 8:55:00 AM

Lab ID: 1810D96-003

Matrix: AQUEOUS

Received Date: 10/26/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
Toluene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
Ethylbenzene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
Naphthalene	ND	2.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
1-Methylnaphthalene	ND	4.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
2-Methylnaphthalene	ND	4.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
Acetone	ND	10		µg/L	1	10/30/2018 7:05:26 PM	A55274
Bromobenzene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
Bromodichloromethane	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
Bromoform	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
Bromomethane	ND	3.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
2-Butanone	ND	10		µg/L	1	10/30/2018 7:05:26 PM	A55274
Carbon disulfide	ND	10		µg/L	1	10/30/2018 7:05:26 PM	A55274
Carbon Tetrachloride	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
Chlorobenzene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
Chloroethane	ND	2.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
Chloroform	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
Chloromethane	ND	3.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
2-Chlorotoluene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
4-Chlorotoluene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
cis-1,2-DCE	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
Dibromochloromethane	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
Dibromomethane	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
1,1-Dichloroethane	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
1,1-Dichloroethene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
1,2-Dichloropropane	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
1,3-Dichloropropane	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
2,2-Dichloropropane	ND	2.0		µg/L	1	10/30/2018 7:05:26 PM	A55274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1810D96

Date Reported: 11/2/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-181025

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 10/25/2018 8:55:00 AM

Lab ID: 1810D96-003

Matrix: AQUEOUS

Received Date: 10/26/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
Hexachlorobutadiene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
2-Hexanone	ND	10		µg/L	1	10/30/2018 7:05:26 PM	A55274
Isopropylbenzene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
4-Isopropyltoluene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
4-Methyl-2-pentanone	ND	10		µg/L	1	10/30/2018 7:05:26 PM	A55274
Methylene Chloride	ND	3.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
n-Butylbenzene	ND	3.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
n-Propylbenzene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
sec-Butylbenzene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
Styrene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
tert-Butylbenzene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
Tetrachloroethene (PCE)	10	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
trans-1,2-DCE	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
Trichlorofluoromethane	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
Vinyl chloride	ND	1.0		µg/L	1	10/30/2018 7:05:26 PM	A55274
Xylenes, Total	ND	1.5		µg/L	1	10/30/2018 7:05:26 PM	A55274
Surr: 1,2-Dichloroethane-d4	87.1	70-130		%Rec	1	10/30/2018 7:05:26 PM	A55274
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	10/30/2018 7:05:26 PM	A55274
Surr: Dibromofluoromethane	88.1	70-130		%Rec	1	10/30/2018 7:05:26 PM	A55274
Surr: Toluene-d8	93.5	70-130		%Rec	1	10/30/2018 7:05:26 PM	A55274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1810D96

Date Reported: 11/2/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-181025

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 10/25/2018 8:58:00 AM

Lab ID: 1810D96-004

Matrix: AQUEOUS

Received Date: 10/26/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
Toluene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
Ethylbenzene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
Naphthalene	ND	2.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
1-Methylnaphthalene	ND	4.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
2-Methylnaphthalene	ND	4.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
Acetone	ND	10		µg/L	1	10/30/2018 7:34:13 PM	A55274
Bromobenzene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
Bromodichloromethane	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
Bromoform	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
Bromomethane	ND	3.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
2-Butanone	ND	10		µg/L	1	10/30/2018 7:34:13 PM	A55274
Carbon disulfide	ND	10		µg/L	1	10/30/2018 7:34:13 PM	A55274
Carbon Tetrachloride	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
Chlorobenzene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
Chloroethane	ND	2.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
Chloroform	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
Chloromethane	ND	3.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
2-Chlorotoluene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
4-Chlorotoluene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
cis-1,2-DCE	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
Dibromochloromethane	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
Dibromomethane	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
1,1-Dichloroethane	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
1,1-Dichloroethene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
1,2-Dichloropropane	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
1,3-Dichloropropane	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
2,2-Dichloropropane	ND	2.0		µg/L	1	10/30/2018 7:34:13 PM	A55274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1810D96

Date Reported: 11/2/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-181025

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 10/25/2018 8:58:00 AM

Lab ID: 1810D96-004

Matrix: AQUEOUS

Received Date: 10/26/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
Hexachlorobutadiene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
2-Hexanone	ND	10		µg/L	1	10/30/2018 7:34:13 PM	A55274
Isopropylbenzene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
4-Isopropyltoluene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
4-Methyl-2-pentanone	ND	10		µg/L	1	10/30/2018 7:34:13 PM	A55274
Methylene Chloride	ND	3.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
n-Butylbenzene	ND	3.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
n-Propylbenzene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
sec-Butylbenzene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
Styrene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
tert-Butylbenzene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
trans-1,2-DCE	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
Trichlorofluoromethane	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
Vinyl chloride	ND	1.0		µg/L	1	10/30/2018 7:34:13 PM	A55274
Xylenes, Total	ND	1.5		µg/L	1	10/30/2018 7:34:13 PM	A55274
Surr: 1,2-Dichloroethane-d4	86.9	70-130		%Rec	1	10/30/2018 7:34:13 PM	A55274
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	10/30/2018 7:34:13 PM	A55274
Surr: Dibromofluoromethane	89.4	70-130		%Rec	1	10/30/2018 7:34:13 PM	A55274
Surr: Toluene-d8	94.2	70-130		%Rec	1	10/30/2018 7:34:13 PM	A55274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1810D96

Date Reported: 11/2/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-181025

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 10/25/2018 9:01:00 AM

Lab ID: 1810D96-005

Matrix: AQUEOUS

Received Date: 10/26/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
Toluene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
Ethylbenzene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
Naphthalene	ND	2.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
1-Methylnaphthalene	ND	4.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
2-Methylnaphthalene	ND	4.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
Acetone	ND	10		µg/L	1	10/30/2018 8:02:54 PM	A55274
Bromobenzene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
Bromodichloromethane	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
Bromoform	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
Bromomethane	ND	3.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
2-Butanone	ND	10		µg/L	1	10/30/2018 8:02:54 PM	A55274
Carbon disulfide	ND	10		µg/L	1	10/30/2018 8:02:54 PM	A55274
Carbon Tetrachloride	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
Chlorobenzene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
Chloroethane	ND	2.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
Chloroform	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
Chloromethane	ND	3.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
2-Chlorotoluene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
4-Chlorotoluene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
cis-1,2-DCE	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
Dibromochloromethane	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
Dibromomethane	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
1,1-Dichloroethane	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
1,1-Dichloroethene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
1,2-Dichloropropane	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
1,3-Dichloropropane	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
2,2-Dichloropropane	ND	2.0		µg/L	1	10/30/2018 8:02:54 PM	A55274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1810D96

Date Reported: 11/2/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-181025

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 10/25/2018 9:01:00 AM

Lab ID: 1810D96-005

Matrix: AQUEOUS

Received Date: 10/26/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
Hexachlorobutadiene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
2-Hexanone	ND	10		µg/L	1	10/30/2018 8:02:54 PM	A55274
Isopropylbenzene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
4-Isopropyltoluene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
4-Methyl-2-pentanone	ND	10		µg/L	1	10/30/2018 8:02:54 PM	A55274
Methylene Chloride	ND	3.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
n-Butylbenzene	ND	3.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
n-Propylbenzene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
sec-Butylbenzene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
Styrene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
tert-Butylbenzene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
trans-1,2-DCE	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
Trichlorofluoromethane	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
Vinyl chloride	ND	1.0		µg/L	1	10/30/2018 8:02:54 PM	A55274
Xylenes, Total	ND	1.5		µg/L	1	10/30/2018 8:02:54 PM	A55274
Surr: 1,2-Dichloroethane-d4	86.4	70-130		%Rec	1	10/30/2018 8:02:54 PM	A55274
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	10/30/2018 8:02:54 PM	A55274
Surr: Dibromofluoromethane	90.1	70-130		%Rec	1	10/30/2018 8:02:54 PM	A55274
Surr: Toluene-d8	96.6	70-130		%Rec	1	10/30/2018 8:02:54 PM	A55274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1810D96

Date Reported: 11/2/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-181025

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 10/25/2018 9:08:00 AM

Lab ID: 1810D96-006

Matrix: AQUEOUS

Received Date: 10/26/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
Toluene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
Ethylbenzene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
Naphthalene	ND	2.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
1-Methylnaphthalene	ND	4.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
2-Methylnaphthalene	ND	4.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
Acetone	ND	10		µg/L	1	10/30/2018 9:57:16 PM	A55274
Bromobenzene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
Bromodichloromethane	2.9	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
Bromoform	3.8	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
Bromomethane	ND	3.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
2-Butanone	ND	10		µg/L	1	10/30/2018 9:57:16 PM	A55274
Carbon disulfide	ND	10		µg/L	1	10/30/2018 9:57:16 PM	A55274
Carbon Tetrachloride	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
Chlorobenzene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
Chloroethane	ND	2.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
Chloroform	1.4	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
Chloromethane	ND	3.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
2-Chlorotoluene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
4-Chlorotoluene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
cis-1,2-DCE	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
Dibromochloromethane	4.8	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
Dibromomethane	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
1,1-Dichloroethane	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
1,1-Dichloroethene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
1,2-Dichloropropane	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
1,3-Dichloropropane	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
2,2-Dichloropropane	ND	2.0		µg/L	1	10/30/2018 9:57:16 PM	A55274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1810D96

Date Reported: 11/2/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-181025

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 10/25/2018 9:08:00 AM

Lab ID: 1810D96-006

Matrix: AQUEOUS

Received Date: 10/26/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
Hexachlorobutadiene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
2-Hexanone	ND	10		µg/L	1	10/30/2018 9:57:16 PM	A55274
Isopropylbenzene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
4-Isopropyltoluene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
4-Methyl-2-pentanone	ND	10		µg/L	1	10/30/2018 9:57:16 PM	A55274
Methylene Chloride	ND	3.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
n-Butylbenzene	ND	3.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
n-Propylbenzene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
sec-Butylbenzene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
Styrene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
tert-Butylbenzene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
trans-1,2-DCE	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
Trichlorofluoromethane	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
Vinyl chloride	ND	1.0		µg/L	1	10/30/2018 9:57:16 PM	A55274
Xylenes, Total	ND	1.5		µg/L	1	10/30/2018 9:57:16 PM	A55274
Surr: 1,2-Dichloroethane-d4	83.7	70-130		%Rec	1	10/30/2018 9:57:16 PM	A55274
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	10/30/2018 9:57:16 PM	A55274
Surr: Dibromofluoromethane	91.5	70-130		%Rec	1	10/30/2018 9:57:16 PM	A55274
Surr: Toluene-d8	96.1	70-130		%Rec	1	10/30/2018 9:57:16 PM	A55274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1810D96

Date Reported: 11/2/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-181025 DUP

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 10/25/2018 9:08:00 AM

Lab ID: 1810D96-007

Matrix: AQUEOUS

Received Date: 10/26/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
Toluene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
Ethylbenzene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
Naphthalene	ND	2.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
1-Methylnaphthalene	ND	4.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
2-Methylnaphthalene	ND	4.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
Acetone	ND	10		µg/L	1	10/30/2018 10:25:55 PM	A55274
Bromobenzene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
Bromodichloromethane	2.7	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
Bromoform	3.7	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
Bromomethane	ND	3.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
2-Butanone	ND	10		µg/L	1	10/30/2018 10:25:55 PM	A55274
Carbon disulfide	ND	10		µg/L	1	10/30/2018 10:25:55 PM	A55274
Carbon Tetrachloride	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
Chlorobenzene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
Chloroethane	ND	2.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
Chloroform	1.1	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
Chloromethane	ND	3.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
2-Chlorotoluene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
4-Chlorotoluene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
cis-1,2-DCE	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
Dibromochloromethane	4.3	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
Dibromomethane	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
1,1-Dichloroethane	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
1,1-Dichloroethene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
1,2-Dichloropropane	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
1,3-Dichloropropane	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
2,2-Dichloropropane	ND	2.0		µg/L	1	10/30/2018 10:25:55 PM	A55274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1810D96

Date Reported: 11/2/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-181025 DUP

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 10/25/2018 9:08:00 AM

Lab ID: 1810D96-007

Matrix: AQUEOUS

Received Date: 10/26/2018 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
Hexachlorobutadiene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
2-Hexanone	ND	10		µg/L	1	10/30/2018 10:25:55 PM	A55274
Isopropylbenzene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
4-Isopropyltoluene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
4-Methyl-2-pentanone	ND	10		µg/L	1	10/30/2018 10:25:55 PM	A55274
Methylene Chloride	ND	3.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
n-Butylbenzene	ND	3.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
n-Propylbenzene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
sec-Butylbenzene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
Styrene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
tert-Butylbenzene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
trans-1,2-DCE	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
Trichlorofluoromethane	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
Vinyl chloride	ND	1.0		µg/L	1	10/30/2018 10:25:55 PM	A55274
Xylenes, Total	ND	1.5		µg/L	1	10/30/2018 10:25:55 PM	A55274
Surr: 1,2-Dichloroethane-d4	86.3	70-130		%Rec	1	10/30/2018 10:25:55 PM	A55274
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	10/30/2018 10:25:55 PM	A55274
Surr: Dibromofluoromethane	90.8	70-130		%Rec	1	10/30/2018 10:25:55 PM	A55274
Surr: Toluene-d8	95.8	70-130		%Rec	1	10/30/2018 10:25:55 PM	A55274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1810D96

02-Nov-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Monthly Analysis

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: A55274		RunNo: 55274							
Prep Date:	Analysis Date: 10/30/2018		SeqNo: 1838959		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	93.5	70	130			
Toluene	19	1.0	20.00	0	94.4	70	130			
Chlorobenzene	20	1.0	20.00	0	99.9	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	101	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	84.6	70	130			
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.4	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	8.8		10.00		88.2	70	130			
Surr: Toluene-d8	9.7		10.00		97.5	70	130			

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: A55274		RunNo: 55274							
Prep Date:	Analysis Date: 10/30/2018		SeqNo: 1838973		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1810D96

02-Nov-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Monthly Analysis

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	A55274	RunNo:	55274					
Prep Date:		Analysis Date:	10/30/2018	SeqNo:	1838973	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1810D96

02-Nov-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Monthly Analysis

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: A55274		RunNo: 55274							
Prep Date:	Analysis Date: 10/30/2018		SeqNo: 1838973		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.4		10.00		84.4	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	9.1		10.00		90.5	70	130			
Surr: Toluene-d8	9.5		10.00		95.3	70	130			

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R55310		RunNo: 55310							
Prep Date:	Analysis Date: 10/31/2018		SeqNo: 1840083		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.6		10.00		85.8	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	8.9		10.00		88.9	70	130			
Surr: Toluene-d8	9.0		10.00		90.4	70	130			

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R55310		RunNo: 55310							
Prep Date:	Analysis Date: 10/31/2018		SeqNo: 1840101		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.4	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	9.1		10.00		90.8	70	130			
Surr: Toluene-d8	9.4		10.00		94.2	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

Client Name: City of Las Cruces

Work Order Number: 1810D96

RcptNo: 1

Received By: Victoria Zellar 10/26/2018 8:45:00 AM

Victoria Zellar

Completed By: Jazzmine Burkhead 10/26/2018 3:08:52 PM

Reviewed By: *VVZ 10/26/18*

Labeled by: *JO 10/26/18*

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes No
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes No

JO 10/26/18
 # of preserved bottles checked for pH. *8*
 (2 or >2 unless noted)
 Adjusted?
 Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.7	Good	Not Present			

Chain-of-Custody Record


Client: City of Las Cruces
Water Quality Laboratory
 Mailing Address: PO Box 2000
Las Cruces, N.M. 88004
 Phone #: 505-528-3604
 email or Fax#: 505-528-3604 / 505-528-3609

QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation
 NELAP Other _____
 EDD (Type) EXCEL

Turn-Around Time:
 Standard Rush
 Project Name:
JSP Joint Superfund Project
Monthly Analysis
 Project #:
02- JSP Briggs Walnut
 Project Manager:
Luis Guirado (505) 528-3609
 Sampler: Jadon Ryan
 On Ice: Yes No
 Sample Temperature: 4.7 (C) 10-3.7

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
10-25-18	0818	PENNING WATER	ELC-18-1025	8-40ml Vials	Hg, Cl ₂	1810096
	0825		ELC-27-181025			- 001
	0855		ELC-25A-181025			- 003
	0858		ELC-61-181025			- 004
	0901		ELC-62-181025			- 005
	0909		ELC-64-181025			- 006
10-25-18	0907	PENNING WATER	ELC-64-181025-DIR	8-40ml Vials	Hg, Cl ₂	- 007

Date: 10-25-18 Time: 1500
 Relinquished by: Jadon Ryan
 Date: 10-26-18 Time: 08:45
 Received by: Melvin Wilson
 Date: 10-26-18 Time: 08:45
 Remarks: Send Results to Luis Guirado @ lbg@crvus.org
Just in case, please email to lbg@crvus.org
Send invoice and bill Guirado

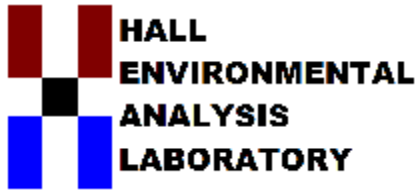


HALL ENVIRONMENTAL ANALYSIS LABORATORY
 www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA) VDC	8270 (Semi-VOA)	Air Bubbles (Y or N)
									X		
									X		
									X		
									X		
									X		
									X		

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

November 28, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP Joint Superfund Project Monthly Analysis

OrderNo.: 1811B37

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 2 sample(s) on 11/21/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1811B37

Date Reported: 11/28/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS1- 181120

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 11/20/2018 8:31:00 AM

Lab ID: 1811B37-001

Matrix: AIR

Received Date: 11/21/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
Toluene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
Ethylbenzene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
Naphthalene	ND	0.20		µg/L	1	11/27/2018 2:01:40 PM	A55906
1-Methylnaphthalene	ND	0.40		µg/L	1	11/27/2018 2:01:40 PM	A55906
2-Methylnaphthalene	ND	0.40		µg/L	1	11/27/2018 2:01:40 PM	A55906
Acetone	ND	1.0		µg/L	1	11/27/2018 2:01:40 PM	A55906
Bromobenzene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
Bromodichloromethane	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
Bromoform	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
Bromomethane	ND	0.20		µg/L	1	11/27/2018 2:01:40 PM	A55906
2-Butanone	ND	1.0		µg/L	1	11/27/2018 2:01:40 PM	A55906
Carbon disulfide	ND	1.0		µg/L	1	11/27/2018 2:01:40 PM	A55906
Carbon tetrachloride	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
Chlorobenzene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
Chloroethane	ND	0.20		µg/L	1	11/27/2018 2:01:40 PM	A55906
Chloroform	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
Chloromethane	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
2-Chlorotoluene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
4-Chlorotoluene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
cis-1,2-DCE	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	11/27/2018 2:01:40 PM	A55906
Dibromochloromethane	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
Dibromomethane	ND	0.20		µg/L	1	11/27/2018 2:01:40 PM	A55906
1,2-Dichlorobenzene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
1,3-Dichlorobenzene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
1,4-Dichlorobenzene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
Dichlorodifluoromethane	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
1,1-Dichloroethane	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
1,1-Dichloroethene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
1,2-Dichloropropane	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
1,3-Dichloropropane	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
2,2-Dichloropropane	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 1 of 4
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1811B37

Date Reported: 11/28/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS1- 181120

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 11/20/2018 8:31:00 AM

Lab ID: 1811B37-001

Matrix: AIR

Received Date: 11/21/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
Hexachlorobutadiene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
2-Hexanone	ND	1.0		µg/L	1	11/27/2018 2:01:40 PM	A55906
Isopropylbenzene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
4-Isopropyltoluene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
4-Methyl-2-pentanone	ND	1.0		µg/L	1	11/27/2018 2:01:40 PM	A55906
Methylene chloride	ND	0.30		µg/L	1	11/27/2018 2:01:40 PM	A55906
n-Butylbenzene	ND	0.30		µg/L	1	11/27/2018 2:01:40 PM	A55906
n-Propylbenzene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
sec-Butylbenzene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
Styrene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
tert-Butylbenzene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
Tetrachloroethene (PCE)	0.15	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
trans-1,2-DCE	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
1,1,1-Trichloroethane	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
1,1,2-Trichloroethane	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
Trichloroethene (TCE)	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
Trichlorofluoromethane	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
1,2,3-Trichloropropane	ND	0.20		µg/L	1	11/27/2018 2:01:40 PM	A55906
Vinyl chloride	ND	0.10		µg/L	1	11/27/2018 2:01:40 PM	A55906
Xylenes, Total	ND	0.15		µg/L	1	11/27/2018 2:01:40 PM	A55906
Surr: Dibromofluoromethane	90.1	70-130		%Rec	1	11/27/2018 2:01:40 PM	A55906
Surr: 1,2-Dichloroethane-d4	83.3	70-130		%Rec	1	11/27/2018 2:01:40 PM	A55906
Surr: Toluene-d8	87.8	70-130		%Rec	1	11/27/2018 2:01:40 PM	A55906
Surr: 4-Bromofluorobenzene	89.1	70-130		%Rec	1	11/27/2018 2:01:40 PM	A55906

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1811B37

Date Reported: 11/28/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS2- 181120

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 11/20/2018 8:33:00 AM

Lab ID: 1811B37-002

Matrix: AIR

Received Date: 11/21/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
Toluene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
Ethylbenzene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
Naphthalene	ND	0.20		µg/L	1	11/27/2018 2:31:27 PM	A55906
1-Methylnaphthalene	ND	0.40		µg/L	1	11/27/2018 2:31:27 PM	A55906
2-Methylnaphthalene	ND	0.40		µg/L	1	11/27/2018 2:31:27 PM	A55906
Acetone	ND	1.0		µg/L	1	11/27/2018 2:31:27 PM	A55906
Bromobenzene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
Bromodichloromethane	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
Bromoform	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
Bromomethane	ND	0.20		µg/L	1	11/27/2018 2:31:27 PM	A55906
2-Butanone	ND	1.0		µg/L	1	11/27/2018 2:31:27 PM	A55906
Carbon disulfide	ND	1.0		µg/L	1	11/27/2018 2:31:27 PM	A55906
Carbon tetrachloride	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
Chlorobenzene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
Chloroethane	ND	0.20		µg/L	1	11/27/2018 2:31:27 PM	A55906
Chloroform	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
Chloromethane	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
2-Chlorotoluene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
4-Chlorotoluene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
cis-1,2-DCE	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	11/27/2018 2:31:27 PM	A55906
Dibromochloromethane	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
Dibromomethane	ND	0.20		µg/L	1	11/27/2018 2:31:27 PM	A55906
1,2-Dichlorobenzene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
1,3-Dichlorobenzene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
1,4-Dichlorobenzene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
Dichlorodifluoromethane	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
1,1-Dichloroethane	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
1,1-Dichloroethene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
1,2-Dichloropropane	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
1,3-Dichloropropane	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
2,2-Dichloropropane	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 3 of 4
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1811B37

Date Reported: 11/28/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS2- 181120

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 11/20/2018 8:33:00 AM

Lab ID: 1811B37-002

Matrix: AIR

Received Date: 11/21/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
Hexachlorobutadiene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
2-Hexanone	ND	1.0		µg/L	1	11/27/2018 2:31:27 PM	A55906
Isopropylbenzene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
4-Isopropyltoluene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
4-Methyl-2-pentanone	ND	1.0		µg/L	1	11/27/2018 2:31:27 PM	A55906
Methylene chloride	ND	0.30		µg/L	1	11/27/2018 2:31:27 PM	A55906
n-Butylbenzene	ND	0.30		µg/L	1	11/27/2018 2:31:27 PM	A55906
n-Propylbenzene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
sec-Butylbenzene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
Styrene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
tert-Butylbenzene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
Tetrachloroethene (PCE)	0.14	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
trans-1,2-DCE	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
1,1,1-Trichloroethane	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
1,1,2-Trichloroethane	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
Trichloroethene (TCE)	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
Trichlorofluoromethane	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
1,2,3-Trichloropropane	ND	0.20		µg/L	1	11/27/2018 2:31:27 PM	A55906
Vinyl chloride	ND	0.10		µg/L	1	11/27/2018 2:31:27 PM	A55906
Xylenes, Total	ND	0.15		µg/L	1	11/27/2018 2:31:27 PM	A55906
Surr: Dibromofluoromethane	93.8	70-130		%Rec	1	11/27/2018 2:31:27 PM	A55906
Surr: 1,2-Dichloroethane-d4	85.3	70-130		%Rec	1	11/27/2018 2:31:27 PM	A55906
Surr: Toluene-d8	89.6	70-130		%Rec	1	11/27/2018 2:31:27 PM	A55906
Surr: 4-Bromofluorobenzene	93.1	70-130		%Rec	1	11/27/2018 2:31:27 PM	A55906

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: City of Las Cruces Work Order Number: 1811B37 RootNo: 1

Received By: Victoria Zellar 11/21/2018 8:40:00 AM *Victoria Zellar*
 Completed By: Jazzmine Burkhead 11/21/2018 10:05:12 AM
 Reviewed By: *SAB 11/21/18*
 Labeled by: *DAD 11/21/18*

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C? Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes No
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH:
 (<2 or >12 unless noted)
 Adjusted?
 Checked by: *DAD 11/21/18*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	NA	Good	Not Present			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
 Mailing Address: P.O. Box 28000
Las Cruces, NM 88004
 Phone #: 575-529-3604
 email or Fax#: 575-529-3604 / 575-529-3604

Turn-Around Time: Standard Rush
 Project Name: WSP Joint Special Fund Project Monthly Analysis
 Project #: CIC-058
 Project Manager: Guerra (575) 528-3609
 Sampler: Jedwin Ryan
 On Ice: Yes No
 Sample Temperature: N/A

QA/QC Package: Standard Level 4 (Full Validation)
 Accreditation: NELAP Other
 EDD (Type) EXCEL

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMBs (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAHs (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCBs	8260B (VOA) VOC	8270 (Semi-VOA)	Air Bubbles (Y or N)
11/20/18	0731	AIR	CIC ASE-18112D	Tuber Bag	NONE	1811B37									X			
11/20/18	0733	AIR	CIC ASE-18112D	Tuber Bag	NONE	-002									X			
11/20/18	1500																	
Date	Time	Relinquished by:	Relinquished by:	Received by:	FEDEX Date	Time	Remarks: <u>Send Results to Luis Guerra, guerrerol@las-cruces.org</u> <u>Jedwin Ryan 11/21/18 8:40</u> <u>Send via to C/O Law's Group</u> <u>*Send an "copy" - vuz 11/21/18</u>											

If necessary, samples submitted to Hill Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly noted on the analytical report.



HALL ENVIRONMENTAL ANALYSIS LABORATORY
 www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

November 28, 2018

Luis Guerra

City of Las Cruces

PO Box 20000

Las Cruces, NM 88004

TEL: (575) 528-3604

FAX

RE: JSP Joint Superfund Project Monthly Analysis

OrderNo.: 1811B42

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 11/21/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1811B42

Date Reported: 11/28/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC18-181120

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 11/20/2018 8:12:00 AM

Lab ID: 1811B42-001

Matrix: AQUEOUS

Received Date: 11/21/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
Toluene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
Ethylbenzene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
Naphthalene	ND	2.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
1-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
2-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
Acetone	ND	10		µg/L	1	11/28/2018 3:41:00 AM	B55900
Bromobenzene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
Bromodichloromethane	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
Bromoform	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
Bromomethane	ND	3.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
2-Butanone	ND	10		µg/L	1	11/28/2018 3:41:00 AM	B55900
Carbon disulfide	ND	10		µg/L	1	11/28/2018 3:41:00 AM	B55900
Carbon Tetrachloride	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
Chlorobenzene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
Chloroethane	ND	2.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
Chloroform	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
Chloromethane	ND	3.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
2-Chlorotoluene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
4-Chlorotoluene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
cis-1,2-DCE	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
Dibromochloromethane	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
Dibromomethane	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
1,1-Dichloroethane	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
1,1-Dichloroethene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
1,2-Dichloropropane	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
1,3-Dichloropropane	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
2,2-Dichloropropane	ND	2.0		µg/L	1	11/28/2018 3:41:00 AM	B55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1811B42

Date Reported: 11/28/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC18-181120

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 11/20/2018 8:12:00 AM

Lab ID: 1811B42-001

Matrix: AQUEOUS

Received Date: 11/21/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
Hexachlorobutadiene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
2-Hexanone	ND	10		µg/L	1	11/28/2018 3:41:00 AM	B55900
Isopropylbenzene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
4-Isopropyltoluene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
4-Methyl-2-pentanone	ND	10		µg/L	1	11/28/2018 3:41:00 AM	B55900
Methylene Chloride	ND	3.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
n-Butylbenzene	ND	3.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
n-Propylbenzene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
sec-Butylbenzene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
Styrene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
tert-Butylbenzene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
Tetrachloroethene (PCE)	4.6	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
trans-1,2-DCE	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
Trichlorofluoromethane	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
Vinyl chloride	ND	1.0		µg/L	1	11/28/2018 3:41:00 AM	B55900
Xylenes, Total	ND	1.5		µg/L	1	11/28/2018 3:41:00 AM	B55900
Surr: 1,2-Dichloroethane-d4	98.2	70-130		%Rec	1	11/28/2018 3:41:00 AM	B55900
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	11/28/2018 3:41:00 AM	B55900
Surr: Dibromofluoromethane	93.7	70-130		%Rec	1	11/28/2018 3:41:00 AM	B55900
Surr: Toluene-d8	91.1	70-130		%Rec	1	11/28/2018 3:41:00 AM	B55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1811B42

Date Reported: 11/28/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC27-181120

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 11/20/2018 8:50:00 AM

Lab ID: 1811B42-002

Matrix: AQUEOUS

Received Date: 11/21/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
Toluene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
Ethylbenzene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
Naphthalene	ND	2.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
1-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
2-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
Acetone	ND	10		µg/L	1	11/28/2018 4:05:00 AM	B55900
Bromobenzene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
Bromodichloromethane	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
Bromoform	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
Bromomethane	ND	3.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
2-Butanone	ND	10		µg/L	1	11/28/2018 4:05:00 AM	B55900
Carbon disulfide	ND	10		µg/L	1	11/28/2018 4:05:00 AM	B55900
Carbon Tetrachloride	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
Chlorobenzene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
Chloroethane	ND	2.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
Chloroform	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
Chloromethane	ND	3.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
2-Chlorotoluene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
4-Chlorotoluene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
cis-1,2-DCE	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
Dibromochloromethane	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
Dibromomethane	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
1,1-Dichloroethane	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
1,1-Dichloroethene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
1,2-Dichloropropane	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
1,3-Dichloropropane	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
2,2-Dichloropropane	ND	2.0		µg/L	1	11/28/2018 4:05:00 AM	B55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1811B42

Date Reported: 11/28/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC27-181120

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 11/20/2018 8:50:00 AM

Lab ID: 1811B42-002

Matrix: AQUEOUS

Received Date: 11/21/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
Hexachlorobutadiene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
2-Hexanone	ND	10		µg/L	1	11/28/2018 4:05:00 AM	B55900
Isopropylbenzene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
4-Isopropyltoluene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
4-Methyl-2-pentanone	ND	10		µg/L	1	11/28/2018 4:05:00 AM	B55900
Methylene Chloride	ND	3.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
n-Butylbenzene	ND	3.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
n-Propylbenzene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
sec-Butylbenzene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
Styrene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
tert-Butylbenzene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
Tetrachloroethene (PCE)	14	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
trans-1,2-DCE	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
Trichlorofluoromethane	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
Vinyl chloride	ND	1.0		µg/L	1	11/28/2018 4:05:00 AM	B55900
Xylenes, Total	ND	1.5		µg/L	1	11/28/2018 4:05:00 AM	B55900
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	11/28/2018 4:05:00 AM	B55900
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	11/28/2018 4:05:00 AM	B55900
Surr: Dibromofluoromethane	97.2	70-130		%Rec	1	11/28/2018 4:05:00 AM	B55900
Surr: Toluene-d8	97.3	70-130		%Rec	1	11/28/2018 4:05:00 AM	B55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1811B42

Date Reported: 11/28/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCIS1-181120

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 11/20/2018 8:19:00 AM

Lab ID: 1811B42-003

Matrix: AQUEOUS

Received Date: 11/21/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
Toluene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
Ethylbenzene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
Naphthalene	ND	2.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
1-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
2-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
Acetone	ND	10		µg/L	1	11/28/2018 4:28:00 AM	B55900
Bromobenzene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
Bromodichloromethane	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
Bromoform	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
Bromomethane	ND	3.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
2-Butanone	ND	10		µg/L	1	11/28/2018 4:28:00 AM	B55900
Carbon disulfide	ND	10		µg/L	1	11/28/2018 4:28:00 AM	B55900
Carbon Tetrachloride	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
Chlorobenzene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
Chloroethane	ND	2.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
Chloroform	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
Chloromethane	ND	3.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
2-Chlorotoluene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
4-Chlorotoluene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
cis-1,2-DCE	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
Dibromochloromethane	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
Dibromomethane	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
1,1-Dichloroethane	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
1,1-Dichloroethene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
1,2-Dichloropropane	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
1,3-Dichloropropane	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
2,2-Dichloropropane	ND	2.0		µg/L	1	11/28/2018 4:28:00 AM	B55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1811B42

Date Reported: 11/28/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCIS1-181120

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 11/20/2018 8:19:00 AM

Lab ID: 1811B42-003

Matrix: AQUEOUS

Received Date: 11/21/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
Hexachlorobutadiene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
2-Hexanone	ND	10		µg/L	1	11/28/2018 4:28:00 AM	B55900
Isopropylbenzene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
4-Isopropyltoluene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
4-Methyl-2-pentanone	ND	10		µg/L	1	11/28/2018 4:28:00 AM	B55900
Methylene Chloride	ND	3.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
n-Butylbenzene	ND	3.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
n-Propylbenzene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
sec-Butylbenzene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
Styrene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
tert-Butylbenzene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
Tetrachloroethene (PCE)	12	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
trans-1,2-DCE	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
Trichlorofluoromethane	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
Vinyl chloride	ND	1.0		µg/L	1	11/28/2018 4:28:00 AM	B55900
Xylenes, Total	ND	1.5		µg/L	1	11/28/2018 4:28:00 AM	B55900
Surr: 1,2-Dichloroethane-d4	99.3	70-130		%Rec	1	11/28/2018 4:28:00 AM	B55900
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	11/28/2018 4:28:00 AM	B55900
Surr: Dibromofluoromethane	95.9	70-130		%Rec	1	11/28/2018 4:28:00 AM	B55900
Surr: Toluene-d8	95.8	70-130		%Rec	1	11/28/2018 4:28:00 AM	B55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1811B42

Date Reported: 11/28/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCIS1-181120 Dup

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 11/20/2018 8:19:00 AM

Lab ID: 1811B42-004

Matrix: AQUEOUS

Received Date: 11/21/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
Toluene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
Ethylbenzene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
Naphthalene	ND	2.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
1-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
2-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
Acetone	ND	10		µg/L	1	11/28/2018 4:51:00 AM	B55900
Bromobenzene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
Bromodichloromethane	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
Bromoform	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
Bromomethane	ND	3.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
2-Butanone	ND	10		µg/L	1	11/28/2018 4:51:00 AM	B55900
Carbon disulfide	ND	10		µg/L	1	11/28/2018 4:51:00 AM	B55900
Carbon Tetrachloride	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
Chlorobenzene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
Chloroethane	ND	2.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
Chloroform	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
Chloromethane	ND	3.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
2-Chlorotoluene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
4-Chlorotoluene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
cis-1,2-DCE	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
Dibromochloromethane	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
Dibromomethane	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
1,1-Dichloroethane	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
1,1-Dichloroethene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
1,2-Dichloropropane	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
1,3-Dichloropropane	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
2,2-Dichloropropane	ND	2.0		µg/L	1	11/28/2018 4:51:00 AM	B55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1811B42

Date Reported: 11/28/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCIS1-181120 Dup

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 11/20/2018 8:19:00 AM

Lab ID: 1811B42-004

Matrix: AQUEOUS

Received Date: 11/21/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
Hexachlorobutadiene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
2-Hexanone	ND	10		µg/L	1	11/28/2018 4:51:00 AM	B55900
Isopropylbenzene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
4-Isopropyltoluene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
4-Methyl-2-pentanone	ND	10		µg/L	1	11/28/2018 4:51:00 AM	B55900
Methylene Chloride	ND	3.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
n-Butylbenzene	ND	3.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
n-Propylbenzene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
sec-Butylbenzene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
Styrene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
tert-Butylbenzene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
Tetrachloroethene (PCE)	11	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
trans-1,2-DCE	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
Trichlorofluoromethane	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
Vinyl chloride	ND	1.0		µg/L	1	11/28/2018 4:51:00 AM	B55900
Xylenes, Total	ND	1.5		µg/L	1	11/28/2018 4:51:00 AM	B55900
Surr: 1,2-Dichloroethane-d4	98.0	70-130		%Rec	1	11/28/2018 4:51:00 AM	B55900
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	11/28/2018 4:51:00 AM	B55900
Surr: Dibromofluoromethane	98.4	70-130		%Rec	1	11/28/2018 4:51:00 AM	B55900
Surr: Toluene-d8	93.4	70-130		%Rec	1	11/28/2018 4:51:00 AM	B55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1811B42

Date Reported: 11/28/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCC1-181120

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 11/20/2018 8:22:00 AM

Lab ID: 1811B42-005

Matrix: AQUEOUS

Received Date: 11/21/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
Toluene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
Ethylbenzene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
Naphthalene	ND	2.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
1-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
2-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
Acetone	ND	10		µg/L	1	11/28/2018 5:14:00 AM	B55900
Bromobenzene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
Bromodichloromethane	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
Bromoform	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
Bromomethane	ND	3.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
2-Butanone	ND	10		µg/L	1	11/28/2018 5:14:00 AM	B55900
Carbon disulfide	ND	10		µg/L	1	11/28/2018 5:14:00 AM	B55900
Carbon Tetrachloride	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
Chlorobenzene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
Chloroethane	ND	2.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
Chloroform	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
Chloromethane	ND	3.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
2-Chlorotoluene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
4-Chlorotoluene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
cis-1,2-DCE	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
Dibromochloromethane	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
Dibromomethane	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
1,1-Dichloroethane	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
1,1-Dichloroethene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
1,2-Dichloropropane	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
1,3-Dichloropropane	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
2,2-Dichloropropane	ND	2.0		µg/L	1	11/28/2018 5:14:00 AM	B55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1811B42

Date Reported: 11/28/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCC1-181120

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 11/20/2018 8:22:00 AM

Lab ID: 1811B42-005

Matrix: AQUEOUS

Received Date: 11/21/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
Hexachlorobutadiene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
2-Hexanone	ND	10		µg/L	1	11/28/2018 5:14:00 AM	B55900
Isopropylbenzene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
4-Isopropyltoluene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
4-Methyl-2-pentanone	ND	10		µg/L	1	11/28/2018 5:14:00 AM	B55900
Methylene Chloride	ND	3.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
n-Butylbenzene	ND	3.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
n-Propylbenzene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
sec-Butylbenzene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
Styrene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
tert-Butylbenzene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
trans-1,2-DCE	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
Trichlorofluoromethane	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
Vinyl chloride	ND	1.0		µg/L	1	11/28/2018 5:14:00 AM	B55900
Xylenes, Total	ND	1.5		µg/L	1	11/28/2018 5:14:00 AM	B55900
Surr: 1,2-Dichloroethane-d4	97.1	70-130		%Rec	1	11/28/2018 5:14:00 AM	B55900
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	11/28/2018 5:14:00 AM	B55900
Surr: Dibromofluoromethane	97.2	70-130		%Rec	1	11/28/2018 5:14:00 AM	B55900
Surr: Toluene-d8	94.7	70-130		%Rec	1	11/28/2018 5:14:00 AM	B55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1811B42

Date Reported: 11/28/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCC2-181120

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 11/20/2018 8:24:00 AM

Lab ID: 1811B42-006

Matrix: AQUEOUS

Received Date: 11/21/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
Toluene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
Ethylbenzene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
Naphthalene	ND	2.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
1-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
2-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
Acetone	ND	10		µg/L	1	11/28/2018 5:38:00 AM	B55900
Bromobenzene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
Bromodichloromethane	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
Bromoform	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
Bromomethane	ND	3.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
2-Butanone	ND	10		µg/L	1	11/28/2018 5:38:00 AM	B55900
Carbon disulfide	ND	10		µg/L	1	11/28/2018 5:38:00 AM	B55900
Carbon Tetrachloride	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
Chlorobenzene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
Chloroethane	ND	2.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
Chloroform	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
Chloromethane	ND	3.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
2-Chlorotoluene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
4-Chlorotoluene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
cis-1,2-DCE	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
Dibromochloromethane	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
Dibromomethane	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
1,1-Dichloroethane	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
1,1-Dichloroethene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
1,2-Dichloropropane	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
1,3-Dichloropropane	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
2,2-Dichloropropane	ND	2.0		µg/L	1	11/28/2018 5:38:00 AM	B55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1811B42

Date Reported: 11/28/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCC2-181120

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 11/20/2018 8:24:00 AM

Lab ID: 1811B42-006

Matrix: AQUEOUS

Received Date: 11/21/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
Hexachlorobutadiene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
2-Hexanone	ND	10		µg/L	1	11/28/2018 5:38:00 AM	B55900
Isopropylbenzene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
4-Isopropyltoluene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
4-Methyl-2-pentanone	ND	10		µg/L	1	11/28/2018 5:38:00 AM	B55900
Methylene Chloride	ND	3.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
n-Butylbenzene	ND	3.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
n-Propylbenzene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
sec-Butylbenzene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
Styrene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
tert-Butylbenzene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
trans-1,2-DCE	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
Trichlorofluoromethane	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
Vinyl chloride	ND	1.0		µg/L	1	11/28/2018 5:38:00 AM	B55900
Xylenes, Total	ND	1.5		µg/L	1	11/28/2018 5:38:00 AM	B55900
Surr: 1,2-Dichloroethane-d4	98.7	70-130		%Rec	1	11/28/2018 5:38:00 AM	B55900
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	11/28/2018 5:38:00 AM	B55900
Surr: Dibromofluoromethane	93.0	70-130		%Rec	1	11/28/2018 5:38:00 AM	B55900
Surr: Toluene-d8	95.9	70-130		%Rec	1	11/28/2018 5:38:00 AM	B55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1811B42

Date Reported: 11/28/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCES1-181120

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 11/20/2018 8:26:00 AM

Lab ID: 1811B42-007

Matrix: AQUEOUS

Received Date: 11/21/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
Toluene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
Ethylbenzene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
Naphthalene	ND	2.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
1-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
2-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
Acetone	ND	10		µg/L	1	11/28/2018 6:01:00 AM	B55900
Bromobenzene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
Bromodichloromethane	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
Bromoform	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
Bromomethane	ND	3.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
2-Butanone	ND	10		µg/L	1	11/28/2018 6:01:00 AM	B55900
Carbon disulfide	ND	10		µg/L	1	11/28/2018 6:01:00 AM	B55900
Carbon Tetrachloride	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
Chlorobenzene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
Chloroethane	ND	2.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
Chloroform	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
Chloromethane	ND	3.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
2-Chlorotoluene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
4-Chlorotoluene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
cis-1,2-DCE	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
Dibromochloromethane	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
Dibromomethane	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
1,1-Dichloroethane	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
1,1-Dichloroethene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
1,2-Dichloropropane	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
1,3-Dichloropropane	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
2,2-Dichloropropane	ND	2.0		µg/L	1	11/28/2018 6:01:00 AM	B55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1811B42

Date Reported: 11/28/2018

CLIENT: City of Las Cruces

Client Sample ID: CLCES1-181120

Project: JSP Joint Superfund Project Monthly Ana

Collection Date: 11/20/2018 8:26:00 AM

Lab ID: 1811B42-007

Matrix: AQUEOUS

Received Date: 11/21/2018 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
Hexachlorobutadiene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
2-Hexanone	ND	10		µg/L	1	11/28/2018 6:01:00 AM	B55900
Isopropylbenzene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
4-Isopropyltoluene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
4-Methyl-2-pentanone	ND	10		µg/L	1	11/28/2018 6:01:00 AM	B55900
Methylene Chloride	ND	3.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
n-Butylbenzene	ND	3.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
n-Propylbenzene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
sec-Butylbenzene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
Styrene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
tert-Butylbenzene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
trans-1,2-DCE	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
Trichlorofluoromethane	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
Vinyl chloride	ND	1.0		µg/L	1	11/28/2018 6:01:00 AM	B55900
Xylenes, Total	ND	1.5		µg/L	1	11/28/2018 6:01:00 AM	B55900
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	11/28/2018 6:01:00 AM	B55900
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	11/28/2018 6:01:00 AM	B55900
Surr: Dibromofluoromethane	100	70-130		%Rec	1	11/28/2018 6:01:00 AM	B55900
Surr: Toluene-d8	94.7	70-130		%Rec	1	11/28/2018 6:01:00 AM	B55900

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1811B42

28-Nov-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Monthly Analysis

Sample ID 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: B55900		RunNo: 55900							
Prep Date:	Analysis Date: 11/27/2018		SeqNo: 1864882		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	112	70	130			
Toluene	19	1.0	20.00	0	95.9	70	130			
Chlorobenzene	19	1.0	20.00	0	94.8	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	106	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	106	70	130			
Surr: 1,2-Dichloroethane-d4	12		10.00		116	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	9.6		10.00		95.8	70	130			

Sample ID rb2	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: B55900		RunNo: 55900							
Prep Date:	Analysis Date: 11/27/2018		SeqNo: 1864883		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1811B42

28-Nov-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Monthly Analysis

Sample ID	rb2	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	B55900	RunNo:	55900					
Prep Date:		Analysis Date:	11/27/2018	SeqNo:	1864883	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1811B42

28-Nov-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Monthly Analysis

Sample ID: rb2	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: B55900		RunNo: 55900							
Prep Date:	Analysis Date: 11/27/2018		SeqNo: 1864883		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.7		10.00		97.0	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |



Hall Environmental Analysis Laboratory
 4901 Havens NE
 Albuquerque, NM 87109
 TEL: 505-345-3973 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: City of Las Cruces Work Order Number: 1811B42 Trip No: 1

Received By: Victoria Zellar 11/21/2018 8:40:00 AM *Victoria Zellar*
 Completed By: Jazzmine Burkhead 11/21/2018 10:09:38 AM
 Reviewed By: *As 11/21/18*
 Labeled by: *JAB 11/21/18*

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No # of preserved bottles checked for pH: *2 (12/18 unless noted)*
 11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes No
 12. Are matrices correctly identified on Chain of Custody? Yes No Adjusted?
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes No Checked by: *JAB 11/21/18*

Special Handling (if applicable)

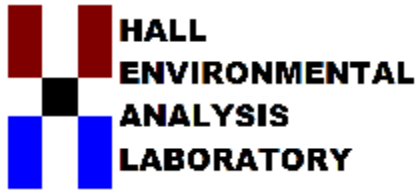
15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.3	Good	Not Present			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 27, 2018

Luis Guerra
City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3604
FAX

RE: JSP Joint Superfund Project Monthly Analysis

OrderNo.: 1812B62

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 12/20/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812B62

Date Reported: 12/27/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-181219

Project: JSP Joint Superfund Project Monthly An

Collection Date: 12/19/2018 8:10:00 AM

Lab ID: 1812B62-001

Matrix: AQUEOUS

Received Date: 12/20/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
Toluene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
Ethylbenzene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
Naphthalene	ND	2.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
1-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
2-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
Acetone	ND	10		µg/L	1	12/21/2018 3:47:00 PM	R56574
Bromobenzene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
Bromodichloromethane	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
Bromoform	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
Bromomethane	ND	3.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
2-Butanone	ND	10		µg/L	1	12/21/2018 3:47:00 PM	R56574
Carbon disulfide	ND	10		µg/L	1	12/21/2018 3:47:00 PM	R56574
Carbon Tetrachloride	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
Chlorobenzene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
Chloroethane	ND	2.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
Chloroform	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
Chloromethane	ND	3.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
2-Chlorotoluene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
4-Chlorotoluene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
cis-1,2-DCE	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
Dibromochloromethane	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
Dibromomethane	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
1,1-Dichloroethane	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
1,1-Dichloroethene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
1,2-Dichloropropane	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
1,3-Dichloropropane	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
2,2-Dichloropropane	ND	2.0		µg/L	1	12/21/2018 3:47:00 PM	R56574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812B62

Date Reported: 12/27/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-181219

Project: JSP Joint Superfund Project Monthly An

Collection Date: 12/19/2018 8:10:00 AM

Lab ID: 1812B62-001

Matrix: AQUEOUS

Received Date: 12/20/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
Hexachlorobutadiene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
2-Hexanone	ND	10		µg/L	1	12/21/2018 3:47:00 PM	R56574
Isopropylbenzene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
4-Isopropyltoluene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
4-Methyl-2-pentanone	ND	10		µg/L	1	12/21/2018 3:47:00 PM	R56574
Methylene Chloride	ND	3.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
n-Butylbenzene	ND	3.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
n-Propylbenzene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
sec-Butylbenzene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
Styrene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
tert-Butylbenzene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
Tetrachloroethene (PCE)	7.5	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
trans-1,2-DCE	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
Trichlorofluoromethane	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
Vinyl chloride	ND	1.0		µg/L	1	12/21/2018 3:47:00 PM	R56574
Xylenes, Total	ND	1.5		µg/L	1	12/21/2018 3:47:00 PM	R56574
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	12/21/2018 3:47:00 PM	R56574
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	12/21/2018 3:47:00 PM	R56574
Surr: Dibromofluoromethane	98.7	70-130		%Rec	1	12/21/2018 3:47:00 PM	R56574
Surr: Toluene-d8	98.6	70-130		%Rec	1	12/21/2018 3:47:00 PM	R56574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812B62

Date Reported: 12/27/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-181219 Dup

Project: JSP Joint Superfund Project Monthly An

Collection Date: 12/19/2018 8:10:00 AM

Lab ID: 1812B62-002

Matrix: AQUEOUS

Received Date: 12/20/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
Toluene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
Ethylbenzene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
Naphthalene	ND	2.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
1-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
2-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
Acetone	ND	10		µg/L	1	12/21/2018 4:11:00 PM	R56574
Bromobenzene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
Bromodichloromethane	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
Bromoform	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
Bromomethane	ND	3.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
2-Butanone	ND	10		µg/L	1	12/21/2018 4:11:00 PM	R56574
Carbon disulfide	ND	10		µg/L	1	12/21/2018 4:11:00 PM	R56574
Carbon Tetrachloride	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
Chlorobenzene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
Chloroethane	ND	2.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
Chloroform	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
Chloromethane	ND	3.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
2-Chlorotoluene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
4-Chlorotoluene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
cis-1,2-DCE	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
Dibromochloromethane	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
Dibromomethane	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
1,1-Dichloroethane	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
1,1-Dichloroethene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
1,2-Dichloropropane	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
1,3-Dichloropropane	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
2,2-Dichloropropane	ND	2.0		µg/L	1	12/21/2018 4:11:00 PM	R56574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812B62

Date Reported: 12/27/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 18-181219 Dup

Project: JSP Joint Superfund Project Monthly An

Collection Date: 12/19/2018 8:10:00 AM

Lab ID: 1812B62-002

Matrix: AQUEOUS

Received Date: 12/20/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
Hexachlorobutadiene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
2-Hexanone	ND	10		µg/L	1	12/21/2018 4:11:00 PM	R56574
Isopropylbenzene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
4-Isopropyltoluene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
4-Methyl-2-pentanone	ND	10		µg/L	1	12/21/2018 4:11:00 PM	R56574
Methylene Chloride	ND	3.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
n-Butylbenzene	ND	3.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
n-Propylbenzene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
sec-Butylbenzene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
Styrene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
tert-Butylbenzene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
Tetrachloroethene (PCE)	7.3	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
trans-1,2-DCE	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
Trichlorofluoromethane	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
Vinyl chloride	ND	1.0		µg/L	1	12/21/2018 4:11:00 PM	R56574
Xylenes, Total	ND	1.5		µg/L	1	12/21/2018 4:11:00 PM	R56574
Surr: 1,2-Dichloroethane-d4	99.5	70-130		%Rec	1	12/21/2018 4:11:00 PM	R56574
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	12/21/2018 4:11:00 PM	R56574
Surr: Dibromofluoromethane	98.2	70-130		%Rec	1	12/21/2018 4:11:00 PM	R56574
Surr: Toluene-d8	98.3	70-130		%Rec	1	12/21/2018 4:11:00 PM	R56574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812B62

Date Reported: 12/27/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-181219

Project: JSP Joint Superfund Project Monthly An

Collection Date: 12/19/2018 8:19:00 AM

Lab ID: 1812B62-003

Matrix: AQUEOUS

Received Date: 12/20/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
Toluene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
Ethylbenzene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
Naphthalene	ND	2.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
1-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
2-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
Acetone	ND	10		µg/L	1	12/21/2018 4:35:00 PM	R56574
Bromobenzene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
Bromodichloromethane	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
Bromoform	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
Bromomethane	ND	3.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
2-Butanone	ND	10		µg/L	1	12/21/2018 4:35:00 PM	R56574
Carbon disulfide	ND	10		µg/L	1	12/21/2018 4:35:00 PM	R56574
Carbon Tetrachloride	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
Chlorobenzene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
Chloroethane	ND	2.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
Chloroform	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
Chloromethane	ND	3.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
2-Chlorotoluene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
4-Chlorotoluene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
cis-1,2-DCE	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
Dibromochloromethane	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
Dibromomethane	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
1,1-Dichloroethane	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
1,1-Dichloroethene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
1,2-Dichloropropane	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
1,3-Dichloropropane	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
2,2-Dichloropropane	ND	2.0		µg/L	1	12/21/2018 4:35:00 PM	R56574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812B62

Date Reported: 12/27/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC IS1-181219

Project: JSP Joint Superfund Project Monthly An

Collection Date: 12/19/2018 8:19:00 AM

Lab ID: 1812B62-003

Matrix: AQUEOUS

Received Date: 12/20/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
Hexachlorobutadiene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
2-Hexanone	ND	10		µg/L	1	12/21/2018 4:35:00 PM	R56574
Isopropylbenzene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
4-Isopropyltoluene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
4-Methyl-2-pentanone	ND	10		µg/L	1	12/21/2018 4:35:00 PM	R56574
Methylene Chloride	ND	3.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
n-Butylbenzene	ND	3.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
n-Propylbenzene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
sec-Butylbenzene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
Styrene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
tert-Butylbenzene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
Tetrachloroethene (PCE)	11	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
trans-1,2-DCE	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
Trichlorofluoromethane	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
Vinyl chloride	ND	1.0		µg/L	1	12/21/2018 4:35:00 PM	R56574
Xylenes, Total	ND	1.5		µg/L	1	12/21/2018 4:35:00 PM	R56574
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	12/21/2018 4:35:00 PM	R56574
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	12/21/2018 4:35:00 PM	R56574
Surr: Dibromofluoromethane	96.5	70-130		%Rec	1	12/21/2018 4:35:00 PM	R56574
Surr: Toluene-d8	97.9	70-130		%Rec	1	12/21/2018 4:35:00 PM	R56574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812B62

Date Reported: 12/27/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-181219

Project: JSP Joint Superfund Project Monthly An

Collection Date: 12/19/2018 8:52:00 AM

Lab ID: 1812B62-004

Matrix: AQUEOUS

Received Date: 12/20/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
Toluene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
Ethylbenzene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
Naphthalene	ND	2.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
1-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
2-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
Acetone	ND	10		µg/L	1	12/21/2018 4:59:00 PM	R56574
Bromobenzene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
Bromodichloromethane	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
Bromoform	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
Bromomethane	ND	3.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
2-Butanone	ND	10		µg/L	1	12/21/2018 4:59:00 PM	R56574
Carbon disulfide	ND	10		µg/L	1	12/21/2018 4:59:00 PM	R56574
Carbon Tetrachloride	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
Chlorobenzene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
Chloroethane	ND	2.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
Chloroform	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
Chloromethane	ND	3.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
2-Chlorotoluene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
4-Chlorotoluene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
cis-1,2-DCE	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
Dibromochloromethane	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
Dibromomethane	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
1,1-Dichloroethane	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
1,1-Dichloroethene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
1,2-Dichloropropane	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
1,3-Dichloropropane	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
2,2-Dichloropropane	ND	2.0		µg/L	1	12/21/2018 4:59:00 PM	R56574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812B62

Date Reported: 12/27/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC 27-181219

Project: JSP Joint Superfund Project Monthly An

Collection Date: 12/19/2018 8:52:00 AM

Lab ID: 1812B62-004

Matrix: AQUEOUS

Received Date: 12/20/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
Hexachlorobutadiene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
2-Hexanone	ND	10		µg/L	1	12/21/2018 4:59:00 PM	R56574
Isopropylbenzene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
4-Isopropyltoluene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
4-Methyl-2-pentanone	ND	10		µg/L	1	12/21/2018 4:59:00 PM	R56574
Methylene Chloride	ND	3.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
n-Butylbenzene	ND	3.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
n-Propylbenzene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
sec-Butylbenzene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
Styrene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
tert-Butylbenzene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
Tetrachloroethene (PCE)	14	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
trans-1,2-DCE	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
Trichlorofluoromethane	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
Vinyl chloride	ND	1.0		µg/L	1	12/21/2018 4:59:00 PM	R56574
Xylenes, Total	ND	1.5		µg/L	1	12/21/2018 4:59:00 PM	R56574
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	12/21/2018 4:59:00 PM	R56574
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	12/21/2018 4:59:00 PM	R56574
Surr: Dibromofluoromethane	99.1	70-130		%Rec	1	12/21/2018 4:59:00 PM	R56574
Surr: Toluene-d8	98.5	70-130		%Rec	1	12/21/2018 4:59:00 PM	R56574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812B62

Date Reported: 12/27/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-181219

Project: JSP Joint Superfund Project Monthly An

Collection Date: 12/19/2018 8:22:00 AM

Lab ID: 1812B62-005

Matrix: AQUEOUS

Received Date: 12/20/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
Toluene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
Ethylbenzene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
Naphthalene	ND	2.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
1-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
2-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
Acetone	ND	10		µg/L	1	12/21/2018 5:23:00 PM	R56574
Bromobenzene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
Bromodichloromethane	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
Bromoform	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
Bromomethane	ND	3.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
2-Butanone	ND	10		µg/L	1	12/21/2018 5:23:00 PM	R56574
Carbon disulfide	ND	10		µg/L	1	12/21/2018 5:23:00 PM	R56574
Carbon Tetrachloride	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
Chlorobenzene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
Chloroethane	ND	2.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
Chloroform	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
Chloromethane	ND	3.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
2-Chlorotoluene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
4-Chlorotoluene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
cis-1,2-DCE	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
Dibromochloromethane	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
Dibromomethane	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
1,1-Dichloroethane	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
1,1-Dichloroethene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
1,2-Dichloropropane	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
1,3-Dichloropropane	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
2,2-Dichloropropane	ND	2.0		µg/L	1	12/21/2018 5:23:00 PM	R56574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812B62

Date Reported: 12/27/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C1-181219

Project: JSP Joint Superfund Project Monthly An

Collection Date: 12/19/2018 8:22:00 AM

Lab ID: 1812B62-005

Matrix: AQUEOUS

Received Date: 12/20/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
Hexachlorobutadiene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
2-Hexanone	ND	10		µg/L	1	12/21/2018 5:23:00 PM	R56574
Isopropylbenzene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
4-Isopropyltoluene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
4-Methyl-2-pentanone	ND	10		µg/L	1	12/21/2018 5:23:00 PM	R56574
Methylene Chloride	ND	3.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
n-Butylbenzene	ND	3.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
n-Propylbenzene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
sec-Butylbenzene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
Styrene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
tert-Butylbenzene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
trans-1,2-DCE	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
Trichlorofluoromethane	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
Vinyl chloride	ND	1.0		µg/L	1	12/21/2018 5:23:00 PM	R56574
Xylenes, Total	ND	1.5		µg/L	1	12/21/2018 5:23:00 PM	R56574
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	12/21/2018 5:23:00 PM	R56574
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	12/21/2018 5:23:00 PM	R56574
Surr: Dibromofluoromethane	97.8	70-130		%Rec	1	12/21/2018 5:23:00 PM	R56574
Surr: Toluene-d8	97.7	70-130		%Rec	1	12/21/2018 5:23:00 PM	R56574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812B62

Date Reported: 12/27/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-181219

Project: JSP Joint Superfund Project Monthly An

Collection Date: 12/19/2018 8:25:00 AM

Lab ID: 1812B62-006

Matrix: AQUEOUS

Received Date: 12/20/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
Toluene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
Ethylbenzene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
Naphthalene	ND	2.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
1-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
2-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
Acetone	ND	10		µg/L	1	12/21/2018 5:47:00 PM	R56574
Bromobenzene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
Bromodichloromethane	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
Bromoform	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
Bromomethane	ND	3.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
2-Butanone	ND	10		µg/L	1	12/21/2018 5:47:00 PM	R56574
Carbon disulfide	ND	10		µg/L	1	12/21/2018 5:47:00 PM	R56574
Carbon Tetrachloride	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
Chlorobenzene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
Chloroethane	ND	2.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
Chloroform	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
Chloromethane	ND	3.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
2-Chlorotoluene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
4-Chlorotoluene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
cis-1,2-DCE	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
Dibromochloromethane	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
Dibromomethane	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
1,1-Dichloroethane	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
1,1-Dichloroethene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
1,2-Dichloropropane	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
1,3-Dichloropropane	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
2,2-Dichloropropane	ND	2.0		µg/L	1	12/21/2018 5:47:00 PM	R56574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812B62

Date Reported: 12/27/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC C2-181219

Project: JSP Joint Superfund Project Monthly An

Collection Date: 12/19/2018 8:25:00 AM

Lab ID: 1812B62-006

Matrix: AQUEOUS

Received Date: 12/20/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
Hexachlorobutadiene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
2-Hexanone	ND	10		µg/L	1	12/21/2018 5:47:00 PM	R56574
Isopropylbenzene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
4-Isopropyltoluene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
4-Methyl-2-pentanone	ND	10		µg/L	1	12/21/2018 5:47:00 PM	R56574
Methylene Chloride	ND	3.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
n-Butylbenzene	ND	3.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
n-Propylbenzene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
sec-Butylbenzene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
Styrene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
tert-Butylbenzene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
trans-1,2-DCE	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
Trichlorofluoromethane	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
Vinyl chloride	ND	1.0		µg/L	1	12/21/2018 5:47:00 PM	R56574
Xylenes, Total	ND	1.5		µg/L	1	12/21/2018 5:47:00 PM	R56574
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	12/21/2018 5:47:00 PM	R56574
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	12/21/2018 5:47:00 PM	R56574
Surr: Dibromofluoromethane	98.5	70-130		%Rec	1	12/21/2018 5:47:00 PM	R56574
Surr: Toluene-d8	98.3	70-130		%Rec	1	12/21/2018 5:47:00 PM	R56574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812B62

Date Reported: 12/27/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-181219

Project: JSP Joint Superfund Project Monthly An

Collection Date: 12/19/2018 8:16:00 AM

Lab ID: 1812B62-007

Matrix: AQUEOUS

Received Date: 12/20/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
Toluene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
Ethylbenzene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
Naphthalene	ND	2.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
1-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
2-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
Acetone	ND	10		µg/L	1	12/21/2018 6:11:00 PM	R56574
Bromobenzene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
Bromodichloromethane	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
Bromoform	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
Bromomethane	ND	3.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
2-Butanone	ND	10		µg/L	1	12/21/2018 6:11:00 PM	R56574
Carbon disulfide	ND	10		µg/L	1	12/21/2018 6:11:00 PM	R56574
Carbon Tetrachloride	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
Chlorobenzene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
Chloroethane	ND	2.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
Chloroform	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
Chloromethane	ND	3.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
2-Chlorotoluene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
4-Chlorotoluene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
cis-1,2-DCE	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
Dibromochloromethane	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
Dibromomethane	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
1,1-Dichloroethane	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
1,1-Dichloroethene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
1,2-Dichloropropane	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
1,3-Dichloropropane	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
2,2-Dichloropropane	ND	2.0		µg/L	1	12/21/2018 6:11:00 PM	R56574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812B62

Date Reported: 12/27/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC ES1-181219

Project: JSP Joint Superfund Project Monthly An

Collection Date: 12/19/2018 8:16:00 AM

Lab ID: 1812B62-007

Matrix: AQUEOUS

Received Date: 12/20/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
Hexachlorobutadiene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
2-Hexanone	ND	10		µg/L	1	12/21/2018 6:11:00 PM	R56574
Isopropylbenzene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
4-Isopropyltoluene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
4-Methyl-2-pentanone	ND	10		µg/L	1	12/21/2018 6:11:00 PM	R56574
Methylene Chloride	ND	3.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
n-Butylbenzene	ND	3.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
n-Propylbenzene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
sec-Butylbenzene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
Styrene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
tert-Butylbenzene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
trans-1,2-DCE	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
Trichlorofluoromethane	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
Vinyl chloride	ND	1.0		µg/L	1	12/21/2018 6:11:00 PM	R56574
Xylenes, Total	ND	1.5		µg/L	1	12/21/2018 6:11:00 PM	R56574
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	12/21/2018 6:11:00 PM	R56574
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	12/21/2018 6:11:00 PM	R56574
Surr: Dibromofluoromethane	99.8	70-130		%Rec	1	12/21/2018 6:11:00 PM	R56574
Surr: Toluene-d8	99.6	70-130		%Rec	1	12/21/2018 6:11:00 PM	R56574

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1812B62

27-Dec-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Monthly Analysis

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R56574		RunNo: 56574							
Prep Date:	Analysis Date: 12/21/2018		SeqNo: 1892893		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	97.6	70	130			
Toluene	20	1.0	20.00	0	98.1	70	130			
Chlorobenzene	19	1.0	20.00	0	96.6	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	101	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	94.6	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.2	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.7	70	130			
Surr: Toluene-d8	10		10.00		99.7	70	130			

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R56574		RunNo: 56574							
Prep Date:	Analysis Date: 12/21/2018		SeqNo: 1892894		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1812B62

27-Dec-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Monthly Analysis

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R56574	RunNo:	56574					
Prep Date:		Analysis Date:	12/21/2018	SeqNo:	1892894	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1812B62

27-Dec-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Monthly Analysis

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R56574		RunNo: 56574							
Prep Date:	Analysis Date: 12/21/2018		SeqNo: 1892894		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	9.7		10.00		97.0	70	130			
Surr: Toluene-d8	9.9		10.00		98.6	70	130			

Sample ID 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: SL56574		RunNo: 56574							
Prep Date:	Analysis Date: 12/21/2018		SeqNo: 1892924		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	9.7		10.00		97.0	70	130			
Surr: Toluene-d8	9.9		10.00		98.7	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1812B62

RcptNo: 1

Received By: **Isaiah Ortiz** 12/20/2018 10:00:00 AM *I-Ox*
 Completed By: **Isaiah Ortiz** 12/20/2018 11:02:48 AM *I-Ox*
 Reviewed By: *LB* *me/18*
CB: JAB 12/20/18

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: *JAB* 12/20/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.8	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 31, 2018

Luis Guerra
City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3604
FAX

RE: JSP Joint Superfund Project Monthly Analysis

OrderNo.: 1812B84

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 2 sample(s) on 12/20/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a white background.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812B84

Date Reported: 12/31/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS1-181219

Project: JSP Joint Superfund Project Monthly An

Collection Date: 12/19/2018 8:29:00 AM

Lab ID: 1812B84-001

Matrix: AIR

Received Date: 12/20/2018 10:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
Toluene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
Ethylbenzene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
Naphthalene	ND	0.20		µg/L	1	12/28/2018 4:07:00 PM	R56590
1-Methylnaphthalene	ND	0.40		µg/L	1	12/28/2018 4:07:00 PM	R56590
2-Methylnaphthalene	ND	0.40		µg/L	1	12/28/2018 4:07:00 PM	R56590
Acetone	ND	1.0		µg/L	1	12/28/2018 4:07:00 PM	R56590
Bromobenzene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
Bromodichloromethane	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
Bromoform	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
Bromomethane	ND	0.20		µg/L	1	12/28/2018 4:07:00 PM	R56590
2-Butanone	ND	1.0		µg/L	1	12/28/2018 4:07:00 PM	R56590
Carbon disulfide	ND	1.0		µg/L	1	12/28/2018 4:07:00 PM	R56590
Carbon tetrachloride	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
Chlorobenzene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
Chloroethane	ND	0.20		µg/L	1	12/28/2018 4:07:00 PM	R56590
Chloroform	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
Chloromethane	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
2-Chlorotoluene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
4-Chlorotoluene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
cis-1,2-DCE	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	12/28/2018 4:07:00 PM	R56590
Dibromochloromethane	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
Dibromomethane	ND	0.20		µg/L	1	12/28/2018 4:07:00 PM	R56590
1,2-Dichlorobenzene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
1,3-Dichlorobenzene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
1,4-Dichlorobenzene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
Dichlorodifluoromethane	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
1,1-Dichloroethane	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
1,1-Dichloroethene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
1,2-Dichloropropane	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
1,3-Dichloropropane	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
2,2-Dichloropropane	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 1 of 6
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812B84

Date Reported: 12/31/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS1-181219

Project: JSP Joint Superfund Project Monthly An

Collection Date: 12/19/2018 8:29:00 AM

Lab ID: 1812B84-001

Matrix: AIR

Received Date: 12/20/2018 10:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
Hexachlorobutadiene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
2-Hexanone	ND	1.0		µg/L	1	12/28/2018 4:07:00 PM	R56590
Isopropylbenzene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
4-Isopropyltoluene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
4-Methyl-2-pentanone	ND	1.0		µg/L	1	12/28/2018 4:07:00 PM	R56590
Methylene chloride	ND	0.30		µg/L	1	12/28/2018 4:07:00 PM	R56590
n-Butylbenzene	ND	0.30		µg/L	1	12/28/2018 4:07:00 PM	R56590
n-Propylbenzene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
sec-Butylbenzene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
Styrene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
tert-Butylbenzene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
trans-1,2-DCE	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
1,1,1-Trichloroethane	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
1,1,2-Trichloroethane	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
Trichloroethene (TCE)	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
Trichlorofluoromethane	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
1,2,3-Trichloropropane	ND	0.20		µg/L	1	12/28/2018 4:07:00 PM	R56590
Vinyl chloride	ND	0.10		µg/L	1	12/28/2018 4:07:00 PM	R56590
Xylenes, Total	ND	0.15		µg/L	1	12/28/2018 4:07:00 PM	R56590
Surr: Dibromofluoromethane	101	70-130		%Rec	1	12/28/2018 4:07:00 PM	R56590
Surr: 1,2-Dichloroethane-d4	98.8	70-130		%Rec	1	12/28/2018 4:07:00 PM	R56590
Surr: Toluene-d8	100	70-130		%Rec	1	12/28/2018 4:07:00 PM	R56590
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	12/28/2018 4:07:00 PM	R56590

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812B84

Date Reported: 12/31/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS2-181219

Project: JSP Joint Superfund Project Monthly An

Collection Date: 12/19/2018 8:32:00 AM

Lab ID: 1812B84-002

Matrix: AIR

Received Date: 12/20/2018 10:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
Toluene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
Ethylbenzene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
Naphthalene	ND	0.20		µg/L	1	12/28/2018 4:54:00 PM	R56590
1-Methylnaphthalene	ND	0.40		µg/L	1	12/28/2018 4:54:00 PM	R56590
2-Methylnaphthalene	ND	0.40		µg/L	1	12/28/2018 4:54:00 PM	R56590
Acetone	ND	1.0		µg/L	1	12/28/2018 4:54:00 PM	R56590
Bromobenzene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
Bromodichloromethane	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
Bromoform	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
Bromomethane	ND	0.20		µg/L	1	12/28/2018 4:54:00 PM	R56590
2-Butanone	ND	1.0		µg/L	1	12/28/2018 4:54:00 PM	R56590
Carbon disulfide	ND	1.0		µg/L	1	12/28/2018 4:54:00 PM	R56590
Carbon tetrachloride	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
Chlorobenzene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
Chloroethane	ND	0.20		µg/L	1	12/28/2018 4:54:00 PM	R56590
Chloroform	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
Chloromethane	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
2-Chlorotoluene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
4-Chlorotoluene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
cis-1,2-DCE	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	12/28/2018 4:54:00 PM	R56590
Dibromochloromethane	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
Dibromomethane	ND	0.20		µg/L	1	12/28/2018 4:54:00 PM	R56590
1,2-Dichlorobenzene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
1,3-Dichlorobenzene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
1,4-Dichlorobenzene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
Dichlorodifluoromethane	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
1,1-Dichloroethane	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
1,1-Dichloroethene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
1,2-Dichloropropane	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
1,3-Dichloropropane	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
2,2-Dichloropropane	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	Page 3 of 6
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812B84

Date Reported: 12/31/2018

CLIENT: City of Las Cruces

Client Sample ID: CLC AS2-181219

Project: JSP Joint Superfund Project Monthly An

Collection Date: 12/19/2018 8:32:00 AM

Lab ID: 1812B84-002

Matrix: AIR

Received Date: 12/20/2018 10:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
Hexachlorobutadiene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
2-Hexanone	ND	1.0		µg/L	1	12/28/2018 4:54:00 PM	R56590
Isopropylbenzene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
4-Isopropyltoluene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
4-Methyl-2-pentanone	ND	1.0		µg/L	1	12/28/2018 4:54:00 PM	R56590
Methylene chloride	ND	0.30		µg/L	1	12/28/2018 4:54:00 PM	R56590
n-Butylbenzene	ND	0.30		µg/L	1	12/28/2018 4:54:00 PM	R56590
n-Propylbenzene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
sec-Butylbenzene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
Styrene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
tert-Butylbenzene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
trans-1,2-DCE	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
1,1,1-Trichloroethane	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
1,1,2-Trichloroethane	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
Trichloroethene (TCE)	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
Trichlorofluoromethane	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
1,2,3-Trichloropropane	ND	0.20		µg/L	1	12/28/2018 4:54:00 PM	R56590
Vinyl chloride	ND	0.10		µg/L	1	12/28/2018 4:54:00 PM	R56590
Xylenes, Total	ND	0.15		µg/L	1	12/28/2018 4:54:00 PM	R56590
Surr: Dibromofluoromethane	102	70-130		%Rec	1	12/28/2018 4:54:00 PM	R56590
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	12/28/2018 4:54:00 PM	R56590
Surr: Toluene-d8	98.8	70-130		%Rec	1	12/28/2018 4:54:00 PM	R56590
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/28/2018 4:54:00 PM	R56590

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 4 of 6
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1812B84

31-Dec-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Monthly Analysis

Sample ID	1812b84-001adup	SampType:	DUP	TestCode:	EPA Method 8260B: Volatiles					
Client ID:	CLC AS1-181219	Batch ID:	R56590	RunNo:	56590					
Prep Date:		Analysis Date:	12/28/2018	SeqNo:	1895816	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.10						0	20	
Toluene	ND	0.10						0	20	
Ethylbenzene	ND	0.10						0	20	
Methyl tert-butyl ether (MTBE)	ND	0.10						0	20	
1,2,4-Trimethylbenzene	ND	0.10						0	20	
1,3,5-Trimethylbenzene	ND	0.10						0	20	
1,2-Dichloroethane (EDC)	ND	0.10						0	20	
1,2-Dibromoethane (EDB)	ND	0.10						0	20	
Naphthalene	ND	0.20						0	20	
1-Methylnaphthalene	ND	0.40						0	20	
2-Methylnaphthalene	ND	0.40						0	20	
Acetone	ND	1.0						0	20	
Bromobenzene	ND	0.10						0	20	
Bromodichloromethane	ND	0.10						0	20	
Bromoform	ND	0.10						0	20	
Bromomethane	ND	0.20						0	20	
2-Butanone	ND	1.0						0	20	
Carbon disulfide	ND	1.0						0	20	
Carbon tetrachloride	ND	0.10						0	20	
Chlorobenzene	ND	0.10						0	20	
Chloroethane	ND	0.20						0	20	
Chloroform	ND	0.10						0	20	
Chloromethane	ND	0.10						0	20	
2-Chlorotoluene	ND	0.10						0	20	
4-Chlorotoluene	ND	0.10						0	20	
cis-1,2-DCE	ND	0.10						0	20	
cis-1,3-Dichloropropene	ND	0.10						0	20	
1,2-Dibromo-3-chloropropane	ND	0.20						0	20	
Dibromochloromethane	ND	0.10						0	20	
Dibromomethane	ND	0.20						0	20	
1,2-Dichlorobenzene	ND	0.10						0	20	
1,3-Dichlorobenzene	ND	0.10						0	20	
1,4-Dichlorobenzene	ND	0.10						0	20	
Dichlorodifluoromethane	ND	0.10						0	20	
1,1-Dichloroethane	ND	0.10						0	20	
1,1-Dichloroethene	ND	0.10						0	20	
1,2-Dichloropropane	ND	0.10						0	20	
1,3-Dichloropropane	ND	0.10						0	20	
2,2-Dichloropropane	ND	0.10						0	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1812B84

31-Dec-18

Client: City of Las Cruces
Project: JSP Joint Superfund Project Monthly Analysis

Sample ID 1812b84-001adup		SampType: DUP		TestCode: EPA Method 8260B: Volatiles						
Client ID: CLC AS1-181219		Batch ID: R56590		RunNo: 56590						
Prep Date:		Analysis Date: 12/28/2018		SeqNo: 1895816 Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.10						0	20	
Hexachlorobutadiene	ND	0.10						0	20	
2-Hexanone	ND	1.0						0	20	
Isopropylbenzene	ND	0.10						0	20	
4-Isopropyltoluene	ND	0.10						0	20	
4-Methyl-2-pentanone	ND	1.0						0	20	
Methylene chloride	ND	0.30						0	20	
n-Butylbenzene	ND	0.30						0	20	
n-Propylbenzene	ND	0.10						0	20	
sec-Butylbenzene	ND	0.10						0	20	
Styrene	ND	0.10						0	20	
tert-Butylbenzene	ND	0.10						0	20	
1,1,1,2-Tetrachloroethane	ND	0.10						0	20	
1,1,2,2-Tetrachloroethane	ND	0.10						0	20	
Tetrachloroethene (PCE)	ND	0.10						0	20	
trans-1,2-DCE	ND	0.10						0	20	
trans-1,3-Dichloropropene	ND	0.10						0	20	
1,2,3-Trichlorobenzene	ND	0.10						0	20	
1,2,4-Trichlorobenzene	ND	0.10						0	20	
1,1,1-Trichloroethane	ND	0.10						0	20	
1,1,2-Trichloroethane	ND	0.10						0	20	
Trichloroethene (TCE)	ND	0.10						0	20	
Trichlorofluoromethane	ND	0.10						0	20	
1,2,3-Trichloropropane	ND	0.20						0	20	
Vinyl chloride	ND	0.10						0	20	
Xylenes, Total	ND	0.15						0	20	
Surr: Dibromofluoromethane	1.0		1.000		102	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	0.99		1.000		98.5	70	130	0	0	
Surr: Toluene-d8	0.99		1.000		98.6	70	130	0	0	
Surr: 4-Bromofluorobenzene	1.0		1.000		103	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1812B84

RcptNo: 1

Received By: Anne Thorne 12/20/2018 10:05:00 AM

Anne Thorne

Completed By: Anne Thorne 12/20/2018 1:53:28 PM

Anne Thorne

Reviewed By: *IO* 12/20/18

Labeled by AT 12/20/18

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
5. Sample(s) in proper container(s)? Yes No
6. Sufficient sample volume for indicated test(s)? Yes No
7. Are samples (except VOA and ONG) properly preserved? Yes No
8. Was preservative added to bottles? Yes No NA
9. VOA vials have zero headspace? Yes No No VOA Vials
10. Were any sample containers received broken? Yes No
11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Is it clear what analyses were requested? Yes No
14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____ (<2 or >12 unless noted) Adjusted? _____ Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____	Date: _____
By Whom: _____	Via: <input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding: _____	
Client Instructions: _____	

16. Additional remarks:

17. **Cooler Information**

Appendix E

Terracon Sampling Report with Laboratory Reports for Annual Groundwater Monitoring Event

Groundwater Monitoring Report

Griggs and Walnut Groundwater Plume Las Cruces, New Mexico

May 28, 2019
Terracon Project No. AU18P186



Prepared for:
Daniel B. Stephens & Associates, Inc.

Prepared by:
Terracon Consultants, Inc.
Las Cruces, New Mexico

Offices Nationwide
Employee-Owned

Established in 1965
terracon.com

Terracon

Geotechnical ■ Environmental ■ Construction Materials ■ Facilities

May 28, 2019



Daniel B. Stephens & Associates, Inc.
6020 Academy NE, Suite 100
Albuquerque, New Mexico 87109

Attn: Ms. Kelly Jayne, P.E., CFM
P: (505) 353-9162
E: kjayne@geo-logic.com

Re: Annual Groundwater Monitoring Event, January 2019
Griggs and Walnut Groundwater Plume,
Las Cruces, New Mexico
Terracon Project No. AU18P186, Supplement No.1

Dear Ms. Jayne:

Terracon Consultants, Inc. (Terracon) is pleased to submit this report documenting Annual Groundwater Monitoring activities. The report documents single round of groundwater monitoring that occurred in December 2018 and January 2019, and field work activities conducted in May 2019 at the above referenced site. This investigation was performed in accordance with Terracon's Proposal No. P68187036, Rev.3 dated November 28, 2018, and proposal supplement No.1 dated April 30, 2019.

We appreciate the opportunity to perform these services for you. Please contact Ana Solis at (281) 889-9940 if you have questions regarding the information provided in the report.

Sincerely,
Terracon Consultants, Inc.

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Attachments



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Geotechnical



Environmental



Construction Materials



Facilities

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GROUNDWATER MONITORING REPORT GRIGGS AND WALNUT GROUNDWATER PLUME

Las Cruces, New Mexico
Terracon Project No. AU18P186
May 28, 2019

1.0 INTRODUCTION

The following Groundwater Monitoring report documents a single round of groundwater sampling of twenty-five (25) monitoring wells and three (3) municipal water supply wells at the Griggs and Walnut Groundwater Plume Superfund Site, during December 2018, January 2019, and May 2019. Terracon Consultants were retained by Daniel B. Stephens & Associates, Inc. (DBSA) to conduct an annual sampling event according to the approved Sampling and Analysis Plan/Quality Assurance Project Plan (SAP/QAPP, 2018). In addition, at request of the Environmental Protection Agency (EPA), Terracon retained the services of a FLUTE representative to provide training for gauging and sampling FLUTE wells to ensure compliance with the Standard Operating Procedures (SOPs) for the project. Members from Terracon, City of Las Cruces (CLC), and DBSA were present for the training.

1.1 Project Information

The Site consists of a groundwater plume containing dissolved perchloroethylene (PCE), aka tetrachloroethylene. The plume is approximately 1.8 miles long by 0.5 miles wide and located within the CLC, New Mexico. PCE contamination is present in groundwater at depths ranging from more than 100 to 650 feet (ft) below ground surface (bgs). A map depicting the project area and well locations is included as Figure 1. PCE impacted groundwater has been detected in several CLC municipal water supply wells. The Site was proposed to the EPA's National Priority List (NPL) on January 11, 2001, to address contaminated groundwater. Final listing was on June 14, 2001.

In 2006, the EPA completed the Remediation Investigation and Feasibility Study (RI/FS) relative to the PCE impacts to water supply wells within the City of Las Cruces. EPA issued the Record of Decision (ROD) for the remedy on June 19, 2007, selecting enhanced groundwater extraction (pumping) with treatment of extracted groundwater to remove PCE. The ROD required a groundwater extraction and treatment system, and a monitoring well network to evaluate the performance of the selected remedy. The next phase was the preparation and implementation of the Remedial Design/Remedial Action (RD/RA). The RD/RA was prepared by CLC and Dona Ana County (DAC) Joint Superfund Program (JSP) Technical Team.

The Groundwater Monitoring Program is being implemented by the JSP. Select monitoring wells and inactive CLC water supply wells have been sampled periodically since 2012 to evaluate the performance of the extraction system at achieving hydraulic capture of the PCE plume and reduction of PCE concentrations to below the MCL of 5 µg/L for PCE. These wells are identified in the RA Sampling and Analysis Plan (RA SAP) approved by EPA in 2011, with the exception of monitoring wells GMMW16-S and GMMW16-D which were installed in August, 2015, as part of

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an optimization effort. The well sampling network was updated in 2017 with the issuance of a new UAO that became effective January 2018.

1.2 Scope of Services

Terracon performed project activities in accordance with the SAP prepared by DBSA (October 10, 2018). Field activities were performed in accordance with the Site Specific Health and Safety Plan (HSP) prepared by DBSA (October 10, 2018), the Quality Assurance Project Plan, the Field Sampling Plan and the Standard Operating Procedures (SOPs) approved with the latest SAP/QAPP for the Water Flexible Underground Liner Technologies (FLUTe). Terracon performed the following tasks, which are described in more detail in Section 2.0 of this report.

- Measure the depth to static groundwater in all accessible wells, as designated by the SAP for the baseline event (Table A-1);
- FLUTe well training conducted by FLUTe well vendor.
- Sample all accessible monitoring wells as designated by the SAP for the baseline event (Table A-1);
- Collect water samples from CLC public water supply wells designated by the SAP (Table A-1);
- Submit the collected groundwater samples for laboratory analyses of VOCs, total arsenic, arsenic speciation, and total uranium as designated in Table A-1 of the SAP;
- Provide results of laboratory analyses of all samples.
- Measure of depth to groundwater in CLC-20 and GMMW-15 (including shallow, intermediate, and deep intervals) during the May 2019 re-mobilization.

1.3 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. Terracon makes no warranties, either express or implied, regarding the findings, conclusions or recommendations. Terracon does not warrant the work of laboratories, or other third parties supplying information used in the preparation of the report. These services were performed in accordance with the scope of work, as set forth in the proposal.

1.4 Additional Scope Limitations

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. We cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this report. Our recommendations are based solely upon data obtained at the time and within the scope of these services.

1.5 Reliance

This report has been prepared for the exclusive use of CLC, DBSA, and members of the JSP, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of the CLC, DBSA and Terracon. Any unauthorized distribution or reuse is at the client's sole risk. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to the client and all relying parties unless otherwise agreed in writing.

2.0 GROUNDWATER SAMPLING AND ANALYSES

2.1 Groundwater Monitoring Well Construction

FLUTe Wells

There are six (6) FLUTe wells at the site, each of these wells have multiple monitoring intervals connected to distinct sampling ports. Details of the FLUTe wells are shown in Table 2.1 (Appendix C); monitoring interval values are in feet below ground surface (ft bgs).

Nested Wells

Each of the nested wells include multiple screened intervals. Wells GMMW-11 and GMMW-15 consist of three 3-inch nominal diameter cased monitoring wells, and have flush-mount surface completions consisting of a well vault and concrete apron that protects the well casings. Well GMMW-16 consists of two individual 4-inch nominal diameter cased monitoring wells, with the casing extending approximately three feet above ground surface with protective locking covers, concrete aprons and bollards. Details of the nested well screen intervals are shown in Table 2.2 (Appendix C).

Monitoring Wells

Each monitoring well has a flush-mount surface completion consisting of a well vault and concrete apron that protects the well casing. Details of the monitoring well screened intervals are shown in Table 2.3 (Appendix C).

City of Las Cruces Municipal Water Supply Wells

Details of the CLC municipal water supply wells, as provided by CLC, are shown in Table 2.4 (Appendix C).

2.2 FLUTe Well Training

Per the EPA's request, Terracon retained training services from a FLUTe representative to provide training to the Griggs-Walnut team that included members from Terracon, DBSA, and City of Las Cruces. This training was completed to ensure compliance with SOPs for the project. The

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training was completed on January 4, 2019 and a sign-in sheet is provided as Appendix B of this report.

2.3 Depth to Groundwater

Terracon attempted to measure the depth to groundwater in twenty-five (25) monitoring wells and four (4) municipal water supply wells. Tables 2.5 through 2.8 in Appendix D provide the depth to water (DTW) data, and the date measured. The DTW measurements collected from the FLUTE wells was conducted in accordance with the SOP. During the technical training, the FLUTE vendor instructed that the water level within the uppermost FLUTE port, labelled “port 1”, can be assumed to be representative of the highest groundwater level in any of the sampling ports. The FLUTE liner is filled with water to assure a seal between the liner and aquifer formation, and this water level is measured using the “tag” port. The SAP requires the water level within the liner to be from 10 feet higher in the liner than in the formation to prevent leakage from the surface to the screened intervals of the FLUTE ports, and leakage between sampling ports. Water is added or removed from the liner to meet these criteria.

2.4 Groundwater Sampling

Once the depth to groundwater measurements were obtained, groundwater samples were collected. Proper purging techniques were utilized prior to sample collection, and Terracon measured the water quality parameters during well purging activities, and recorded these measurements in the field logbook. Water quality parameters were measured using a YSI ProDSS multimeter, that was calibrated each morning prior to use. Terracon obtained field measurements of temperature, dissolved oxygen, specific conductance, resistivity, total dissolved solids, pH, oxidation-reduction potential, and turbidity.

Collected groundwater samples were identified in accordance with the SAP. Each sample was assigned a unique sample number, i.e. GMMW-03-01, where “GMMW-03” signifies the well and “01” signifies the port in the case of the Flute wells or Passive Diffusion Bag (PDB) in the case of the PDB wells. During sample collection activities, Terracon also performed quality control/quality assurance sample collection in accordance with the SAP, including sample duplicates (10% of total samples), trip blanks (1 per day), equipment blanks (1 per day for non-dedicated equipment), matrix spike (5% of total samples), and field blanks (10% of total samples). Tables 2.9a through 2.9d in Appendix E provide information related to the sampling methods used during this sampling program.

FLUTE Wells

Appendix A of the SAP details the sampling procedures to be used at the Griggs and Walnut Groundwater Plume FLUTE wells. Each FLUTE well has been installed in a 6-inch diameter steel-cased well. Each well casing is perforated at multiple depths to open up different zones in the well

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to the formation. Each perforated zone is 10 feet in length. Each casing is sealed between each zone to ensure that the sampled water is representative of the sampled zone.

The FLUTE pumping system consists of a sampling port located at each perforated interval, a check valve, and a U-shaped tube set. The U-shaped tube set consists of a 1/2-inch diameter tube and a 1/8-inch tube to the surface. Water enters the sampling port through the check valve and fills both sides of the U-shaped tube. Compressed nitrogen gas (N₂) is applied to the 1/8-inch tube to displace the collected water and pump it to the surface.

The SAP requires that each port of the FLUTE wells be purged 3 times prior to sample collection. Terracon purged each working port 3 times prior to sample collections. Terracon performed these activities in accordance with the SAP, with the following exceptions:

- GMMW-08, port 1 was capped and not sampled.
- GMMW-08, port 2 was clogged therefore it was not sampled.
- GMMW-10, port 1 there was no water recovery, therefore, it was not sampled.

The remaining ports within each FLUTE well produced sufficient groundwater to support purging and sampling activities.

Nested Wells

The HydraSleeve groundwater sampler was used to collect a representative sample without the need of purging the well as detailed in the SAP. The HydraSleeve were placed within the screened intervals of nested wells: GMMW-11, GMMW-15, and GMMW-16. The Hydrasleeves were given a period of time to re-equilibrate within the monitoring wells before collecting the samples. Water quality parameters were collected from each well. Adverse conditions were not encountered at any of the nested wells.

Monitoring Wells

The SAP identified eleven (11) monitoring wells used for groundwater monitoring activities in connection with the groundwater plume.

HydraSleeve groundwater samplers were used to collect representative samples without purging the wells as detailed in the SAP. The Hydrasleeve were placed within the screen interval of monitoring wells: MW-1, MW-SF2, MW-SF5, MW-SF9, and MW-SF10. Hydrasleeves were given a period of time to re-equilibrate within the monitoring wells before collecting the samples. Water quality parameters were collected from each well. Terracon was able to collect samples from MW-SF9 and MW-SF10. The remaining wells were not sampled due to the wells containing insufficient groundwater to support sample collection.

Passive Diffusion bag (PDB) samplers were used to collect samples from wells NGMW-01, NGMW-02, and NGMW-03 as detailed in the SAP. The PDB retrieval lines and the intervals where

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the PDB samplers were positioned were determined previously by others and documented in the SAP. Terracon disposed of the previous water within each PDB sampler and filled each PDB sampler with laboratory-grade deionized water. Due to the limited amount of volume available per PDB sampler water quality parameters were not collected.

City of Las Cruces Municipal Water Supply Wells

In accordance with the SAP, Terracon collected grab samples from municipal water supply wells CLC-18 and CLC-27 from designated sample ports. Well CLC 26 was out of service and the pump had been removed from this well. This well was purged by the low flow method using a bladder pump as specified in the SAP. Details of the groundwater sample names and sampling method are provided in Tables 2.9a through 2.9d in Appendix E.

Terracon attempted to collect a groundwater sample from CLC-20 during the May 2019 mobilization using a Hydrasleeve. A sample could not be collected from CLC-20, as the Hydrasleeve did not recover any groundwater after several attempts.

2.5 Quality Assurance/Quality Control Samples

Terracon collected Quality Assurance/Quality Control (QA/QC) samples in accordance with the requirements of the SAP. Trip blanks were submitted to the laboratory at a rate of one per day during sampling activities. A minimum of 10% Field Blanks and Duplicate samples were collected, a minimum of 5% Matrix Spike/Matrix Spike Duplicates were collected, and Equipment Blanks were collected at a rate of one per day while using non-dedicated equipment (bladder pump). All QA/QC samples were submitted to the analytical laboratory for analyses. Details of the collected QA/QC samples are provided in Table 2.10 in Appendix F.

2.6 Analytical Program

All groundwater samples were analyzed for VOCs following EPA Test Method 8260B. Selected samples were analyzed for total arsenic and total uranium using EPA Test Method 6020, ICPMS, and arsenic speciation using EPA Test Method E1632AM. The groundwater samples were submitted to Hall Environmental Analysis Laboratory (HEAL) in Albuquerque, New Mexico via overnight courier. Results of sample analyses are provided in Appendix G.

2.7 FLUTE Wells Integrity Test

During May 2029 Terracon conducted well integrity testing activities for FLUTE wells GMMW-01, GMMW-08, GMMW-09, and GMMW-10, following testing procedure provided by DBSA. Details and results of these testing activities are not part of this report, and will be reported separately by DBSA.

3.0 RESULTS

3.1 Observations

Terracon recorded field activities, including observations of well conditions. Copies of the field logs are provided in Appendix D. Pertinent observations and field activities are summarized in the following sections.

FLUTe Wells

FLUTe well GMMW-08 currently has 7 ports of which two ports are not operational for sample collection: Port 1 has been capped and Port 2 is currently clogged.

Nested Wells

The flush-mount surface completions of GMMW-11 and GMMW-15 were observed to be in good condition. Observations of the 3-inch diameter casings of each well did not identify any damage. Each well was observed to be properly capped.

The surface completions of GMMW-16S and GMMW-16D were observed to be in good condition. All appurtenances, including the well casing, protective locking cover, locks, concrete well pad and protective bollards, were in good condition.

Monitoring Wells

Terracon observed the surface completions, well casings and well caps to be in good condition at monitoring wells MW-1, MW-3, MW-4, MW-5, MW-SF2, MW-SF5, MW-SF9, MW-SF10, NGMW-01, NGMW-02, and NGMW-03. Terracon observed monitoring wells MW-1, MW-3, MW-4, MW-5, and MW-SF2, MW-SF5 to be either dry or contain insufficient groundwater to support sampling activities.

City of Las Cruces Municipal Water Supply Wells

Observations of the CLC production wells CLC-18 and CLC-27 indicate that these wells are in good working order. Production well CLC-26 was not operational during this sampling event and the well pump has been permanently removed. These wells are sampled in accordance with the SAP by obtaining grab samples from the established sampling ports at CLC-18 and CLC-27. The sample from well CLC-26 was obtained by low-flow sampling methodology.

CLC-20 well was no operational during the May 2019 sampling efforts. The Hydrasleeve deployed for sampling of these municipal water supply well was retrieved dry and stained with what appears to be oily sediments. It appears that the pump has been removed from CLC-20, however, some of the equipment appears to remain in the well. CLC-20 did not contain enough groundwater to support sampling activities, or downhole equipment obstructed attempted sampling activities.

3.2 Sample Results

Laboratory results are presented in Appendix D.

4.0 RECOMMENDATIONS

Terracon has the following recommendations in connection with field procedures associated with groundwater sample collection of the wells used to monitor the Griggs and Walnut Groundwater Plume site. These recommendations address rehabilitation or maintenance and repair of select monitoring wells, and execution of future groundwater monitoring events.

Well Rehabilitation, Maintenance or Repair

Based on the results of this groundwater monitoring event, Terracon recommends the JSP team consider the following actions:

- It is recommended to replace the manhole seals within the FLUTE wells to keep stormwater out of the metal casing of the wells.
- It is recommended to adequately label the wells in the field to prevent confusion during field activities.

SAP Field Procedures

Based on the results of this groundwater monitoring event, Terracon recommends the following be addressed in the annual update of the approved SAP for the site. Terracon recommends the following:

- It is recommended to update the well map in the SAP.
- Update SAP to remove requirement to collect water quality parameters from wells to be sampled with PDBs.

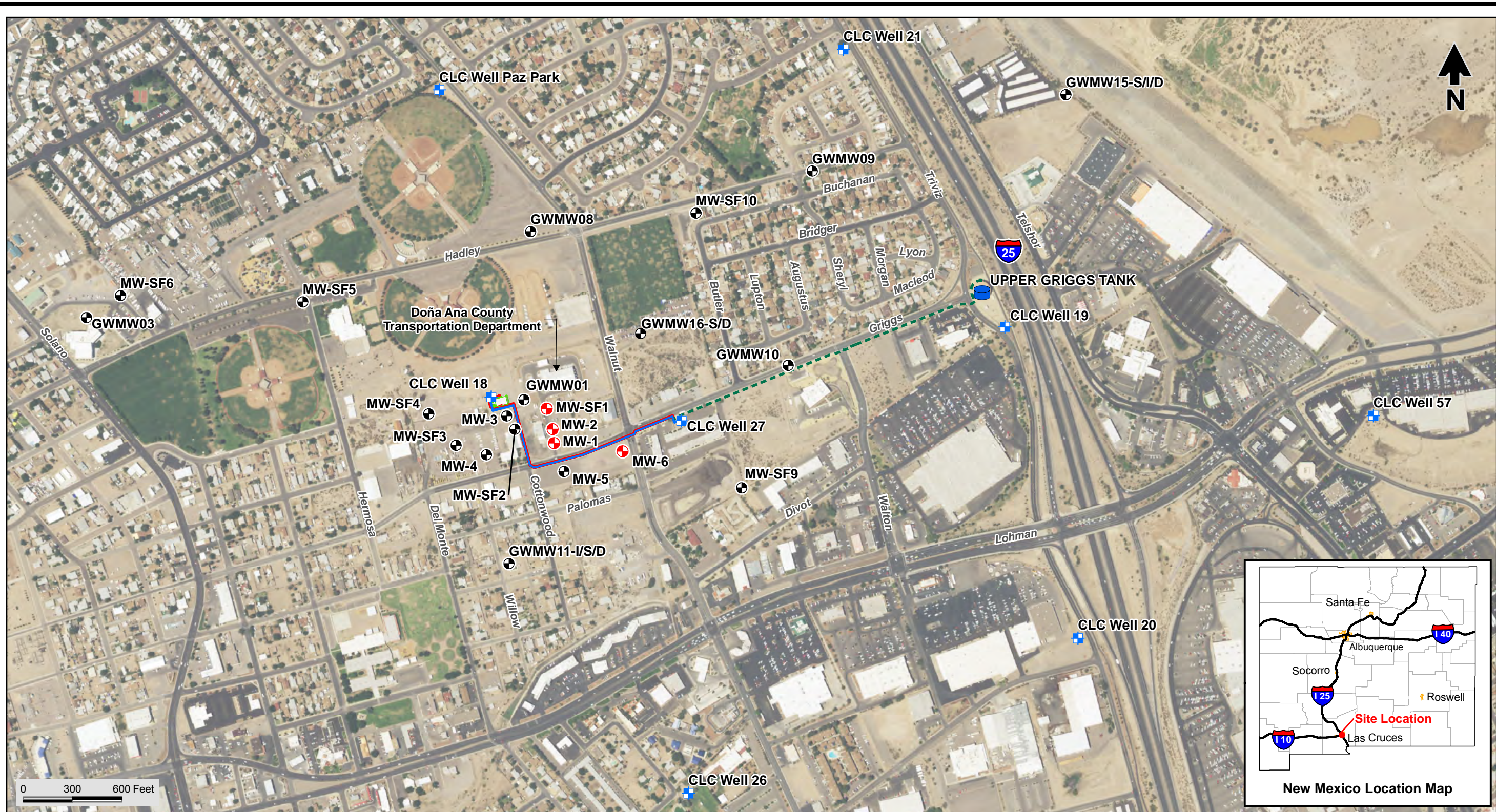
Future Groundwater Monitoring Events

Terracon reviewed and compared field activities performed during this event with field logs of sampling events from previous years, and has the following recommendations:

- Terracon recommends that the annual monitoring event be scheduled earlier in the year to avoid the holiday season of late November and December. A scheduled start date of early October will assure that delays to sample collection and laboratory analyses will not be adversely impacted by holiday schedules.

APPENDIX A

Figure 1 – Project Area Map



Source: National Agricultural Imagery Program October 2014.

- Explanation**
- Monitor well
 - ⊕ CLC supply well
 - ⊕ Collapsed well
 - ⊕ CLC water reservoir
 - Existing 10" water line to reservoir
 - 6" raw water line
 - 8" finished water line
 - Treatment compound

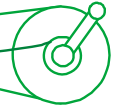
GRIGGS-WALNUT GROUND WATER PLUME SITE
REMEDIAL ACTION
Project Area Map

Figure 1

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APPENDIX B

FLUTE Training Sign-in



Sampling guidelines for *Water FLUTE* systems installed after May, 2009

Rev. April, 2010

Water level in the liner.

The liner water level should be ~10 ft above the highest formation water level to provide a good seal of the liner in the hole (5 ft minimum excess head). The formation water level can be measured via the “pump tube” for each port. The water level inside the liner should be tagged in the ½ x 5/8” tube labeled “TAG” adjacent to the sampling tubes. If the water level inside the liner is measured in the liner, outside the Tag Tube, lower the weighted tag line very slowly to avoid damage to the liner. Water can be added to the liner by simply pouring water into the liner or through the TAG tube, whichever is easier. Do not fill the liner more than 10 ft above the highest formation water level. The water level in the liner should be checked prior to each sampling episode. (Beware that filling the liner with de-ionized water can give a false water level reading.) It is not recommended to manually tag water levels more than 200 ft below the surface. The wet film adhesion may prevent the removal of the tag line. A special Teflon coated tag line can be used to extend that limit.

Water flow

The water flow into the pumping system is shown in Fig. 1. Water flows from the formation through the spacer pore space, through the port tube, through the first check valve, and fills the “pump tube”. The “sample tube” is also filled at the same time. The water level rises in the pump tube to the water table for that port.

Setting up the gas pressure source

The water is pumped with gas pressure. The FLUTE pump design is such that there is very low risk of aeration of the sample. The gas source is usually a nitrogen bottle with a regulator for setting the prescribed driving pressure. The arrangement of the FLUTE gas drive system is shown in Fig. 2. The regulator is set to the proper gas pressure defined later by closing the three way valve to prevent gas flow out of the quick connect fitting. The

pressure gauge on the FLUTE pump driver is much more sensitive than the regulator for setting the regulator pressure. The FLUTE pump driver must be securely connected to the regulator at the normal ¼” NPT connection on the regulator outlet.

The regulator is first attached to the top fitting on the gas bottle (a special nitrogen regulator fitting connects to a nitrogen bottle). Tighten the nut securely. Turn the pressure regulator handle counter-clockwise until it moves freely (the no pressure position). Rotate the main valve on the regulator (nearer the bottle) clockwise to fully closed. Open the valve on the bottle (counter clockwise). The main bottle pressure gauge on the regulator will rise to the bottle pressure. Close the regulator valve (clockwise) until the pressure starts to rise on the pressure gauge on the FLUTE pump driver (three way valve closed with no flow out of the quick connect). Adjust the regulator to the desired pressure for purging, provided by FLUTE. Connect the quick connect to the top fitting of the pump tube (see Fig. 2). Open the three way valve to drive the water out of the pump.

Purging

Water is pumped from the tubing by applying the gas pressure to the interface at the static water level in the pump tube (Fig. 1 and 2). The water is driven down in the pump tube and up through the second check valve to the surface via the sample tube. By driving the water with a sufficient gas pressure (the “recommended purge pressure”) to drive all of the water in the pump tube and the sample tube to the surface, the water in the pump tubing is nearly all expelled. The purge stroke (~1 gal. of water) is complete when gas is expelled from the sample tube following the water flow. The pressure in the system must then be vented (i.e., dropped to atmospheric by turning the three way valve to the vent position), to allow the pump tube to refill by flow via the port tube. The recharge flow from the port tube consists of the port tube water, the water in the pore space of the spacer, and water from the medium. Because of the relatively large volume in the pump tube, most of the recharge is from the medium. The recharge will take about as long as the first purge stroke. However, a low conductivity medium will require more time.

Purging the pump tube a second time will remove any of the water that has resided in the spacer and port tube volume. That is highly recommended, since the water resident in the tubing and spacer is probably not typical of the formation water. If the refill has been prompt, the second purge water

volume will be similar to the first stroke. Two more purge strokes, for a total of four purge strokes, are recommended to remove water that may have been in long contact with the liner or spacer. (Note, systems manufactured before May, 2009 use larger pumps and were only stroked twice. The purge volume is slightly larger for this new procedure and takes about the same time as the two stroke system. This new system stresses the liner less at the spacer and has numerous other advantages.)

Sampling

The sampling flow is best driven on the fifth cycle using a “recommended sampling pressure” which is less than that needed to drive gas through the bottom of the pump tube. The pressure recommended is that which will drive the water to near, but not out of, the bottom of the large tube. That recommended pressure, “the sampling pressure,” is calculated in the spreadsheet provided with each system. The pressure regulator is set to the sample pressure, which is lower than the purge pressure. Opening the three way valve will now apply the sample pressure to the system causing flow from the sample tube.

The first flow of the sampling cycle sweeps along droplets of water left in the tubing from the purge cycle. That residual water is depleted of volatile components. Tests have shown that the first tube volume of the sample flow should be discarded as depleted in volatiles (the “discard volume” is also calculated in the spreadsheet). Thereafter, the samples can be collected from the sample tube outflow. The volume to be discarded is shown in the spreadsheet as “discard volume”. The sample tube water flow rate will start fast, then slow, and finally stop. That occurs as the water column being driven approaches the applied pressure/head. The typical sampling pressure drives to within 25 ft. of the bottom of the pump tube (the U). The large buffer zone remaining in the pump tube assures against aeration of the sample.

This procedure should provide an ample sample (~3 liters) of good quality drawn directly from the formation. If a larger sample volume is needed, simply drop the pressure (i.e., vent the three way valve again), let the pump refill and apply the pressure again. No discard is needed for subsequent sampling flows.

Caution: If the pumping system refills very slowly, there may not be sufficient water in the pump to fill the “sample tube” to the surface when the stroke is performed. In that case, there will be spitting of gas from the sample water and it will be followed by a flow of gas only. The sample water should never show “spitting” and the sample stroke should never end with gas flow from the sample tube. The proper sample flow will slow until it stops flowing. Should this evidence of insufficient recharge be observed, allow the pump to refill for a longer time and repeat the sample stroke. One can tag the water level in the large tube, as described in the head measurement procedure, to assure that the pumping system has been sufficient refilled.

Measuring the head in the system

The water level at each port can be manually measured by removing the plug from the top of the pump tube and lowering a slender (~1/4”) electric water level meter until it contacts the water level in the pump tube. It is not recommended to manually tag water levels more than 200 ft below the surface. The wet film adhesion may prevent the removal of the tag line. A special Teflon coated tag line can be used to extend that limit.

The water level in the large tubes may not be the current water level. After sampling, if there is any leakage of the second check valve (sand in the tube, etc...) the water in the sample tube can backflow into the larger tube, adding to the water that fills the large tube during the recharge. Also, if the water level in the formation is dropping between head measurements, the water level in the pump tube will not follow the descent if the first check valve is a good seal. For these two reasons, and for the freezing concern below, it is best to finish the sampling stroke by raising the pressure to the “purge pressure” value to purge the pumping system of all water. Then upon refilling, the level is the current head for each port. If head measurements are made between sampling events, each port’s pumping system should be first be purged one stroke to allow the tubing to refill to the current head value. Always replace the plugs in the top of the pump tubes when finished sampling.

If the water might freeze in the sampling tubing near the surface, purge the entire volume of water from each sampling line, after sampling, before leaving it. Use the recommended purge pressure to remove all water, not the sampling pressure. **Each line should be blowing gas when the purge is**

complete. If the tubes were purged after sampling prior to head measurements, that is sufficient.

Since the Water FLUTE uses PVDF tubing, the purge of the entire system after sampling should not be neglected, even if head measurements are not to be made. This removes the water column in the sampling tube. For deep water tables, the long term pressure of the standing water in the sampling tube might lead to excessive creep of the tubing which is susceptible to “cold flow”, a characteristic of Teflon like materials. (This is not a concern except for very deep water tables (>300 ft).

In most cases, the performance of a final purge of the system after sampling is useful, even if not essential.

Simultaneous purge and sampling of all tubes

The FLUTE pumping system for each port is essentially identical in length, pump volume and elevation in the hole. This allows all ports to be purged and sampled simultaneously for a great saving in sampling time. The only difference for simultaneous sampling is that the pressure source must include a tube to each port fitting at the wellhead. FLUTE offers a manifold pump driver system at extra cost (the single port driver is provided with the Water FLUTE). The recommended purge and sample pressures are the same as used for single port sampling.

In some cases, the buoyancy of the sampling system is so great when emptied of water during the simultaneous purge that the tubing bundle can cause the liner to invert. The sampling volume spreadsheet provided with the liner notes whether the system can be purged simultaneously. This is only a problem for smaller hole diameters, many ports, and a small excess head in the liner. The new pump design allows simultaneous sampling in most situations.

A short summary is provided as the following checklist:

Check List

1. Check/restore the water level in the liner.
2. Connect the gas driver source to the gas drive (pump) tube for the port.

3. Set the regulator to the recommended purge pressure.
4. Turn the three way valve and expel the tube water at the suggested purge pressure. Collect the purged water volume for verification of a good purge. Note the water flow time of the purge stroke (~4 min.).
5. Allow the tubing to refill. Repeat the purge. Collect the purge volume to assure the amount removed is at least the “port tube volume”. Was the refill long enough?
6. Purge a total of four times, more if desired.
7. Allow the tubing to refill for the sample stroke.
8. Reduce the driving pressure to the “sampling pressure”. Apply the pressure and collect the first flow to measure the discard volume. Discard that water. Collect the samples.
9. Perform a final purge of the water out of the sampling lines by raising the driving pressure to the purge pressure value.
10. When the sampling system has refilled, tag the water level, if desired, for the current water table. If a port system is refilling very slowly, tag it at a later time.

See the spreadsheet provided with each *Water FLUTE* for the recommended purge and sampling pressures. Those are the pressures that can also be used for a simultaneous purge of the several ports. The spreadsheet flags the condition where all ports should not be purged simultaneously. In most cases, several, to all, of the ports can be purged simultaneously.

Optimum sampling procedure:

Since it is often desirable to minimize the amount of time that the sample water resides in the pumping tubing, it is useful to note the actual time that is required for the recharge of the system. Since the fill rate slows dramatically for the last portion of the recharge, it is not necessary to wait for a complete refill. For most formations, the recharge is dominated by the tubing pressure drop. In that case, the time required for the purge stroke to be completed is about the same time required for the refill. (The exception is for a tight formation that recharges the tubing very slowly.) Hence the second purge can be started after waiting the same length of time as the first purge endured. If the second purge is of a similar volume (usually somewhat less) than the first purge volume, the refill time was long enough. After the same delay, the sampling stroke can be initiated. This timing of the strokes allows one to reduce the retention time in the pumping system. For the very large sample volumes produced, the refill time can be shortened

even more, as long as the sample volume is adequate after the discard of the first flow.

In some situations, the retention time is still too long. FLUTE can often increase the sample tube and port tube diameters for greater flow rates. However, the standard design is well matched for to a wide range of hole diameters, depths, and water table elevations. For very deep wells, the tubing may need to be of higher pressure capacity for the required driving pressures. For water table depths below 700 ft., this may be a concern. FLUTE initiated a design change from Nylon 11 to PVDF tubing in the Water FLUTE systems in 2002 to avoid any concern about tubing interaction with the sample water. However, the prescribed purge is sufficient for the use of Nylon tubing systems.

For special situations such as a very large difference (>50ft) between the water tables at the ports or large fluctuations in the water table, the pumping system may be extended to greater depths. However, the sampling procedure above is sufficient for that situation also.

Questions: Call 888-333-2433 and ask for Carl Keller, or a field engineer.

Figure 1. Water FLUTE pump system

(Single port system shown for clarity)

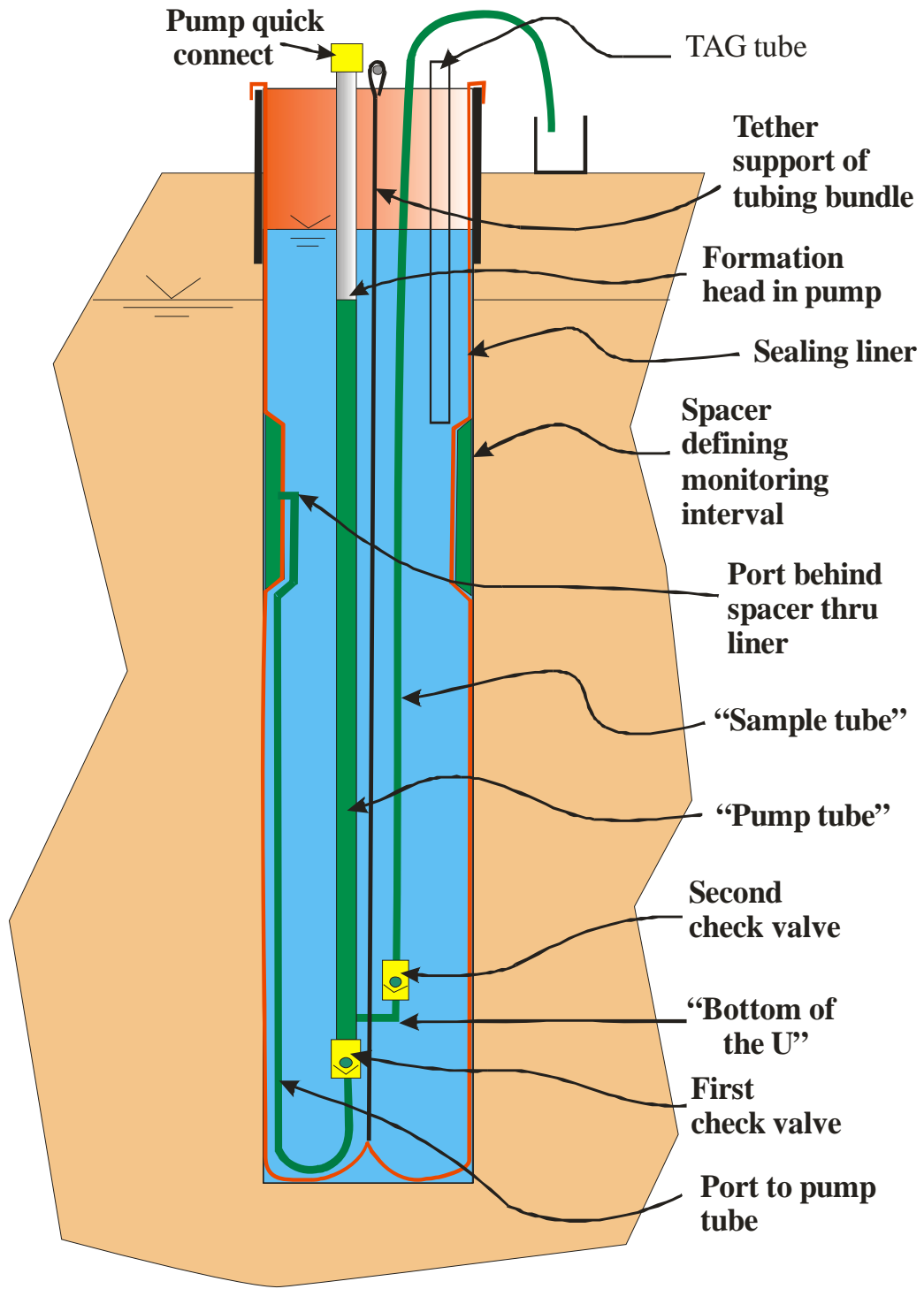
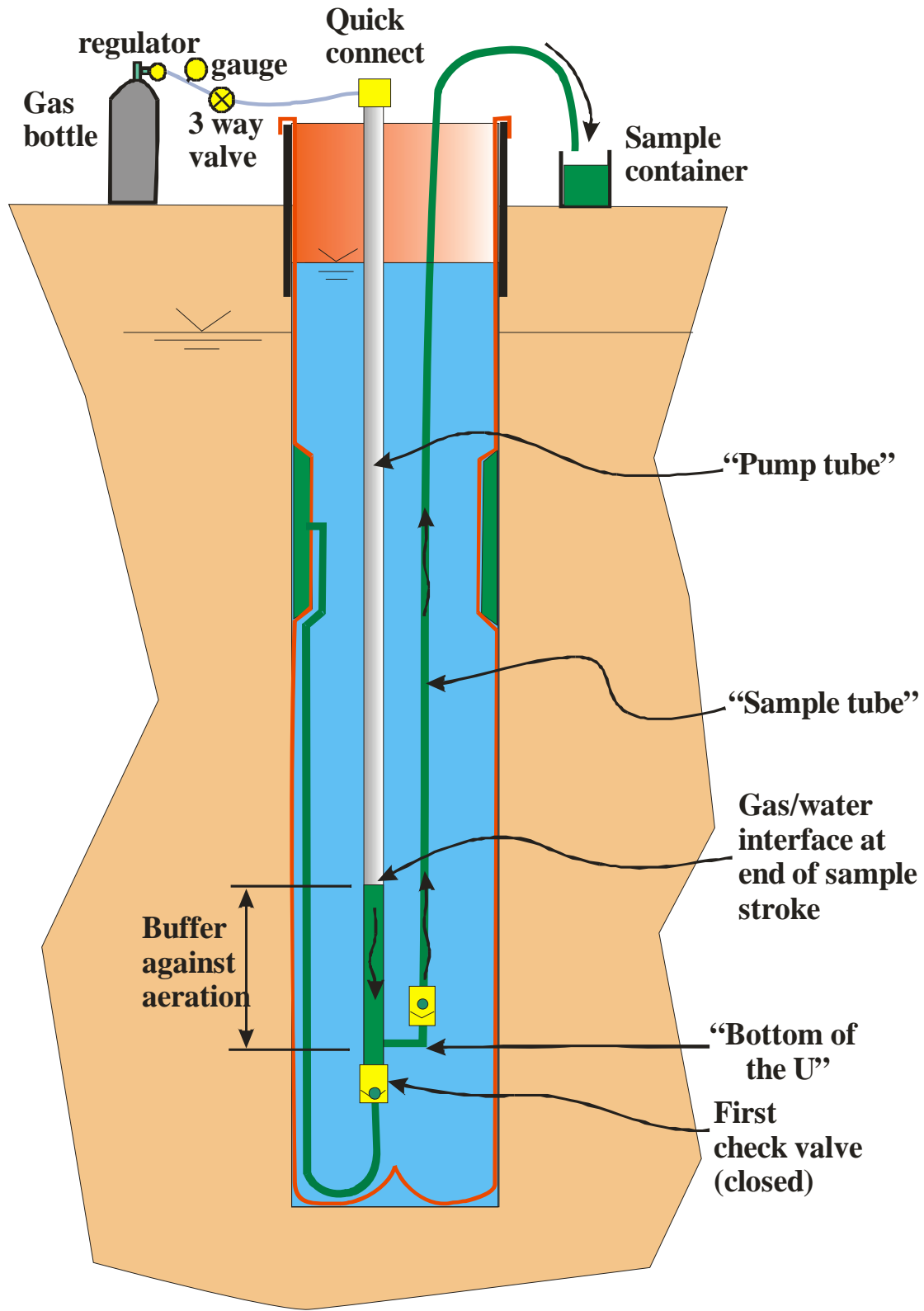


Fig. 2. Pumping Procedure



Daily Tailgate Safety Meeting

Project: 6818P186 & AU18P186

Site/Location: CLE Griggs Walnut

Date: 1/4/19

SITE	Site Conditions:	Weather Conditions:	Road Conditions:
	<input type="checkbox"/> Overhead power	Temp: ~30°F	<input type="checkbox"/> Snow
	<input type="checkbox"/> Canal/River/Ponds	<input type="checkbox"/> Sunny	<input type="checkbox"/> Ice
	<input type="checkbox"/> Wetlands	<input type="checkbox"/> Overcast	<input type="checkbox"/> Muddy
	<input type="checkbox"/> Ditches/Hills/Slopes	<input type="checkbox"/> Rain	<input type="checkbox"/> Wet
	<input type="checkbox"/> Difficult Access Road	<input type="checkbox"/> Windy	<input checked="" type="checkbox"/> Dry
	<input type="checkbox"/> Railroad	<input type="checkbox"/> Snow, Ice	<input type="checkbox"/> Fog
<input type="checkbox"/> Barbed Wire	<input type="checkbox"/> _____	<input type="checkbox"/> _____	
<input type="checkbox"/> Difficult Owner			

SCOPE	Sampling:	Drilling:	Installation:	Remediation:	Site Recon:
	<input type="checkbox"/> Soil vapor	<input type="checkbox"/> DPT	<input type="checkbox"/> Soil vapor	<input type="checkbox"/> AFVR	<input type="checkbox"/> Phase I ESA
	<input type="checkbox"/> Air	<input type="checkbox"/> Auger	<input type="checkbox"/> Type II well	<input type="checkbox"/> System O&M	<input type="checkbox"/> Well Survey
	<input type="checkbox"/> Soil	<input type="checkbox"/> Air	<input type="checkbox"/> Type III well	<input type="checkbox"/> Excavation	<input type="checkbox"/> Utility Locate
	<input type="checkbox"/> Surface water	<input type="checkbox"/> Mud	<input type="checkbox"/> _____	<input type="checkbox"/> Tank Removal	<input type="checkbox"/> Boring Layout
	<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Sonic	<input type="checkbox"/> _____	<input type="checkbox"/> Injection	<input type="checkbox"/> SPCC/SWPPP
	<input type="checkbox"/> Sludge	<input type="checkbox"/> Rock Core	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Survey
<input type="checkbox"/> ACM/LBP	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	

HAZARDS	Physical Hazards:	Biological Hazards:	Chemical Hazards:	Other Hazards:
	<input checked="" type="checkbox"/> Slips, Trips, Falls	<input type="checkbox"/> Ticks	<input type="checkbox"/> LNAPL	<input type="checkbox"/> Excavation
	<input type="checkbox"/> Underground Utilities	<input type="checkbox"/> Mosquitos	<input checked="" type="checkbox"/> VOCs: _____	<input type="checkbox"/> Explosion
	<input type="checkbox"/> Heat Stress/Stroke	<input type="checkbox"/> Chiggers	<input type="checkbox"/> SVOCs: _____	<input type="checkbox"/> Confined Spaces
	<input checked="" type="checkbox"/> Hypothermia	<input type="checkbox"/> Wasps/Yellow Jackets	<input type="checkbox"/> Metals: _____	<input type="checkbox"/> Heavy Equipment
	<input checked="" type="checkbox"/> Noise	<input type="checkbox"/> Snakes	<input type="checkbox"/> SVOCs: _____	<input checked="" type="checkbox"/> Vehicles
	<input checked="" type="checkbox"/> Lifting	<input type="checkbox"/> Bears	<input type="checkbox"/> Pesticides: _____	<input type="checkbox"/> Radiation
<input type="checkbox"/> _____	<input type="checkbox"/> Poison Ivy	<input type="checkbox"/> PCBs: _____	<input type="checkbox"/> _____	
<input type="checkbox"/> _____	<input type="checkbox"/> Fire Ants	<input type="checkbox"/> _____	<input type="checkbox"/> _____	

SAFETY	Level D:	Other PPE:	Special Equipment:	Other:
	<input checked="" type="checkbox"/> Hard Hat	<input type="checkbox"/> Bug Repellent	<input checked="" type="checkbox"/> First Aid Kit	<input type="checkbox"/> _____
	<input checked="" type="checkbox"/> Safety Glasses	<input type="checkbox"/> Permethrin Clothing	<input checked="" type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> _____
	<input checked="" type="checkbox"/> Steel Toe Boots	<input type="checkbox"/> Faceshield	<input type="checkbox"/> Poison Ivy Kit/Technu	<input type="checkbox"/> _____
	<input checked="" type="checkbox"/> Gloves	<input type="checkbox"/> Chainsaw Chaps	<input checked="" type="checkbox"/> Cones, Barricades, Signs	<input type="checkbox"/> _____
	<input checked="" type="checkbox"/> Hearing Protection	<input type="checkbox"/> Snake Chaps	<input type="checkbox"/> GFCI	<input type="checkbox"/> _____
	<input type="checkbox"/> Tyvek	<input type="checkbox"/> Life Jacket	<input type="checkbox"/> PID	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> High Visibility Vest	<input type="checkbox"/> Face Shield	<input type="checkbox"/> LEL/Oxygen	<input type="checkbox"/> _____	
<input type="checkbox"/> _____	<input type="checkbox"/> Respirator	<input type="checkbox"/> Safety Harness	<input type="checkbox"/> _____	
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	

Attendees:

Name	Company	Signature	Reviewed HASP?
Alicia Ormentin	Terracon	<i>Alicia Ormentin</i>	Yes
Ana Solis	Terracon	<i>Ana Solis</i>	Yes
Luis Guerra	City of Los Angeles	<i>Luis Guerra</i>	Yes
GREG SCHNAP	DBS: A	<i>Greg Schnap</i>	YES
Larry Eisdad	Terracon	<i>Larry Eisdad</i>	yes
Jan Sharp	FLUTE	<i>Jan Sharp</i>	yes

APPENDIX C

WELL CONSTRUCTION DETAILS



TABLE 2.1 - FLUTE Well Monitoring Intervals
Griggs and Walnut Groundwater Plume
 Las Cruces, New Mexico
 Terracon Project No. AU18P186

Well ID	Port ID	Monitoring Interval (ft bgs)
GMMW-01	1	210 – 220
	2	270 – 280
	3	330 – 340
	4	420 – 430
	5	460 – 470
	6	515 – 525
	7	550 – 560
GMMW-03	1	140 – 150
	2	225 – 235
	3	270 – 280
	4	320 – 330
	5	410 – 420
	6	460 – 470
GMMW-06	1	100-110
	2	165-175
GMMW-08	1	190 – 200
	2	255 – 265
	3	305 – 315
	4	380 – 390
	5	430 – 440
	6	490 – 500
	7	535 – 545
GMMW-09	1	240 – 250
	2	295 – 305
	3	355 – 365
	4	410 – 420
	5	480 – 490
	6	550 – 560
	7	630 – 640
GMMW-10	1	250 – 260
	2	320 – 330
	3	370 – 380
	4	440 – 450
	5	505 – 515
	6	560 – 570
	7	620 – 630



**TABLE 2.2 - Nested Wells Screened Intervals
Griggs and Walnut Groundwater Plume**

Las Cruces, New Mexico
Terracon Project No. AU18P186

Well ID	Interval ID	Screen Interval (ft bgs)
GWMW-11	GWMW-11S ¹	190 – 205
	GWMW-11I	299.1 – 314.1
	GWMW-11D	525 – 540
GWMW-15	GWMW-15S	289.2 – 304.2
	GWMW-15I	460 – 475
	GWMW-15D	580.6 – 595.6
GWMW-16	GWMW-16S	185 – 205
	GWMW-16D	350 – 370

¹ – S denotes the shallow interval, I denote the intermediate interval, and D denotes the deep interval



**TABLE 2.3 - Monitoring and Passive Diffusion Wells Screened Intevals
Griggs and Walnut Groundwater Plume**

Las Cruces, New Mexico
Terracon Project No. AU18P186

Well ID	Screen Interval (ft bgs)
MW-1	187 – 197
MW-3	180 – 190
MW-4	175 – 185
MW-5	181.8 – 191.8
MW-SF2	184.34 – 199.34
MW-SF5	137.73 – 152.73
MW-SF9	188.03 – 203.03
MW-SF10	193.7 – 203.7
*NGMW-01	115 – 165
*NGMW-02	115 – 165
*NGMW-03	115 – 165

*Passive Diffusion Wells



**TABLE 2.4 - City of Las Cruces Municipal Supply Wells Screened
Intevals**

Griggs and Walnut Groundwater Plume

Las Cruces, New Mexico

Terracon Project No. AU18P186

Well ID	Screen Interval (ft bgs)
CLC 18	380 – 516.5
CLC 20	380 - 673
CLC 26	410 – 510
CLC 27	327 – 730

APPENDIX D

DEPTH TO WATER

TABLE 2.5 - FLUTE Well Water Levels
Griggs and Walnut Groundwater Plume
 Las Cruces, New Mexico
 Terracon Project No. AU18P186

Well ID	Date Measured	DTW (ft bgs)	Comments
GMMW-01	1/14/2019	port 1=92.41	Well vault intact. Ports and sample tubing - fair condition
		port 2=92.33	
		port 3=92.41	
		port 4=92.58	
		port 5=92.66	
		port 6=92.66	
		port 7=92.83	
GMMW-03	1/9/2019	port 1=126.91	Well vault intact. Ports and sample tubing - fair condition
		port 2=129.83	
		port 3=131.00	
GMMW-06	1/14/2019	port 1=97.5	Well vault intact. Ports and sample tubing - fair condition
		port 2=96.75	
GMMW-08	1/7/2019	port 3=174.75	Well vault intact. Port 2 clogged, Port 1 capped.
		port 4=175.33	
		port 5=175.29	
		port 6=175.92	
		port 7=175.33	
GMMW-09	1/10/2019	port 1=213.00	Well vault intact. Ports and sample tubing - fair condition
		port 2=212.16	
		port 3=211.83	
		port 4=212.13	
		port 5=212.17	
		port 6=212.42	
		port 7=212.00	
GMMW-10	1/8/2019	port 1=223.66	Well vault intact. Ports and sample tubing - fair condition
		port 2=223.63	
		port 3=223.63	
		port 4=223.66	
		port 5=223.66	
		port 6=223.66	
		port 7=223.66	

Note: Depth to water (DTW) in Port 1 measurements are in feet below the top of the FLUTE well protective casing.



TABLE 2.6 - Nested Well Water Levels
Griggs and Walnut Groundwater Plume
 Las Cruces, New Mexico
 Terracon Project No. AU18P186

Well ID	Date Measured	DTW (ft bgs)	TD (ft bgs)	Comments
GWMW-11S	12/13/2018	178.77	205	Well vault and casing intact.
GWMW-11I	12/13/2018	186.57	314.1	Well vault and casing intact.
GWMW-11D	12/13/2018	186.95	540	Well vault and casing intact.
GWMW-15S	12/13/2018	241.35	304.2	Well vault and casing intact.
	5/2/2019	241.1		Well vault and casing intact.
GWMW-15I	12/13/2018	241.83	475	Well vault and casing intact.
	5/2/2019	241.7		Well vault and casing intact.
GWMW-15D	12/13/2018	241.93	595	Well vault and casing intact.
	5/2/2019	241.7		Well vault and casing intact.
GWMW-16S	12/14/2018	190.06	205	Well surface completion, bollards, and casing intact.
GWMW-16D	12/14/2018	196.11	370	Well surface completion, bollards, and casing intact.

Note: DTW and total depth (TD) measurements are in feet below the established measuring point.



TABLE 2.7 - Monitoring and Passive Diffusion Wells Water Levels
Griggs and Walnut Groundwater Plume
Las Cruces, New Mexico
Terracon Project No. AU18P186

Well ID	Date Measured	DTW (ft bgs)	TD (ft bgs)	Comments
MW-1	12/13/2018	193.6	195.99	Well vault and casing intact.
MW-3	12/13/2018	DRY	189.71	Well vault and casing intact.
MW-4	12/13/2018	DRY	185.71	Well vault and casing intact.
MW-5	12/13/2018	DRY	191.8	Well vault and casing intact.
MW-SF2	12/13/2018	191.8	200	Well vault and casing intact.
MW-SF5	12/13/2018	148.7	153.35	Well vault and casing intact.
MW-SF9	12/14/2018	191.75	203.1	Well vault and casing intact.
MW-SF10	12/13/2018	195.8	204.44	Well vault and casing intact.
*NGMW-01	12/13/2018	127.05	170	Well vault and casing intact.
*NGMW-02	12/13/2018	132.4	170	Well vault and casing intact.
*NGMW-03	12/12/2018	137.04	170	Well vault and casing intact.

Note: DTW and total depth (TD) measurements are in feet below the established measuring point.



TABLE 2.8 - City of Las Cruces Production Wells Water Levels
Griggs and Walnut Groundwater Plume
Las Cruces, New Mexico
Terracon Project No. AU18P186

Well ID	Date Measured	DTW (ft bgs)	Comments
CLC 18	12/14/2018	209.7	Wellhead and pump equipment were observed to be intact. No damage noted.
CLC 20	5/2/2019	238.7	Well taken out of service. Pump has been apparently removed, some equipment remains within well casing.
CLC 26	12/14/2018	178.9	Well taken out of service. Pump removed.
CLC 27	12/14/2018	261	Wellhead and pump equipment were observed to be intact. No damage noted.

Note: DTW and total depth (TD) measurements are in feet below the established measuring point.

APPENDIX E

SAMPLING METHODS



TABLE 2.9a - FLUTE Wells Sampling Methods
Griggs and Walnut Groundwater Plume
 Las Cruces, New Mexico
 Terracon Project No. AU18P186

Well ID	port	Date	Time	Sampling Method	Sample No.
GWMW-01	1	1/11/2019	12:12	N ₂	GWMW01-01
	2	1/11/2019	12:16	N ₂	GWMW01-02
	3	1/11/2019	12:19	N ₂	GWMW01-03
	4	1/11/2019	12:22	N ₂	GWMW01-04
	5	1/11/2019	12:48	N ₂	GWMW01-05
	6	1/11/2019	12:55	N ₂	GWMW01-06
	7	1/11/2019	12:57	N ₂	GWMW01-07
GWMW-06	1	1/12/2019	15:15	N ₂	GWMW06-01
	2	1/12/2019	15:13	N ₂	GWMW06-02
GWMW-03	1	1/8/2019	17:55	N ₂	GWMW03-01
	2	1/8/2019	18:10	N ₂	GWMW03-02
	3	1/8/2019	18:28	N ₂	GWMW03-03
GWMW-08	3	1/4/2019	13:54	N ₂	GWMW08-03
	4	1/4/2019	14:05	N ₂	GWMW08-04
	5	1/4/2019	14:24	N ₂	GWMW08-05
	6	1/4/2019	14:40	N ₂	GWMW08-06
	7	1/4/2019	14:48	N ₂	GWMW08-07
GWMW-09	1	1/9/2019	14:09	N ₂	GWMW09-01
	2	1/9/2019	14:28	N ₂	GWMW09-02
	3	1/9/2019	14:51	N ₂	GWMW09-03
	4	1/9/2019	15:20	N ₂	GWMW09-04
	5	1/9/2019	15:41	N ₂	GWMW09-05
	6	1/9/2019	16:06	N ₂	GWMW09-06
	7	1/9/2019	16:25	N ₂	GWMW09-07
GWMW-10	1	1/7/2019	17:19	N ₂	GWMW10-01
	2	1/7/2019	15:41	N ₂	GWMW10-02
	3	1/7/2019	15:59	N ₂	GWMW10-03
	4	1/7/2019	16:15	N ₂	GWMW10-04
	5	1/7/2019	16:30	N ₂	GWMW10-05
	6	1/7/2019	16:45	N ₂	GWMW10-06
	7	1/7/2019	17:00	N ₂	GWMW10-07



TABLE 2.9b - Nested Wells Sampling Methods
Griggs and Walnut Groundwater Plume
Las Cruces, New Mexico
Terracon Project No. AU18P186

Well ID	Date	Time	Sampling Method	Sample No.
GWMW-11S	12/21/2018	12:10	Hydrasleeve	GWMW11-S
GWMW-11I	12/21/2018	12:30	Hydrasleeve	GWMW11-I
GWMW-11D	12/21/2018	12:50	Hydrasleeve	GWMW11-D
GWMW-15S	12/24/2018	10:55	Hydrasleeve	GWMW15-S
GWMW-15I	12/24/2018	11:15	Hydrasleeve	GWMW15-I
GWMW-15D	12/24/2018	11:37	Hydrasleeve	GWMW15-D
GWMW-16S	12/21/2018	15:40	Hydrasleeve	GWMW16-S
GWMW-16D	12/21/2018	16:03	Hydrasleeve	GWMW16-D



**TABLE 2.9c - Monitoring and Passive Diffusion Wells Sampling Methods
Griggs and Walnut Groundwater Plume**

Las Cruces, New Mexico

Terracon Project No. AU18P186

Well ID	Date	Time	Sampling Method	Sample No.
MW-1	<i>Unable to sample due to insufficient water within casing.</i>			
MW-3	<i>Unable to sample due to insufficient water within casing.</i>			
MW-4	<i>Unable to sample due to insufficient water within casing.</i>			
MW-5	<i>Unable to sample due to insufficient water within casing.</i>			
MW-SF2	<i>Unable to sample due to insufficient water within casing.</i>			
MW-SF5	<i>Unable to sample due to insufficient water within casing.</i>			
MW-SF9	12/24/2018	13:35	Hydrasleeve	MWSF9
MW-SF10	12/24/2018	14:25	Hydrasleeve	MWSF10
*NGMW-01				
PDB 1	1/29/2019	12:39	PDBs set 1/15/19	NGMW01-01
PDB 2	1/29/2019	12:45		NGMW01-02
PDB 3	1/29/2019	12:52		NGMW01-03
PDB 4	1/29/2019	12:58		NGMW01-04
PDB 5	1/29/2019	13:02		NGMW01-05
PDB 6	1/29/2019	13:06		NGMW01-06
PDB 7	1/29/2019	13:28		NGMW01-07
PDB 8	1/29/2019	13:33		NGMW01-08
PDB 9	1/29/2019	13:38		NGMW01-09
PDB10	1/29/2019	13:43		NGMW01-10
*NGMW-02				
PDB 1	1/30/2019	9:10	PDBs set 1/15/19	NGMW02-01
PDB 2	1/30/2019	9:17		NGMW02-02
PDB 3	1/30/2019	9:21		NGMW02-03
PDB 4	1/30/2019	9:27		NGMW02-04
PDB 5	1/30/2019	9:33		NGMW02-05
PDB 6	1/30/2019	9:37		NGMW02-06
PDB 7	1/30/2019	9:48		NGMW02-07
PDB 8	1/30/2019	9:53		NGMW02-08
PDB 9	1/30/2019	9:58		NGMW02-09
*NGMW-03				
PDB 1	1/30/2019	10:53	PDBs set 1/15/19	NGMW03-01
PDB 2	1/30/2019	10:56		NGMW03-02
PDB 3	1/30/2019	11:01		NGMW03-03
PDB 4	1/30/2019	11:06		NGMW03-04
PDB 5	1/30/2019	11:13		NGMW03-05
PDB 6	1/30/2019	11:17		NGMW03-06
PDB 7	1/30/2019	11:25		NGMW03-07
PDB 8	1/30/2019	11:35		NGMW03-08



**TABLE 2.9d - City of Las Cruces Municipal Water Supply Wells
Sampling Methods**

Griggs and Walnut Groundwater Plume

Las Cruces, New Mexico

Terracon Project No. AU18P186

Well ID	Date	Time	Sampling Method	Sample No.
CLC 18	12/26/2018	11:55	Grab Sample	CLC18
CLC 20	5/2/2019	<i>Unable to sample due to insufficient water within casing or casing obstruction.</i>		
CLC 26	12/27/2018	15:00	Low Flow	CLC26
CLC 27	12/26/2018	12:32	Grab Sample	CLC27

APPENDIX F

QA/QC SAMPLING INFORMATION



TABLE 2.10 - QA/QC Sample Collection Information
Griggs and Walnut Groundwater Plume
 Las Cruces, New Mexico
 Terracon Project No. AU18P186

Equipment Blanks	Field Blanks	Duplicates	MS/MSD
*EB182412	FB181221	MWSF9-Dup	GWMW09-02-MSD
	FB182412	GWMW10-02-DUP	NGMW01-06-MSD
	FB182612	GWMW09-02-DUP	NGMW03-07-MSD
	FB182712	GWMW01-05-DUP	
	FB190201	NGMW01-06-DUP	
	FB190301	NGMW02-06-DUP	
	FB190401	NGMW03-07-DUP	
	FB190701		
	FB190801		
	FB190901		
	FB191101		
	FB191201		
	FB192901		
	FB193001		

APPENDIX G

RESULTS OF LABORATORY ANALYSES



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 31, 2018

Surasi Gandara

Terracon

4450 Bataan Memorial E

Las Cruces, NM 88005

TEL: (575) 527-1700

FAX (575) 527-1092

RE: CLC Walnut & Griggs

OrderNo.: 1812D43

Dear Surasi Gandara:

Hall Environmental Analysis Laboratory received 7 sample(s) on 12/22/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812D43

Date Reported: 12/31/2018

CLIENT: Terracon

Client Sample ID: GWMW-11-S

Project: CLC Walnut & Griggs

Collection Date: 12/21/2018 12:10:00 PM

Lab ID: 1812D43-001

Matrix: AQUEOUS

Received Date: 12/22/2018 10:07:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
Toluene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
Ethylbenzene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
Naphthalene	ND	2.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
1-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
2-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
Acetone	ND	10		µg/L	1	12/28/2018 9:39:00 PM	R56590
Bromobenzene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
Bromodichloromethane	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
Bromoform	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
Bromomethane	ND	3.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
2-Butanone	ND	10		µg/L	1	12/28/2018 9:39:00 PM	R56590
Carbon disulfide	ND	10		µg/L	1	12/28/2018 9:39:00 PM	R56590
Carbon Tetrachloride	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
Chlorobenzene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
Chloroethane	ND	2.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
Chloroform	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
Chloromethane	ND	3.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
2-Chlorotoluene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
4-Chlorotoluene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
cis-1,2-DCE	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
Dibromochloromethane	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
Dibromomethane	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
1,1-Dichloroethane	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
1,1-Dichloroethene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
1,2-Dichloropropane	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
1,3-Dichloropropane	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
2,2-Dichloropropane	ND	2.0		µg/L	1	12/28/2018 9:39:00 PM	R56590

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812D43

Date Reported: 12/31/2018

CLIENT: Terracon

Client Sample ID: GWMW-11-S

Project: CLC Walnut & Griggs

Collection Date: 12/21/2018 12:10:00 PM

Lab ID: 1812D43-001

Matrix: AQUEOUS

Received Date: 12/22/2018 10:07:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
Hexachlorobutadiene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
2-Hexanone	ND	10		µg/L	1	12/28/2018 9:39:00 PM	R56590
Isopropylbenzene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
4-Isopropyltoluene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
4-Methyl-2-pentanone	ND	10		µg/L	1	12/28/2018 9:39:00 PM	R56590
Methylene Chloride	ND	3.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
n-Butylbenzene	ND	3.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
n-Propylbenzene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
sec-Butylbenzene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
Styrene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
tert-Butylbenzene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
trans-1,2-DCE	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
Trichlorofluoromethane	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
Vinyl chloride	ND	1.0		µg/L	1	12/28/2018 9:39:00 PM	R56590
Xylenes, Total	ND	1.5		µg/L	1	12/28/2018 9:39:00 PM	R56590
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	12/28/2018 9:39:00 PM	R56590
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	12/28/2018 9:39:00 PM	R56590
Surr: Dibromofluoromethane	106	70-130		%Rec	1	12/28/2018 9:39:00 PM	R56590
Surr: Toluene-d8	98.9	70-130		%Rec	1	12/28/2018 9:39:00 PM	R56590

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812D43

Date Reported: 12/31/2018

CLIENT: Terracon

Client Sample ID: GWMW-11-I

Project: CLC Walnut & Griggs

Collection Date: 12/21/2018 12:30:00 PM

Lab ID: 1812D43-002

Matrix: AQUEOUS

Received Date: 12/22/2018 10:07:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
Toluene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
Ethylbenzene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
Naphthalene	ND	2.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
1-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
2-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
Acetone	ND	10		µg/L	1	12/28/2018 10:50:00 PM	R56590
Bromobenzene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
Bromodichloromethane	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
Bromoform	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
Bromomethane	ND	3.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
2-Butanone	ND	10		µg/L	1	12/28/2018 10:50:00 PM	R56590
Carbon disulfide	ND	10		µg/L	1	12/28/2018 10:50:00 PM	R56590
Carbon Tetrachloride	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
Chlorobenzene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
Chloroethane	ND	2.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
Chloroform	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
Chloromethane	ND	3.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
2-Chlorotoluene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
4-Chlorotoluene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
cis-1,2-DCE	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
Dibromochloromethane	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
Dibromomethane	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
1,1-Dichloroethane	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
1,1-Dichloroethene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
1,2-Dichloropropane	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
1,3-Dichloropropane	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
2,2-Dichloropropane	ND	2.0		µg/L	1	12/28/2018 10:50:00 PM	R56590

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812D43

Date Reported: 12/31/2018

CLIENT: Terracon

Client Sample ID: GWMW-11-I

Project: CLC Walnut & Griggs

Collection Date: 12/21/2018 12:30:00 PM

Lab ID: 1812D43-002

Matrix: AQUEOUS

Received Date: 12/22/2018 10:07:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
Hexachlorobutadiene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
2-Hexanone	ND	10		µg/L	1	12/28/2018 10:50:00 PM	R56590
Isopropylbenzene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
4-Isopropyltoluene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
4-Methyl-2-pentanone	ND	10		µg/L	1	12/28/2018 10:50:00 PM	R56590
Methylene Chloride	ND	3.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
n-Butylbenzene	ND	3.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
n-Propylbenzene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
sec-Butylbenzene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
Styrene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
tert-Butylbenzene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
Tetrachloroethene (PCE)	4.3	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
trans-1,2-DCE	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
Trichlorofluoromethane	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
Vinyl chloride	ND	1.0		µg/L	1	12/28/2018 10:50:00 PM	R56590
Xylenes, Total	ND	1.5		µg/L	1	12/28/2018 10:50:00 PM	R56590
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	12/28/2018 10:50:00 PM	R56590
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	12/28/2018 10:50:00 PM	R56590
Surr: Dibromofluoromethane	105	70-130		%Rec	1	12/28/2018 10:50:00 PM	R56590
Surr: Toluene-d8	98.1	70-130		%Rec	1	12/28/2018 10:50:00 PM	R56590

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812D43

Date Reported: 12/31/2018

CLIENT: Terracon

Client Sample ID: FB181221

Project: CLC Walnut & Griggs

Collection Date: 12/21/2018 1:05:00 PM

Lab ID: 1812D43-003

Matrix: AQUEOUS

Received Date: 12/22/2018 10:07:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
Toluene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
Ethylbenzene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
Naphthalene	ND	2.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
1-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
2-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
Acetone	ND	10		µg/L	1	12/28/2018 11:14:00 PM	R56590
Bromobenzene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
Bromodichloromethane	1.0	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
Bromoform	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
Bromomethane	ND	3.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
2-Butanone	ND	10		µg/L	1	12/28/2018 11:14:00 PM	R56590
Carbon disulfide	ND	10		µg/L	1	12/28/2018 11:14:00 PM	R56590
Carbon Tetrachloride	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
Chlorobenzene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
Chloroethane	ND	2.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
Chloroform	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
Chloromethane	ND	3.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
2-Chlorotoluene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
4-Chlorotoluene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
cis-1,2-DCE	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
Dibromochloromethane	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
Dibromomethane	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
1,1-Dichloroethane	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
1,1-Dichloroethene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
1,2-Dichloropropane	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
1,3-Dichloropropane	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
2,2-Dichloropropane	ND	2.0		µg/L	1	12/28/2018 11:14:00 PM	R56590

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812D43

Date Reported: 12/31/2018

CLIENT: Terracon

Client Sample ID: FB181221

Project: CLC Walnut & Griggs

Collection Date: 12/21/2018 1:05:00 PM

Lab ID: 1812D43-003

Matrix: AQUEOUS

Received Date: 12/22/2018 10:07:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
Hexachlorobutadiene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
2-Hexanone	ND	10		µg/L	1	12/28/2018 11:14:00 PM	R56590
Isopropylbenzene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
4-Isopropyltoluene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
4-Methyl-2-pentanone	ND	10		µg/L	1	12/28/2018 11:14:00 PM	R56590
Methylene Chloride	ND	3.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
n-Butylbenzene	ND	3.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
n-Propylbenzene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
sec-Butylbenzene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
Styrene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
tert-Butylbenzene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
trans-1,2-DCE	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
Trichlorofluoromethane	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
Vinyl chloride	ND	1.0		µg/L	1	12/28/2018 11:14:00 PM	R56590
Xylenes, Total	ND	1.5		µg/L	1	12/28/2018 11:14:00 PM	R56590
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	12/28/2018 11:14:00 PM	R56590
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	12/28/2018 11:14:00 PM	R56590
Surr: Dibromofluoromethane	107	70-130		%Rec	1	12/28/2018 11:14:00 PM	R56590
Surr: Toluene-d8	100	70-130		%Rec	1	12/28/2018 11:14:00 PM	R56590

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812D43

Date Reported: 12/31/2018

CLIENT: Terracon

Client Sample ID: GWMW-11-D

Project: CLC Walnut & Griggs

Collection Date: 12/21/2018 12:50:00 PM

Lab ID: 1812D43-004

Matrix: AQUEOUS

Received Date: 12/22/2018 10:07:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
Toluene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
Ethylbenzene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
Naphthalene	ND	2.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
1-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
2-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
Acetone	ND	10		µg/L	1	12/28/2018 11:37:00 PM	R56590
Bromobenzene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
Bromodichloromethane	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
Bromoform	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
Bromomethane	ND	3.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
2-Butanone	ND	10		µg/L	1	12/28/2018 11:37:00 PM	R56590
Carbon disulfide	ND	10		µg/L	1	12/28/2018 11:37:00 PM	R56590
Carbon Tetrachloride	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
Chlorobenzene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
Chloroethane	ND	2.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
Chloroform	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
Chloromethane	ND	3.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
2-Chlorotoluene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
4-Chlorotoluene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
cis-1,2-DCE	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
Dibromochloromethane	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
Dibromomethane	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
1,1-Dichloroethane	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
1,1-Dichloroethene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
1,2-Dichloropropane	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
1,3-Dichloropropane	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
2,2-Dichloropropane	ND	2.0		µg/L	1	12/28/2018 11:37:00 PM	R56590

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812D43

Date Reported: 12/31/2018

CLIENT: Terracon

Client Sample ID: GWMW-11-D

Project: CLC Walnut & Griggs

Collection Date: 12/21/2018 12:50:00 PM

Lab ID: 1812D43-004

Matrix: AQUEOUS

Received Date: 12/22/2018 10:07:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
Hexachlorobutadiene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
2-Hexanone	ND	10		µg/L	1	12/28/2018 11:37:00 PM	R56590
Isopropylbenzene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
4-Isopropyltoluene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
4-Methyl-2-pentanone	ND	10		µg/L	1	12/28/2018 11:37:00 PM	R56590
Methylene Chloride	ND	3.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
n-Butylbenzene	ND	3.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
n-Propylbenzene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
sec-Butylbenzene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
Styrene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
tert-Butylbenzene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
trans-1,2-DCE	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
Trichlorofluoromethane	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
Vinyl chloride	ND	1.0		µg/L	1	12/28/2018 11:37:00 PM	R56590
Xylenes, Total	ND	1.5		µg/L	1	12/28/2018 11:37:00 PM	R56590
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	12/28/2018 11:37:00 PM	R56590
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/28/2018 11:37:00 PM	R56590
Surr: Dibromofluoromethane	106	70-130		%Rec	1	12/28/2018 11:37:00 PM	R56590
Surr: Toluene-d8	98.8	70-130		%Rec	1	12/28/2018 11:37:00 PM	R56590

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812D43

Date Reported: 12/31/2018

CLIENT: Terracon

Client Sample ID: GWMW-16-S

Project: CLC Walnut & Griggs

Collection Date: 12/21/2018 3:40:00 PM

Lab ID: 1812D43-005

Matrix: AQUEOUS

Received Date: 12/22/2018 10:07:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
Toluene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
Ethylbenzene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
Naphthalene	ND	2.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
1-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
2-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
Acetone	ND	10		µg/L	1	12/29/2018 12:01:00 AM	R56590
Bromobenzene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
Bromodichloromethane	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
Bromoform	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
Bromomethane	ND	3.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
2-Butanone	ND	10		µg/L	1	12/29/2018 12:01:00 AM	R56590
Carbon disulfide	ND	10		µg/L	1	12/29/2018 12:01:00 AM	R56590
Carbon Tetrachloride	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
Chlorobenzene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
Chloroethane	ND	2.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
Chloroform	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
Chloromethane	ND	3.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
2-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
4-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
cis-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
Dibromochloromethane	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
Dibromomethane	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
1,1-Dichloroethane	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
1,1-Dichloroethene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
1,2-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
1,3-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
2,2-Dichloropropane	ND	2.0		µg/L	1	12/29/2018 12:01:00 AM	R56590

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812D43

Date Reported: 12/31/2018

CLIENT: Terracon

Client Sample ID: GWMW-16-S

Project: CLC Walnut & Griggs

Collection Date: 12/21/2018 3:40:00 PM

Lab ID: 1812D43-005

Matrix: AQUEOUS

Received Date: 12/22/2018 10:07:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
Hexachlorobutadiene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
2-Hexanone	ND	10		µg/L	1	12/29/2018 12:01:00 AM	R56590
Isopropylbenzene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
4-Isopropyltoluene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
4-Methyl-2-pentanone	ND	10		µg/L	1	12/29/2018 12:01:00 AM	R56590
Methylene Chloride	ND	3.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
n-Butylbenzene	ND	3.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
n-Propylbenzene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
sec-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
Styrene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
tert-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
Tetrachloroethene (PCE)	5.1	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
trans-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
Trichlorofluoromethane	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
Vinyl chloride	ND	1.0		µg/L	1	12/29/2018 12:01:00 AM	R56590
Xylenes, Total	ND	1.5		µg/L	1	12/29/2018 12:01:00 AM	R56590
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	12/29/2018 12:01:00 AM	R56590
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	12/29/2018 12:01:00 AM	R56590
Surr: Dibromofluoromethane	107	70-130		%Rec	1	12/29/2018 12:01:00 AM	R56590
Surr: Toluene-d8	98.8	70-130		%Rec	1	12/29/2018 12:01:00 AM	R56590

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812D43

Date Reported: 12/31/2018

CLIENT: Terracon

Client Sample ID: GWMW-16-D

Project: CLC Walnut & Griggs

Collection Date: 12/21/2018 4:03:00 PM

Lab ID: 1812D43-006

Matrix: AQUEOUS

Received Date: 12/22/2018 10:07:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
Toluene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
Ethylbenzene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
Naphthalene	ND	2.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
1-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
2-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
Acetone	ND	10		µg/L	1	12/29/2018 12:24:00 AM	R56590
Bromobenzene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
Bromodichloromethane	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
Bromoform	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
Bromomethane	ND	3.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
2-Butanone	ND	10		µg/L	1	12/29/2018 12:24:00 AM	R56590
Carbon disulfide	ND	10		µg/L	1	12/29/2018 12:24:00 AM	R56590
Carbon Tetrachloride	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
Chlorobenzene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
Chloroethane	ND	2.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
Chloroform	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
Chloromethane	ND	3.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
2-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
4-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
cis-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
Dibromochloromethane	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
Dibromomethane	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
1,1-Dichloroethane	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
1,1-Dichloroethene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
1,2-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
1,3-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
2,2-Dichloropropane	ND	2.0		µg/L	1	12/29/2018 12:24:00 AM	R56590

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812D43

Date Reported: 12/31/2018

CLIENT: Terracon

Client Sample ID: GWMW-16-D

Project: CLC Walnut & Griggs

Collection Date: 12/21/2018 4:03:00 PM

Lab ID: 1812D43-006

Matrix: AQUEOUS

Received Date: 12/22/2018 10:07:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
Hexachlorobutadiene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
2-Hexanone	ND	10		µg/L	1	12/29/2018 12:24:00 AM	R56590
Isopropylbenzene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
4-Isopropyltoluene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
4-Methyl-2-pentanone	ND	10		µg/L	1	12/29/2018 12:24:00 AM	R56590
Methylene Chloride	ND	3.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
n-Butylbenzene	ND	3.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
n-Propylbenzene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
sec-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
Styrene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
tert-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
Tetrachloroethene (PCE)	16	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
trans-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
Trichloroethene (TCE)	1.3	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
Trichlorofluoromethane	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
Vinyl chloride	ND	1.0		µg/L	1	12/29/2018 12:24:00 AM	R56590
Xylenes, Total	ND	1.5		µg/L	1	12/29/2018 12:24:00 AM	R56590
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	12/29/2018 12:24:00 AM	R56590
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	12/29/2018 12:24:00 AM	R56590
Surr: Dibromofluoromethane	106	70-130		%Rec	1	12/29/2018 12:24:00 AM	R56590
Surr: Toluene-d8	98.3	70-130		%Rec	1	12/29/2018 12:24:00 AM	R56590

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812D43

Date Reported: 12/31/2018

CLIENT: Terracon

Client Sample ID: Trip Blank

Project: CLC Walnut & Griggs

Collection Date:

Lab ID: 1812D43-007

Matrix: TRIP BLANK

Received Date: 12/22/2018 10:07:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
Toluene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
Ethylbenzene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
Naphthalene	ND	2.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
1-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
2-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
Acetone	ND	10		µg/L	1	12/29/2018 12:48:00 AM	R56590
Bromobenzene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
Bromodichloromethane	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
Bromoform	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
Bromomethane	ND	3.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
2-Butanone	ND	10		µg/L	1	12/29/2018 12:48:00 AM	R56590
Carbon disulfide	ND	10		µg/L	1	12/29/2018 12:48:00 AM	R56590
Carbon Tetrachloride	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
Chlorobenzene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
Chloroethane	ND	2.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
Chloroform	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
Chloromethane	ND	3.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
2-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
4-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
cis-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
Dibromochloromethane	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
Dibromomethane	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
1,1-Dichloroethane	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
1,1-Dichloroethene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
1,2-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
1,3-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
2,2-Dichloropropane	ND	2.0		µg/L	1	12/29/2018 12:48:00 AM	R56590

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812D43

Date Reported: 12/31/2018

CLIENT: Terracon

Client Sample ID: Trip Blank

Project: CLC Walnut & Griggs

Collection Date:

Lab ID: 1812D43-007

Matrix: TRIP BLANK

Received Date: 12/22/2018 10:07:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
Hexachlorobutadiene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
2-Hexanone	ND	10		µg/L	1	12/29/2018 12:48:00 AM	R56590
Isopropylbenzene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
4-Isopropyltoluene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
4-Methyl-2-pentanone	ND	10		µg/L	1	12/29/2018 12:48:00 AM	R56590
Methylene Chloride	ND	3.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
n-Butylbenzene	ND	3.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
n-Propylbenzene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
sec-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
Styrene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
tert-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
trans-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
Trichlorofluoromethane	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
Vinyl chloride	ND	1.0		µg/L	1	12/29/2018 12:48:00 AM	R56590
Xylenes, Total	ND	1.5		µg/L	1	12/29/2018 12:48:00 AM	R56590
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	12/29/2018 12:48:00 AM	R56590
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	12/29/2018 12:48:00 AM	R56590
Surr: Dibromofluoromethane	107	70-130		%Rec	1	12/29/2018 12:48:00 AM	R56590
Surr: Toluene-d8	97.3	70-130		%Rec	1	12/29/2018 12:48:00 AM	R56590

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1812D43

31-Dec-18

Client: Terracon
Project: CLC Walnut & Griggs

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES								
Client ID: LCSW	Batch ID: R56590	RunNo: 56590								
Prep Date:	Analysis Date: 12/28/2018	SeqNo: 1895813 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	97.7	70	130			
Toluene	20	1.0	20.00	0	98.1	70	130			
Chlorobenzene	20	1.0	20.00	0	99.6	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	98.6	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	96.0	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	10		10.00		99.8	70	130			

Sample ID: rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R56590	RunNo: 56590								
Prep Date:	Analysis Date: 12/28/2018	SeqNo: 1895814 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1812D43

31-Dec-18

Client: Terracon
Project: CLC Walnut & Griggs

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R56590	RunNo:	56590					
Prep Date:		Analysis Date:	12/28/2018	SeqNo:	1895814	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1812D43

31-Dec-18

Client: Terracon
Project: CLC Walnut & Griggs

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R56590	RunNo:	56590					
Prep Date:		Analysis Date:	12/28/2018	SeqNo:	1895814	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.8		10.00		98.1	70	130			

Sample ID	1812d43-001ams	SampType:	MS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	GMMW-11-S	Batch ID:	R56590	RunNo:	56590					
Prep Date:		Analysis Date:	12/28/2018	SeqNo:	1895830	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	20	1.0	20.00	0.4940	99.2	70	130			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	105	67.6	130			
Trichloroethene (TCE)	21	1.0	20.00	0	106	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		110	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	9.9		10.00		99.5	70	130			

Sample ID	1812d43-001amsd	SampType:	MSD	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	GMMW-11-S	Batch ID:	R56590	RunNo:	56590					
Prep Date:		Analysis Date:	12/28/2018	SeqNo:	1895831	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130	3.46	20	
Toluene	20	1.0	20.00	0.4940	95.1	70	130	4.08	20	
Chlorobenzene	20	1.0	20.00	0	97.8	70	130	3.52	20	
1,1-Dichloroethene	20	1.0	20.00	0	102	67.6	130	2.87	20	
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130	4.49	20	
Surr: 1,2-Dichloroethane-d4	11		10.00		109	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		108	70	130	0	0	
Surr: Toluene-d8	9.8		10.00		97.9	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: TER-LC

Work Order Number: 1812D43

RcptNo: 1

Received By: John Caldwell 12/22/2018 10:07:00 AM
 Completed By: Leah Baca 12/24/2018 10:24:07 AM
 Reviewed By: *Leah* 12/24/18

John Caldwell
Leah Baca
 Labeled by *JO*

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: *JO 12/24/18*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	Good	Not Present			

Chain-of-Custody Record

Client: TERRACON LAS CRUCES
 Mailing Address: 4465 Puebloan Memorial East
LAS CRUCES, NM 88011
 Phone #: 575-507-1700
 email or Fax#: Lauri.Eistod@Terracon.com

QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation: Az Compliance
 NELAC Other
 EDD (Type)

Turn-Around Time:
 Standard Rush
 Project Name:
Ole Walnut & Griggs
 Project #:
6818P180

Project Manager:
SURASI GANDABA
 Sampler: Lauri Eistod
 On Ice: Yes No
 # of Coolers: 1
 Cooler Temp (including CF): 2-3 C

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
12/18	12:10	water	GUMW-11-S	3	HLL	-001
12/18	12:30	+	GUMW-11-I	3		-002
12/18	13:05	+	FB1812A1	3		-003
12/18	12:50	+	GUMW-11-D	3		-004
12/18	15:40	+	GUMW-16-S	3	Blank	-005
12/18	16:03	+	GUMW-16-D	3	Blank	-006
12/18	-	AR	Trip Blank	2	HLL	-007

Received by: Alvin C. Grant Date: 12/18/18 Time: 16:52
 Received by: Alvin C. Grant Date: 12-22-18 Time: 10:07



HALL ENVIRONMENTAL ANALYSIS LABORATORY
 www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request	
BTEX / MTBE / TMB's (8021)	
TPH:8015D(GRO / DRO / MRO)	
8081 Pesticides/8082 PCBs	
EDB (Method 504.1)	
PAHs by 8310 or 8270SIMS	
RCRA 8 Metals	
Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	
8260(AVOA) VOC	X
8270 (Semi-VOA)	
Total Coliform (Present/Absent)	Field Blank
	Trip Blank

Remarks: PROVIDE CITY OF LAS CRUCES EDD

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 02, 2019

Surasi Gandara

Terracon

4450 Bataan Memorial E

Las Cruces, NM 88005

TEL: (575) 527-1700

FAX (575) 527-1092

RE: CLC Griggs and Walnut

OrderNo.: 1812E08

Dear Surasi Gandara:

Hall Environmental Analysis Laboratory received 9 sample(s) on 12/27/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E08

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: GWMW-15 S

Project: CLC Griggs and Walnut

Collection Date: 12/24/2018 10:55:00 AM

Lab ID: 1812E08-001

Matrix: AQUEOUS

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
Toluene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
Ethylbenzene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
Naphthalene	ND	2.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
1-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
2-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
Acetone	ND	10		µg/L	1	12/29/2018 4:24:00 PM	R56660
Bromobenzene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
Bromodichloromethane	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
Bromoform	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
Bromomethane	ND	3.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
2-Butanone	ND	10		µg/L	1	12/29/2018 4:24:00 PM	R56660
Carbon disulfide	ND	10		µg/L	1	12/29/2018 4:24:00 PM	R56660
Carbon Tetrachloride	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
Chlorobenzene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
Chloroethane	ND	2.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
Chloroform	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
Chloromethane	ND	3.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
2-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
4-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
cis-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
Dibromochloromethane	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
Dibromomethane	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
1,1-Dichloroethane	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
1,1-Dichloroethene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
1,2-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
1,3-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
2,2-Dichloropropane	ND	2.0		µg/L	1	12/29/2018 4:24:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E08

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: GWMW-15 S

Project: CLC Griggs and Walnut

Collection Date: 12/24/2018 10:55:00 AM

Lab ID: 1812E08-001

Matrix: AQUEOUS

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
Hexachlorobutadiene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
2-Hexanone	ND	10		µg/L	1	12/29/2018 4:24:00 PM	R56660
Isopropylbenzene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
4-Isopropyltoluene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
4-Methyl-2-pentanone	ND	10		µg/L	1	12/29/2018 4:24:00 PM	R56660
Methylene Chloride	ND	3.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
n-Butylbenzene	ND	3.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
n-Propylbenzene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
sec-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
Styrene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
tert-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
trans-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
Trichlorofluoromethane	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
Vinyl chloride	ND	1.0		µg/L	1	12/29/2018 4:24:00 PM	R56660
Xylenes, Total	ND	1.5		µg/L	1	12/29/2018 4:24:00 PM	R56660
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	12/29/2018 4:24:00 PM	R56660
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/29/2018 4:24:00 PM	R56660
Surr: Dibromofluoromethane	105	70-130		%Rec	1	12/29/2018 4:24:00 PM	R56660
Surr: Toluene-d8	100	70-130		%Rec	1	12/29/2018 4:24:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E08

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: GWMW-15 I

Project: CLC Griggs and Walnut

Collection Date: 12/24/2018 11:15:00 AM

Lab ID: 1812E08-002

Matrix: AQUEOUS

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
Toluene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
Ethylbenzene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
Naphthalene	ND	2.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
1-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
2-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
Acetone	ND	10		µg/L	1	12/29/2018 5:35:00 PM	R56660
Bromobenzene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
Bromodichloromethane	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
Bromoform	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
Bromomethane	ND	3.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
2-Butanone	ND	10		µg/L	1	12/29/2018 5:35:00 PM	R56660
Carbon disulfide	ND	10		µg/L	1	12/29/2018 5:35:00 PM	R56660
Carbon Tetrachloride	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
Chlorobenzene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
Chloroethane	ND	2.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
Chloroform	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
Chloromethane	ND	3.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
2-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
4-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
cis-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
Dibromochloromethane	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
Dibromomethane	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
1,1-Dichloroethane	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
1,1-Dichloroethene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
1,2-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
1,3-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
2,2-Dichloropropane	ND	2.0		µg/L	1	12/29/2018 5:35:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E08

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: GWMW-15 I

Project: CLC Griggs and Walnut

Collection Date: 12/24/2018 11:15:00 AM

Lab ID: 1812E08-002

Matrix: AQUEOUS

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
Hexachlorobutadiene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
2-Hexanone	ND	10		µg/L	1	12/29/2018 5:35:00 PM	R56660
Isopropylbenzene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
4-Isopropyltoluene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
4-Methyl-2-pentanone	ND	10		µg/L	1	12/29/2018 5:35:00 PM	R56660
Methylene Chloride	ND	3.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
n-Butylbenzene	ND	3.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
n-Propylbenzene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
sec-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
Styrene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
tert-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
Tetrachloroethene (PCE)	19	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
trans-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
Trichlorofluoromethane	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
Vinyl chloride	ND	1.0		µg/L	1	12/29/2018 5:35:00 PM	R56660
Xylenes, Total	ND	1.5		µg/L	1	12/29/2018 5:35:00 PM	R56660
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	12/29/2018 5:35:00 PM	R56660
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/29/2018 5:35:00 PM	R56660
Surr: Dibromofluoromethane	107	70-130		%Rec	1	12/29/2018 5:35:00 PM	R56660
Surr: Toluene-d8	98.6	70-130		%Rec	1	12/29/2018 5:35:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E08

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: GWMW-15 D

Project: CLC Griggs and Walnut

Collection Date: 12/24/2018 11:37:00 AM

Lab ID: 1812E08-003

Matrix: AQUEOUS

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
Toluene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
Ethylbenzene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
Naphthalene	ND	2.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
1-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
2-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
Acetone	ND	10		µg/L	1	12/29/2018 5:58:00 PM	R56660
Bromobenzene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
Bromodichloromethane	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
Bromoform	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
Bromomethane	ND	3.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
2-Butanone	ND	10		µg/L	1	12/29/2018 5:58:00 PM	R56660
Carbon disulfide	ND	10		µg/L	1	12/29/2018 5:58:00 PM	R56660
Carbon Tetrachloride	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
Chlorobenzene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
Chloroethane	ND	2.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
Chloroform	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
Chloromethane	ND	3.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
2-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
4-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
cis-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
Dibromochloromethane	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
Dibromomethane	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
1,1-Dichloroethane	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
1,1-Dichloroethene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
1,2-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
1,3-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
2,2-Dichloropropane	ND	2.0		µg/L	1	12/29/2018 5:58:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E08

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: GWMW-15 D

Project: CLC Griggs and Walnut

Collection Date: 12/24/2018 11:37:00 AM

Lab ID: 1812E08-003

Matrix: AQUEOUS

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
Hexachlorobutadiene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
2-Hexanone	ND	10		µg/L	1	12/29/2018 5:58:00 PM	R56660
Isopropylbenzene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
4-Isopropyltoluene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
4-Methyl-2-pentanone	ND	10		µg/L	1	12/29/2018 5:58:00 PM	R56660
Methylene Chloride	ND	3.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
n-Butylbenzene	ND	3.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
n-Propylbenzene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
sec-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
Styrene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
tert-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
Tetrachloroethene (PCE)	1.1	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
trans-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
Trichlorofluoromethane	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
Vinyl chloride	ND	1.0		µg/L	1	12/29/2018 5:58:00 PM	R56660
Xylenes, Total	ND	1.5		µg/L	1	12/29/2018 5:58:00 PM	R56660
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	12/29/2018 5:58:00 PM	R56660
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/29/2018 5:58:00 PM	R56660
Surr: Dibromofluoromethane	107	70-130		%Rec	1	12/29/2018 5:58:00 PM	R56660
Surr: Toluene-d8	98.4	70-130		%Rec	1	12/29/2018 5:58:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E08

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: MWSF9

Project: CLC Griggs and Walnut

Collection Date: 12/24/2018 1:35:00 PM

Lab ID: 1812E08-004

Matrix: AQUEOUS

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
Toluene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
Ethylbenzene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
Naphthalene	ND	2.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
1-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
2-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
Acetone	ND	10		µg/L	1	12/29/2018 6:22:00 PM	R56660
Bromobenzene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
Bromodichloromethane	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
Bromoform	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
Bromomethane	ND	3.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
2-Butanone	ND	10		µg/L	1	12/29/2018 6:22:00 PM	R56660
Carbon disulfide	ND	10		µg/L	1	12/29/2018 6:22:00 PM	R56660
Carbon Tetrachloride	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
Chlorobenzene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
Chloroethane	ND	2.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
Chloroform	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
Chloromethane	ND	3.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
2-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
4-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
cis-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
Dibromochloromethane	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
Dibromomethane	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
1,1-Dichloroethane	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
1,1-Dichloroethene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
1,2-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
1,3-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
2,2-Dichloropropane	ND	2.0		µg/L	1	12/29/2018 6:22:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E08

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: MWSF9

Project: CLC Griggs and Walnut

Collection Date: 12/24/2018 1:35:00 PM

Lab ID: 1812E08-004

Matrix: AQUEOUS

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
Hexachlorobutadiene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
2-Hexanone	ND	10		µg/L	1	12/29/2018 6:22:00 PM	R56660
Isopropylbenzene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
4-Isopropyltoluene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
4-Methyl-2-pentanone	ND	10		µg/L	1	12/29/2018 6:22:00 PM	R56660
Methylene Chloride	ND	3.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
n-Butylbenzene	ND	3.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
n-Propylbenzene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
sec-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
Styrene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
tert-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
trans-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
Trichlorofluoromethane	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
Vinyl chloride	ND	1.0		µg/L	1	12/29/2018 6:22:00 PM	R56660
Xylenes, Total	ND	1.5		µg/L	1	12/29/2018 6:22:00 PM	R56660
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	12/29/2018 6:22:00 PM	R56660
Surr: 4-Bromofluorobenzene	99.4	70-130		%Rec	1	12/29/2018 6:22:00 PM	R56660
Surr: Dibromofluoromethane	104	70-130		%Rec	1	12/29/2018 6:22:00 PM	R56660
Surr: Toluene-d8	97.7	70-130		%Rec	1	12/29/2018 6:22:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E08

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: MWSF9- Dup

Project: CLC Griggs and Walnut

Collection Date: 12/24/2018 1:45:00 PM

Lab ID: 1812E08-005

Matrix: AQUEOUS

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
Toluene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
Ethylbenzene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
Naphthalene	ND	2.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
1-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
2-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
Acetone	ND	10		µg/L	1	12/29/2018 6:46:00 PM	R56660
Bromobenzene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
Bromodichloromethane	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
Bromoform	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
Bromomethane	ND	3.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
2-Butanone	ND	10		µg/L	1	12/29/2018 6:46:00 PM	R56660
Carbon disulfide	ND	10		µg/L	1	12/29/2018 6:46:00 PM	R56660
Carbon Tetrachloride	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
Chlorobenzene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
Chloroethane	ND	2.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
Chloroform	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
Chloromethane	ND	3.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
2-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
4-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
cis-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
Dibromochloromethane	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
Dibromomethane	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
1,1-Dichloroethane	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
1,1-Dichloroethene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
1,2-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
1,3-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
2,2-Dichloropropane	ND	2.0		µg/L	1	12/29/2018 6:46:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E08

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: MWSF9- Dup

Project: CLC Griggs and Walnut

Collection Date: 12/24/2018 1:45:00 PM

Lab ID: 1812E08-005

Matrix: AQUEOUS

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
Hexachlorobutadiene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
2-Hexanone	ND	10		µg/L	1	12/29/2018 6:46:00 PM	R56660
Isopropylbenzene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
4-Isopropyltoluene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
4-Methyl-2-pentanone	ND	10		µg/L	1	12/29/2018 6:46:00 PM	R56660
Methylene Chloride	ND	3.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
n-Butylbenzene	ND	3.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
n-Propylbenzene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
sec-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
Styrene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
tert-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
trans-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
Trichlorofluoromethane	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
Vinyl chloride	ND	1.0		µg/L	1	12/29/2018 6:46:00 PM	R56660
Xylenes, Total	ND	1.5		µg/L	1	12/29/2018 6:46:00 PM	R56660
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	12/29/2018 6:46:00 PM	R56660
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	12/29/2018 6:46:00 PM	R56660
Surr: Dibromofluoromethane	105	70-130		%Rec	1	12/29/2018 6:46:00 PM	R56660
Surr: Toluene-d8	97.8	70-130		%Rec	1	12/29/2018 6:46:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E08

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: FB182412

Project: CLC Griggs and Walnut

Collection Date: 12/24/2018 1:55:00 PM

Lab ID: 1812E08-006

Matrix: AQUEOUS

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
Toluene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
Ethylbenzene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
Naphthalene	ND	2.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
1-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
2-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
Acetone	ND	10		µg/L	1	12/29/2018 7:10:00 PM	R56660
Bromobenzene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
Bromodichloromethane	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
Bromoform	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
Bromomethane	ND	3.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
2-Butanone	ND	10		µg/L	1	12/29/2018 7:10:00 PM	R56660
Carbon disulfide	ND	10		µg/L	1	12/29/2018 7:10:00 PM	R56660
Carbon Tetrachloride	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
Chlorobenzene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
Chloroethane	ND	2.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
Chloroform	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
Chloromethane	ND	3.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
2-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
4-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
cis-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
Dibromochloromethane	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
Dibromomethane	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
1,1-Dichloroethane	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
1,1-Dichloroethene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
1,2-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
1,3-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
2,2-Dichloropropane	ND	2.0		µg/L	1	12/29/2018 7:10:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E08

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: FB182412

Project: CLC Griggs and Walnut

Collection Date: 12/24/2018 1:55:00 PM

Lab ID: 1812E08-006

Matrix: AQUEOUS

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
Hexachlorobutadiene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
2-Hexanone	ND	10		µg/L	1	12/29/2018 7:10:00 PM	R56660
Isopropylbenzene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
4-Isopropyltoluene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
4-Methyl-2-pentanone	ND	10		µg/L	1	12/29/2018 7:10:00 PM	R56660
Methylene Chloride	ND	3.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
n-Butylbenzene	ND	3.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
n-Propylbenzene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
sec-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
Styrene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
tert-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
trans-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
Trichlorofluoromethane	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
Vinyl chloride	ND	1.0		µg/L	1	12/29/2018 7:10:00 PM	R56660
Xylenes, Total	ND	1.5		µg/L	1	12/29/2018 7:10:00 PM	R56660
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	12/29/2018 7:10:00 PM	R56660
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	12/29/2018 7:10:00 PM	R56660
Surr: Dibromofluoromethane	106	70-130		%Rec	1	12/29/2018 7:10:00 PM	R56660
Surr: Toluene-d8	99.5	70-130		%Rec	1	12/29/2018 7:10:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E08

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: MWSF10

Project: CLC Griggs and Walnut

Collection Date: 12/24/2018 2:25:00 PM

Lab ID: 1812E08-007

Matrix: AQUEOUS

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
Toluene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
Ethylbenzene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
Naphthalene	ND	2.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
1-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
2-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
Acetone	ND	10		µg/L	1	12/29/2018 7:34:00 PM	R56660
Bromobenzene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
Bromodichloromethane	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
Bromoform	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
Bromomethane	ND	3.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
2-Butanone	ND	10		µg/L	1	12/29/2018 7:34:00 PM	R56660
Carbon disulfide	ND	10		µg/L	1	12/29/2018 7:34:00 PM	R56660
Carbon Tetrachloride	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
Chlorobenzene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
Chloroethane	ND	2.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
Chloroform	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
Chloromethane	ND	3.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
2-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
4-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
cis-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
Dibromochloromethane	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
Dibromomethane	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
1,1-Dichloroethane	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
1,1-Dichloroethene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
1,2-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
1,3-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
2,2-Dichloropropane	ND	2.0		µg/L	1	12/29/2018 7:34:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E08

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: MWSF10

Project: CLC Griggs and Walnut

Collection Date: 12/24/2018 2:25:00 PM

Lab ID: 1812E08-007

Matrix: AQUEOUS

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
Hexachlorobutadiene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
2-Hexanone	ND	10		µg/L	1	12/29/2018 7:34:00 PM	R56660
Isopropylbenzene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
4-Isopropyltoluene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
4-Methyl-2-pentanone	ND	10		µg/L	1	12/29/2018 7:34:00 PM	R56660
Methylene Chloride	ND	3.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
n-Butylbenzene	ND	3.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
n-Propylbenzene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
sec-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
Styrene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
tert-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
Tetrachloroethene (PCE)	16	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
trans-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
Trichloroethene (TCE)	1.1	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
Trichlorofluoromethane	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
Vinyl chloride	ND	1.0		µg/L	1	12/29/2018 7:34:00 PM	R56660
Xylenes, Total	ND	1.5		µg/L	1	12/29/2018 7:34:00 PM	R56660
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	12/29/2018 7:34:00 PM	R56660
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	12/29/2018 7:34:00 PM	R56660
Surr: Dibromofluoromethane	104	70-130		%Rec	1	12/29/2018 7:34:00 PM	R56660
Surr: Toluene-d8	97.0	70-130		%Rec	1	12/29/2018 7:34:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E08

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: EB182412

Project: CLC Griggs and Walnut

Collection Date: 12/24/2018 3:18:00 PM

Lab ID: 1812E08-008

Matrix: AQUEOUS

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
Toluene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
Ethylbenzene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
Naphthalene	ND	2.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
1-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
2-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
Acetone	ND	10		µg/L	1	12/29/2018 7:57:00 PM	R56660
Bromobenzene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
Bromodichloromethane	2.8	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
Bromoform	2.5	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
Bromomethane	ND	3.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
2-Butanone	ND	10		µg/L	1	12/29/2018 7:57:00 PM	R56660
Carbon disulfide	ND	10		µg/L	1	12/29/2018 7:57:00 PM	R56660
Carbon Tetrachloride	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
Chlorobenzene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
Chloroethane	ND	2.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
Chloroform	2.0	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
Chloromethane	ND	3.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
2-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
4-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
cis-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
Dibromochloromethane	3.5	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
Dibromomethane	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
1,1-Dichloroethane	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
1,1-Dichloroethene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
1,2-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
1,3-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
2,2-Dichloropropane	ND	2.0		µg/L	1	12/29/2018 7:57:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E08

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: EB182412

Project: CLC Griggs and Walnut

Collection Date: 12/24/2018 3:18:00 PM

Lab ID: 1812E08-008

Matrix: AQUEOUS

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
Hexachlorobutadiene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
2-Hexanone	ND	10		µg/L	1	12/29/2018 7:57:00 PM	R56660
Isopropylbenzene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
4-Isopropyltoluene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
4-Methyl-2-pentanone	ND	10		µg/L	1	12/29/2018 7:57:00 PM	R56660
Methylene Chloride	ND	3.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
n-Butylbenzene	ND	3.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
n-Propylbenzene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
sec-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
Styrene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
tert-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
trans-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
Trichlorofluoromethane	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
Vinyl chloride	ND	1.0		µg/L	1	12/29/2018 7:57:00 PM	R56660
Xylenes, Total	ND	1.5		µg/L	1	12/29/2018 7:57:00 PM	R56660
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	12/29/2018 7:57:00 PM	R56660
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/29/2018 7:57:00 PM	R56660
Surr: Dibromofluoromethane	107	70-130		%Rec	1	12/29/2018 7:57:00 PM	R56660
Surr: Toluene-d8	97.9	70-130		%Rec	1	12/29/2018 7:57:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E08

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: Trip Blank

Project: CLC Griggs and Walnut

Collection Date:

Lab ID: 1812E08-009

Matrix: TRIP BLANK

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
Toluene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
Ethylbenzene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
Naphthalene	ND	2.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
1-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
2-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
Acetone	ND	10		µg/L	1	12/29/2018 8:21:00 PM	R56660
Bromobenzene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
Bromodichloromethane	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
Bromoform	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
Bromomethane	ND	3.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
2-Butanone	ND	10		µg/L	1	12/29/2018 8:21:00 PM	R56660
Carbon disulfide	ND	10		µg/L	1	12/29/2018 8:21:00 PM	R56660
Carbon Tetrachloride	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
Chlorobenzene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
Chloroethane	ND	2.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
Chloroform	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
Chloromethane	ND	3.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
2-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
4-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
cis-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
Dibromochloromethane	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
Dibromomethane	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
1,1-Dichloroethane	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
1,1-Dichloroethene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
1,2-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
1,3-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
2,2-Dichloropropane	ND	2.0		µg/L	1	12/29/2018 8:21:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E08

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: Trip Blank

Project: CLC Griggs and Walnut

Collection Date:

Lab ID: 1812E08-009

Matrix: TRIP BLANK

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
Hexachlorobutadiene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
2-Hexanone	ND	10		µg/L	1	12/29/2018 8:21:00 PM	R56660
Isopropylbenzene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
4-Isopropyltoluene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
4-Methyl-2-pentanone	ND	10		µg/L	1	12/29/2018 8:21:00 PM	R56660
Methylene Chloride	ND	3.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
n-Butylbenzene	ND	3.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
n-Propylbenzene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
sec-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
Styrene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
tert-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
trans-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
Trichlorofluoromethane	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
Vinyl chloride	ND	1.0		µg/L	1	12/29/2018 8:21:00 PM	R56660
Xylenes, Total	ND	1.5		µg/L	1	12/29/2018 8:21:00 PM	R56660
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	12/29/2018 8:21:00 PM	R56660
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/29/2018 8:21:00 PM	R56660
Surr: Dibromofluoromethane	106	70-130		%Rec	1	12/29/2018 8:21:00 PM	R56660
Surr: Toluene-d8	97.8	70-130		%Rec	1	12/29/2018 8:21:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1812E08

02-Jan-19

Client: Terracon
Project: CLC Griggs and Walnut

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R56660		RunNo: 56660							
Prep Date:	Analysis Date: 12/29/2018		SeqNo: 1895913		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	20	1.0	20.00	0	98.2	70	130			
Chlorobenzene	20	1.0	20.00	0	99.1	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	110	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.9		10.00		98.7	70	130			

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R56660		RunNo: 56660							
Prep Date:	Analysis Date: 12/29/2018		SeqNo: 1895914		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1812E08

02-Jan-19

Client: Terracon
Project: CLC Griggs and Walnut

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R56660	RunNo:	56660					
Prep Date:		Analysis Date:	12/29/2018	SeqNo:	1895914	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1812E08

02-Jan-19

Client: Terracon
Project: CLC Griggs and Walnut

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R56660		RunNo: 56660							
Prep Date:	Analysis Date: 12/29/2018		SeqNo: 1895914		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.8		10.00		97.6	70	130			

Sample ID 1812e08-001ams	SampType: MS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: GMMW-15 S	Batch ID: R56660		RunNo: 56660							
Prep Date:	Analysis Date: 12/29/2018		SeqNo: 1897691		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Chlorobenzene	20	1.0	20.00	0	100	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	111	67.6	130			
Trichloroethene (TCE)	21	1.0	20.00	0	105	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		109	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	10		10.00		99.8	70	130			

Sample ID 1812e08-001amsd	SampType: MSD		TestCode: EPA Method 8260B: VOLATILES							
Client ID: GMMW-15 S	Batch ID: R56660		RunNo: 56660							
Prep Date:	Analysis Date: 12/29/2018		SeqNo: 1897692		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130	6.25	20	
Toluene	19	1.0	20.00	0	94.0	70	130	6.79	20	
Chlorobenzene	19	1.0	20.00	0	94.9	70	130	5.46	20	
1,1-Dichloroethene	21	1.0	20.00	0	106	67.6	130	4.69	20	
Trichloroethene (TCE)	19	1.0	20.00	0	97.2	70	130	8.02	20	
Surr: 1,2-Dichloroethane-d4	11		10.00		109	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		106	70	130	0	0	
Surr: Toluene-d8	9.9		10.00		99.2	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: **TER-LC**

Work Order Number: **1812E08**

RcptNo: **1**

Received By: **Victoria Zellar** 12/27/2018 8:35:00 AM

Victoria Zellar

Completed By: **Erin Melendrez** 12/27/2018 10:11:22 AM

Erin Melendrez

Reviewed By: **DAD 12/27/18**
LB: JAB 12/27/18

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: **JAB** 12/27/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

16. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.6	Good	Yes			

Chain-of-Custody Record

Terracon Las Cruces
 Mailing Address: 4450 Patagon Memorial East
 Las Cruces, NM 88011
 Phone #: 575.527.1700
 email or Fax#: Larrin.Ersted@Terracon.com

QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation: Az Compliance
 NELAC Other
 EDD (Type)

Turn-Around Time:
 Standard Rush
 Project Name:
 Project #:
 Project Manager:

Sampler: Larrin Ersted
 On Ice: Yes No
 # of Coolers: CF=05
 Cooler Temp (including CP): 0.6

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
12/18/18	1055	water	Gwmw-15S	3	HCL	182EDS
	1115		Gwmw-15 I	3	HCL	-001
	1137		Gwmw-15 D	3		-002
	1335		MWSF9	3		-003
	1345		MWSF9 - Dup	3		-004
	1355		FB18241a	3		-005
	1425		MW SF10	3		-006
	1518		EB18241a	3		-007
	-	AQ	Trip Blank	2	HCL	-008
						-009

Received by: *Larrin Ersted* Via: FEDEX Date: 12/18/18
 Received by: *Michael Bullon* Date: 12/18/18



HALL ENVIRONMENTAL ANALYSIS LABORATORY
 www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request	
TPH:8015D(GRO / DRO / MRO)	
8081 Pesticides/8082 PCB's	
EDB (Method 504.1)	
PAHs by 8310 or 8270SIMS	
RCRA 8 Metals	
Cl, F, Br, NO ₂ , NO ₃ , PO ₄ , SO ₄	
8260 (VOA)	X
8270 (Semi-VOA)	X
Total Coliform (Present/Absent)	X
	Field Blank
	Trip Blank
	Equip Blank

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 02, 2019

Surasi Gandara

Terracon

4450 Bataan Memorial E

Las Cruces, NM 88005

TEL: (575) 527-1700

FAX (575) 527-1092

RE: CLC Griggs Walnut

OrderNo.: 1812E66

Dear Surasi Gandara:

Hall Environmental Analysis Laboratory received 3 sample(s) on 12/28/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E66

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: CLC26

Project: CLC Griggs Walnut

Collection Date: 12/27/2018 3:00:00 PM

Lab ID: 1812E66-001

Matrix: AQUEOUS

Received Date: 12/28/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
Toluene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
Ethylbenzene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
Naphthalene	ND	2.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
1-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
2-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
Acetone	ND	10		µg/L	1	12/29/2018 10:19:00 PM	R56660
Bromobenzene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
Bromodichloromethane	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
Bromoform	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
Bromomethane	ND	3.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
2-Butanone	ND	10		µg/L	1	12/29/2018 10:19:00 PM	R56660
Carbon disulfide	ND	10		µg/L	1	12/29/2018 10:19:00 PM	R56660
Carbon Tetrachloride	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
Chlorobenzene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
Chloroethane	ND	2.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
Chloroform	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
Chloromethane	ND	3.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
2-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
4-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
cis-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
Dibromochloromethane	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
Dibromomethane	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
1,1-Dichloroethane	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
1,1-Dichloroethene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
1,2-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
1,3-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
2,2-Dichloropropane	ND	2.0		µg/L	1	12/29/2018 10:19:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 1 of 9
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E66

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: CLC26

Project: CLC Griggs Walnut

Collection Date: 12/27/2018 3:00:00 PM

Lab ID: 1812E66-001

Matrix: AQUEOUS

Received Date: 12/28/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
Hexachlorobutadiene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
2-Hexanone	ND	10		µg/L	1	12/29/2018 10:19:00 PM	R56660
Isopropylbenzene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
4-Isopropyltoluene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
4-Methyl-2-pentanone	ND	10		µg/L	1	12/29/2018 10:19:00 PM	R56660
Methylene Chloride	ND	3.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
n-Butylbenzene	ND	3.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
n-Propylbenzene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
sec-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
Styrene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
tert-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
trans-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
Trichlorofluoromethane	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
Vinyl chloride	ND	1.0		µg/L	1	12/29/2018 10:19:00 PM	R56660
Xylenes, Total	ND	1.5		µg/L	1	12/29/2018 10:19:00 PM	R56660
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	12/29/2018 10:19:00 PM	R56660
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	12/29/2018 10:19:00 PM	R56660
Surr: Dibromofluoromethane	107	70-130		%Rec	1	12/29/2018 10:19:00 PM	R56660
Surr: Toluene-d8	97.2	70-130		%Rec	1	12/29/2018 10:19:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E66

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: FB182712

Project: CLC Griggs Walnut

Collection Date: 12/27/2018 4:30:00 PM

Lab ID: 1812E66-002

Matrix: AQUEOUS

Received Date: 12/28/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
Toluene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
Ethylbenzene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
Naphthalene	ND	2.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
1-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
2-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
Acetone	ND	10		µg/L	1	12/29/2018 10:43:00 PM	R56660
Bromobenzene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
Bromodichloromethane	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
Bromoform	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
Bromomethane	ND	3.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
2-Butanone	ND	10		µg/L	1	12/29/2018 10:43:00 PM	R56660
Carbon disulfide	ND	10		µg/L	1	12/29/2018 10:43:00 PM	R56660
Carbon Tetrachloride	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
Chlorobenzene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
Chloroethane	ND	2.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
Chloroform	1.0	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
Chloromethane	ND	3.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
2-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
4-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
cis-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
Dibromochloromethane	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
Dibromomethane	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
1,1-Dichloroethane	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
1,1-Dichloroethene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
1,2-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
1,3-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
2,2-Dichloropropane	ND	2.0		µg/L	1	12/29/2018 10:43:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E66

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: FB182712

Project: CLC Griggs Walnut

Collection Date: 12/27/2018 4:30:00 PM

Lab ID: 1812E66-002

Matrix: AQUEOUS

Received Date: 12/28/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
Hexachlorobutadiene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
2-Hexanone	ND	10		µg/L	1	12/29/2018 10:43:00 PM	R56660
Isopropylbenzene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
4-Isopropyltoluene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
4-Methyl-2-pentanone	ND	10		µg/L	1	12/29/2018 10:43:00 PM	R56660
Methylene Chloride	ND	3.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
n-Butylbenzene	ND	3.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
n-Propylbenzene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
sec-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
Styrene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
tert-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
trans-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
Trichlorofluoromethane	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
Vinyl chloride	ND	1.0		µg/L	1	12/29/2018 10:43:00 PM	R56660
Xylenes, Total	ND	1.5		µg/L	1	12/29/2018 10:43:00 PM	R56660
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	12/29/2018 10:43:00 PM	R56660
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/29/2018 10:43:00 PM	R56660
Surr: Dibromofluoromethane	106	70-130		%Rec	1	12/29/2018 10:43:00 PM	R56660
Surr: Toluene-d8	98.0	70-130		%Rec	1	12/29/2018 10:43:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E66

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: Trip Blank

Project: CLC Griggs Walnut

Collection Date:

Lab ID: 1812E66-003

Matrix: TRIP BLANK

Received Date: 12/28/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
Toluene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
Ethylbenzene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
Naphthalene	ND	2.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
1-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
2-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
Acetone	10	10		µg/L	1	12/29/2018 11:07:00 PM	R56660
Bromobenzene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
Bromodichloromethane	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
Bromoform	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
Bromomethane	ND	3.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
2-Butanone	ND	10		µg/L	1	12/29/2018 11:07:00 PM	R56660
Carbon disulfide	ND	10		µg/L	1	12/29/2018 11:07:00 PM	R56660
Carbon Tetrachloride	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
Chlorobenzene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
Chloroethane	ND	2.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
Chloroform	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
Chloromethane	ND	3.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
2-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
4-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
cis-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
Dibromochloromethane	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
Dibromomethane	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
1,1-Dichloroethane	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
1,1-Dichloroethene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
1,2-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
1,3-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
2,2-Dichloropropane	ND	2.0		µg/L	1	12/29/2018 11:07:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 5 of 9
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E66

Date Reported: 1/2/2019

CLIENT: Terracon

Client Sample ID: Trip Blank

Project: CLC Griggs Walnut

Collection Date:

Lab ID: 1812E66-003

Matrix: TRIP BLANK

Received Date: 12/28/2018 8:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
Hexachlorobutadiene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
2-Hexanone	ND	10		µg/L	1	12/29/2018 11:07:00 PM	R56660
Isopropylbenzene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
4-Isopropyltoluene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
4-Methyl-2-pentanone	ND	10		µg/L	1	12/29/2018 11:07:00 PM	R56660
Methylene Chloride	ND	3.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
n-Butylbenzene	ND	3.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
n-Propylbenzene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
sec-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
Styrene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
tert-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
trans-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
Trichlorofluoromethane	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
Vinyl chloride	ND	1.0		µg/L	1	12/29/2018 11:07:00 PM	R56660
Xylenes, Total	ND	1.5		µg/L	1	12/29/2018 11:07:00 PM	R56660
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	12/29/2018 11:07:00 PM	R56660
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	12/29/2018 11:07:00 PM	R56660
Surr: Dibromofluoromethane	105	70-130		%Rec	1	12/29/2018 11:07:00 PM	R56660
Surr: Toluene-d8	101	70-130		%Rec	1	12/29/2018 11:07:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 6 of 9
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1812E66

02-Jan-19

Client: Terracon
Project: CLC Griggs Walnut

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R56660		RunNo: 56660							
Prep Date:	Analysis Date: 12/29/2018		SeqNo: 1895913		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	20	1.0	20.00	0	98.2	70	130			
Chlorobenzene	20	1.0	20.00	0	99.1	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	110	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.9		10.00		98.7	70	130			

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R56660		RunNo: 56660							
Prep Date:	Analysis Date: 12/29/2018		SeqNo: 1895914		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1812E66

02-Jan-19

Client: Terracon
Project: CLC Griggs Walnut

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R56660	RunNo:	56660					
Prep Date:		Analysis Date:	12/29/2018	SeqNo:	1895914	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1812E66

02-Jan-19

Client: Terracon
Project: CLC Griggs Walnut

Sample ID	rb	SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID:	R56660		RunNo:	56660				
Prep Date:		Analysis Date:	12/29/2018		SeqNo:	1895914	Units:	µg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.8		10.00		97.6	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

Sample Log-In Check List

Client Name: **TER-LC**

Work Order Number: **1812E66**

RcptNo: 1

Received By: **Victoria Zellar** 12/28/2018 8:55:00 AM

Victoria Zellar

Completed By: **Erin Melendrez** 12/28/2018 9:57:43 AM

Erin Melendrez

Reviewed By: **DAD 12/28/18**
LB: JAB 12/28/18

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? **FedEx**

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes No
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes No

JAB 12/28/18
 # of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: **JAB**

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

16. Additional remarks: **Q3A container 2 of 2 received broken. JAB 12/28/18**

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.8	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 04, 2019

Surasi Gandara

Terracon

4450 Bataan Memorial E

Las Cruces, NM 88005

TEL: (575) 527-1700

FAX (575) 527-1092

RE: CLC Griggs

OrderNo.: 1812E10

Dear Surasi Gandara:

Hall Environmental Analysis Laboratory received 8 sample(s) on 12/27/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E10

Date Reported: 1/4/2019

CLIENT: Terracon

Client Sample ID: CLC 18

Project: CLC Griggs

Collection Date: 12/26/2018 11:55:00 AM

Lab ID: 1812E10-001

Matrix: AQUEOUS

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS							Analyst: DBK
Arsenic	0.0014	0.0010		mg/L	1	1/2/2019 5:39:55 PM	C56714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E10

Date Reported: 1/4/2019

CLIENT: Terracon

Client Sample ID: CLC 27

Project: CLC Griggs

Collection Date: 12/26/2018 12:32:00 PM

Lab ID: 1812E10-002

Matrix: AQUEOUS

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS							Analyst: DBK
Arsenic	0.0011	0.0010		mg/L	1	1/2/2019 5:42:22 PM	C56714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E10

Date Reported: 1/4/2019

CLIENT: Terracon

Client Sample ID: CLC 18

Project: CLC Griggs

Collection Date: 12/26/2018 11:50:00 AM

Lab ID: 1812E10-003

Matrix: AQUEOUS

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL							Analyst: DBK
Arsenic	0.0018	0.0010		mg/L	1	12/31/2018 12:58:13 PM	42302

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E10

Date Reported: 1/4/2019

CLIENT: Terracon

Client Sample ID: CLC 27

Project: CLC Griggs

Collection Date: 12/26/2018 12:25:00 PM

Lab ID: 1812E10-004

Matrix: AQUEOUS

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL							Analyst: DBK
Arsenic	0.0020	0.0010		mg/L	1	12/31/2018 1:04:03 PM	42302

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E10

Date Reported: 1/4/2019

CLIENT: Terracon
Project: CLC Griggs
Lab ID: 1812E10-005

Client Sample ID: CLC 18
Collection Date: 12/26/2018 11:58:00 AM
Matrix: AQUEOUS **Received Date:** 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
Toluene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
Ethylbenzene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
Naphthalene	ND	2.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
1-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
2-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
Acetone	ND	10		µg/L	1	12/29/2018 8:44:00 PM	R56660
Bromobenzene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
Bromodichloromethane	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
Bromoform	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
Bromomethane	ND	3.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
2-Butanone	ND	10		µg/L	1	12/29/2018 8:44:00 PM	R56660
Carbon disulfide	ND	10		µg/L	1	12/29/2018 8:44:00 PM	R56660
Carbon Tetrachloride	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
Chlorobenzene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
Chloroethane	ND	2.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
Chloroform	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
Chloromethane	ND	3.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
2-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
4-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
cis-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
Dibromochloromethane	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
Dibromomethane	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
1,1-Dichloroethane	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
1,1-Dichloroethene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
1,2-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
1,3-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
2,2-Dichloropropane	ND	2.0		µg/L	1	12/29/2018 8:44:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E10

Date Reported: 1/4/2019

CLIENT: Terracon
Project: CLC Griggs
Lab ID: 1812E10-005

Client Sample ID: CLC 18
Collection Date: 12/26/2018 11:58:00 AM
Matrix: AQUEOUS **Received Date:** 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
Hexachlorobutadiene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
2-Hexanone	ND	10		µg/L	1	12/29/2018 8:44:00 PM	R56660
Isopropylbenzene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
4-Isopropyltoluene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
4-Methyl-2-pentanone	ND	10		µg/L	1	12/29/2018 8:44:00 PM	R56660
Methylene Chloride	ND	3.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
n-Butylbenzene	ND	3.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
n-Propylbenzene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
sec-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
Styrene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
tert-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
Tetrachloroethene (PCE)	1.4	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
trans-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
Trichlorofluoromethane	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
Vinyl chloride	ND	1.0		µg/L	1	12/29/2018 8:44:00 PM	R56660
Xylenes, Total	ND	1.5		µg/L	1	12/29/2018 8:44:00 PM	R56660
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	12/29/2018 8:44:00 PM	R56660
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	12/29/2018 8:44:00 PM	R56660
Surr: Dibromofluoromethane	106	70-130		%Rec	1	12/29/2018 8:44:00 PM	R56660
Surr: Toluene-d8	98.7	70-130		%Rec	1	12/29/2018 8:44:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E10

Date Reported: 1/4/2019

CLIENT: Terracon

Client Sample ID: CLC 27

Project: CLC Griggs

Collection Date: 12/26/2018 12:20:00 PM

Lab ID: 1812E10-006

Matrix: AQUEOUS

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
Toluene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
Ethylbenzene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
Naphthalene	ND	2.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
1-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
2-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
Acetone	ND	10		µg/L	1	12/29/2018 9:08:00 PM	R56660
Bromobenzene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
Bromodichloromethane	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
Bromoform	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
Bromomethane	ND	3.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
2-Butanone	ND	10		µg/L	1	12/29/2018 9:08:00 PM	R56660
Carbon disulfide	ND	10		µg/L	1	12/29/2018 9:08:00 PM	R56660
Carbon Tetrachloride	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
Chlorobenzene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
Chloroethane	ND	2.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
Chloroform	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
Chloromethane	ND	3.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
2-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
4-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
cis-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
Dibromochloromethane	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
Dibromomethane	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
1,1-Dichloroethane	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
1,1-Dichloroethene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
1,2-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
1,3-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
2,2-Dichloropropane	ND	2.0		µg/L	1	12/29/2018 9:08:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E10

Date Reported: 1/4/2019

CLIENT: Terracon
Project: CLC Griggs
Lab ID: 1812E10-006

Client Sample ID: CLC 27
Collection Date: 12/26/2018 12:20:00 PM
Matrix: AQUEOUS **Received Date:** 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
Hexachlorobutadiene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
2-Hexanone	ND	10		µg/L	1	12/29/2018 9:08:00 PM	R56660
Isopropylbenzene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
4-Isopropyltoluene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
4-Methyl-2-pentanone	ND	10		µg/L	1	12/29/2018 9:08:00 PM	R56660
Methylene Chloride	ND	3.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
n-Butylbenzene	ND	3.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
n-Propylbenzene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
sec-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
Styrene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
tert-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
Tetrachloroethene (PCE)	13	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
trans-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
Trichlorofluoromethane	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
Vinyl chloride	ND	1.0		µg/L	1	12/29/2018 9:08:00 PM	R56660
Xylenes, Total	ND	1.5		µg/L	1	12/29/2018 9:08:00 PM	R56660
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	12/29/2018 9:08:00 PM	R56660
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	12/29/2018 9:08:00 PM	R56660
Surr: Dibromofluoromethane	106	70-130		%Rec	1	12/29/2018 9:08:00 PM	R56660
Surr: Toluene-d8	97.6	70-130		%Rec	1	12/29/2018 9:08:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E10

Date Reported: 1/4/2019

CLIENT: Terracon
Project: CLC Griggs
Lab ID: 1812E10-007

Client Sample ID: FB182612
Collection Date: 12/26/2018 3:10:00 PM
Matrix: AQUEOUS **Received Date:** 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
Toluene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
Ethylbenzene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
Naphthalene	ND	2.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
1-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
2-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
Acetone	ND	10		µg/L	1	12/29/2018 9:32:00 PM	R56660
Bromobenzene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
Bromodichloromethane	1.0	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
Bromoform	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
Bromomethane	ND	3.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
2-Butanone	ND	10		µg/L	1	12/29/2018 9:32:00 PM	R56660
Carbon disulfide	ND	10		µg/L	1	12/29/2018 9:32:00 PM	R56660
Carbon Tetrachloride	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
Chlorobenzene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
Chloroethane	ND	2.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
Chloroform	1.0	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
Chloromethane	ND	3.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
2-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
4-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
cis-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
Dibromochloromethane	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
Dibromomethane	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
1,1-Dichloroethane	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
1,1-Dichloroethene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
1,2-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
1,3-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
2,2-Dichloropropane	ND	2.0		µg/L	1	12/29/2018 9:32:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E10

Date Reported: 1/4/2019

CLIENT: Terracon
Project: CLC Griggs
Lab ID: 1812E10-007

Client Sample ID: FB182612
Collection Date: 12/26/2018 3:10:00 PM
Matrix: AQUEOUS **Received Date:** 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
Hexachlorobutadiene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
2-Hexanone	ND	10		µg/L	1	12/29/2018 9:32:00 PM	R56660
Isopropylbenzene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
4-Isopropyltoluene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
4-Methyl-2-pentanone	ND	10		µg/L	1	12/29/2018 9:32:00 PM	R56660
Methylene Chloride	ND	3.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
n-Butylbenzene	ND	3.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
n-Propylbenzene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
sec-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
Styrene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
tert-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
trans-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
Trichlorofluoromethane	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
Vinyl chloride	ND	1.0		µg/L	1	12/29/2018 9:32:00 PM	R56660
Xylenes, Total	ND	1.5		µg/L	1	12/29/2018 9:32:00 PM	R56660
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	1	12/29/2018 9:32:00 PM	R56660
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	12/29/2018 9:32:00 PM	R56660
Surr: Dibromofluoromethane	107	70-130		%Rec	1	12/29/2018 9:32:00 PM	R56660
Surr: Toluene-d8	97.4	70-130		%Rec	1	12/29/2018 9:32:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E10

Date Reported: 1/4/2019

CLIENT: Terracon

Client Sample ID: Trip Blank

Project: CLC Griggs

Collection Date:

Lab ID: 1812E10-008

Matrix: TRIP BLANK

Received Date: 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
Toluene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
Ethylbenzene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
Naphthalene	ND	2.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
1-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
2-Methylnaphthalene	ND	4.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
Acetone	ND	10		µg/L	1	12/29/2018 9:55:00 PM	R56660
Bromobenzene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
Bromodichloromethane	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
Bromoform	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
Bromomethane	ND	3.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
2-Butanone	ND	10		µg/L	1	12/29/2018 9:55:00 PM	R56660
Carbon disulfide	ND	10		µg/L	1	12/29/2018 9:55:00 PM	R56660
Carbon Tetrachloride	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
Chlorobenzene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
Chloroethane	ND	2.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
Chloroform	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
Chloromethane	ND	3.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
2-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
4-Chlorotoluene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
cis-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
Dibromochloromethane	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
Dibromomethane	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
1,1-Dichloroethane	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
1,1-Dichloroethene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
1,2-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
1,3-Dichloropropane	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
2,2-Dichloropropane	ND	2.0		µg/L	1	12/29/2018 9:55:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1812E10

Date Reported: 1/4/2019

CLIENT: Terracon
Project: CLC Griggs
Lab ID: 1812E10-008

Client Sample ID: Trip Blank
Collection Date:
Matrix: TRIP BLANK **Received Date:** 12/27/2018 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
Hexachlorobutadiene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
2-Hexanone	ND	10		µg/L	1	12/29/2018 9:55:00 PM	R56660
Isopropylbenzene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
4-Isopropyltoluene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
4-Methyl-2-pentanone	ND	10		µg/L	1	12/29/2018 9:55:00 PM	R56660
Methylene Chloride	ND	3.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
n-Butylbenzene	ND	3.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
n-Propylbenzene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
sec-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
Styrene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
tert-Butylbenzene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
trans-1,2-DCE	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
Trichlorofluoromethane	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
Vinyl chloride	ND	1.0		µg/L	1	12/29/2018 9:55:00 PM	R56660
Xylenes, Total	ND	1.5		µg/L	1	12/29/2018 9:55:00 PM	R56660
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	1	12/29/2018 9:55:00 PM	R56660
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/29/2018 9:55:00 PM	R56660
Surr: Dibromofluoromethane	107	70-130		%Rec	1	12/29/2018 9:55:00 PM	R56660
Surr: Toluene-d8	98.5	70-130		%Rec	1	12/29/2018 9:55:00 PM	R56660

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1812E10

04-Jan-19

Client: Terracon
Project: CLC Griggs

Sample ID MB	SampType: MBLK		TestCode: EPA 200.8: Dissolved Metals							
Client ID: PBW	Batch ID: C56714		RunNo: 56714							
Prep Date:	Analysis Date: 1/2/2019		SeqNo: 1897920		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID LLCS	SampType: LCSLL		TestCode: EPA 200.8: Dissolved Metals							
Client ID: BatchQC	Batch ID: C56714		RunNo: 56714							
Prep Date:	Analysis Date: 1/2/2019		SeqNo: 1897921		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	99.1	50	150			

Sample ID LCS	SampType: LCS		TestCode: EPA 200.8: Dissolved Metals							
Client ID: LCSW	Batch ID: C56714		RunNo: 56714							
Prep Date:	Analysis Date: 1/2/2019		SeqNo: 1897922		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.5	85	115			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1812E10

04-Jan-19

Client: Terracon
Project: CLC Griggs

Sample ID	MB-42302	SampType:	MBLK	TestCode:	200.8 ICPMS Metals:Total					
Client ID:	PBW	Batch ID:	42302	RunNo:	56682					
Prep Date:	12/26/2018	Analysis Date:	12/31/2018	SeqNo:	1896864	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID	MSLCS-42302	SampType:	LCS	TestCode:	200.8 ICPMS Metals:Total					
Client ID:	LCSW	Batch ID:	42302	RunNo:	56682					
Prep Date:	12/27/2018	Analysis Date:	12/31/2018	SeqNo:	1896868	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.3	85	115			

Sample ID	1812E10-003AMSL	SampType:	MSLL	TestCode:	200.8 ICPMS Metals:Total					
Client ID:	CLC 18	Batch ID:	42302	RunNo:	56682					
Prep Date:	12/27/2018	Analysis Date:	12/31/2018	SeqNo:	1896877	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.027	0.0010	0.02500	0.001756	102	70	130			

Sample ID	1812E10-003AMSDL	SampType:	MSDLL	TestCode:	200.8 ICPMS Metals:Total					
Client ID:	CLC 18	Batch ID:	42302	RunNo:	56682					
Prep Date:	12/27/2018	Analysis Date:	12/31/2018	SeqNo:	1896878	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.028	0.0010	0.02500	0.001756	104	70	130	1.87	20	

Sample ID	MSLLLCS-42302	SampType:	LCSLL	TestCode:	200.8 ICPMS Metals:Total					
Client ID:	BatchQC	Batch ID:	42302	RunNo:	56682					
Prep Date:	12/26/2018	Analysis Date:	12/31/2018	SeqNo:	1896905	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0051	0.0050	0.005000	0	101	50	150			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1812E10

04-Jan-19

Client: Terracon
Project: CLC Griggs

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R56660		RunNo: 56660							
Prep Date:	Analysis Date: 12/29/2018		SeqNo: 1895913		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	20	1.0	20.00	0	98.2	70	130			
Chlorobenzene	20	1.0	20.00	0	99.1	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	110	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.9		10.00		98.7	70	130			

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R56660		RunNo: 56660							
Prep Date:	Analysis Date: 12/29/2018		SeqNo: 1895914		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1812E10

04-Jan-19

Client: Terracon
Project: CLC Griggs

Sample ID	rb	SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID:	R56660		RunNo:	56660				
Prep Date:		Analysis Date:	12/29/2018		SeqNo:	1895914	Units:	µg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1812E10

04-Jan-19

Client: Terracon
Project: CLC Griggs

Sample ID	rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R56660		RunNo: 56660						
Prep Date:		Analysis Date: 12/29/2018		SeqNo: 1895914		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.8		10.00		97.6	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

Sample Log-In Check List

Client Name: **TER-LC**

Work Order Number: **1812E10**

RcptNo: **1**

Received By: **Victoria Zellar**

12/27/2018 8:35:00 AM

Victoria Zellar

Completed By: **Erin Melendrez**

12/27/2018 10:25:35 AM

EM

Reviewed By: **DAD 12/27/18**

LB: JAB 12/27/18

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present

2. How was the sample delivered? **FedEx**

Log In

3. Was an attempt made to cool the samples? Yes No NA

4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA

5. Sample(s) in proper container(s)? Yes No

6. Sufficient sample volume for indicated test(s)? Yes No

7. Are samples (except VOA and ONG) properly preserved? Yes No

8. Was preservative added to bottles? Yes No NA

9. VOA vials have zero headspace? Yes No No VOA Vials

10. Were any sample containers received broken? Yes No

11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes No

12. Are matrices correctly identified on Chain of Custody? Yes No

13. Is it clear what analyses were requested? Yes No

14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: **4**
 (<2 or >12 unless noted)
 Adjusted? **No**
 Checked by: **JAB 12/27/18**

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.6	Good	Yes			

Chain-of-Custody Record

Client: Terrace Las Cruces
 Mailing Address: 4450 Babson Memorial FES
Las Cruces NM 88011
 Phone #: 575-527-1700
 email or Fax#: Larrri.Erstad@kvacon.com

QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation: Az Compliance
 NELAC Other
 EDD (Type) _____

Turn-Around Time:
 Standard Rush
 Project Name: CLC Gregg
 Project #: 6818P186

Project Manager:
Swasi Gandara
 Sampler: Larrri Erstad
 On Ice: Yes No
 # of Coolers: 1 (CF = -0.5°C)
 Cooler Temp (including CF): 0.6

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. / BSIZEID
12/24/18	1155	water	CLC 18	1		-001
	1232		CLC 27	1		-002
	1150		CLC 18	2		-003
	1225		CLC 27	2		-004
	1158		CLC 18	3	HCl	-005
	1220		CLC 27	3	HCl	-006
	1510		FB182612	3	HCl	-007
	-	AC	Trip Blank	2	HCl	-008

Date: 12/28/18 Time: 1530
 Relinquished by: [Signature]
 Date: 12/28/18 Time: 1530
 Relinquished by: [Signature]

Received by: [Signature] Via: FEDEX
 Date: 12/27/18 Time: 8:55
 Received by: [Signature] via: _____
 Date: _____ Time: _____

Remarks:

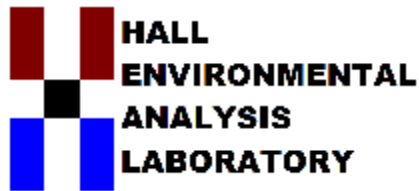
HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOC)	8270 (Semi-VOC)	Total Coliform (Present/Absent)	Field Blank	Trip Blank	EPA 800.8 Arsenic	Filter 800.8 Arsenic
							X			Field Blank	Trip Blank	EPA 800.8 Arsenic	Filter 800.8 Arsenic
							X					X	X
							X					X	X
							X					X	X
							X					X	X

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 08, 2019

Surasi Gandara

Terracon

4450 Bataan Memorial E

Las Cruces, NM 88005

TEL: (575) 527-1700

FAX (575) 527-1092

RE: CLC Griggs and Walnut

OrderNo.: 1901055

Dear Surasi Gandara:

Hall Environmental Analysis Laboratory received 23 sample(s) on 1/3/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 3-01

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 9:56:00 AM

Lab ID: 1901055-001

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
Toluene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
Naphthalene	ND	2.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
Acetone	ND	10		µg/L	1	1/4/2019 4:41:41 PM	R56807
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
Bromoform	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
Bromomethane	ND	3.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
2-Butanone	ND	10		µg/L	1	1/4/2019 4:41:41 PM	R56807
Carbon disulfide	ND	10		µg/L	1	1/4/2019 4:41:41 PM	R56807
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
Chloroethane	ND	2.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
Chloroform	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
Chloromethane	ND	3.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 4:41:41 PM	R56807

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 3-01

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 9:56:00 AM

Lab ID: 1901055-001

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
2-Hexanone	ND	10		µg/L	1	1/4/2019 4:41:41 PM	R56807
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 4:41:41 PM	R56807
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
Styrene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 4:41:41 PM	R56807
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 4:41:41 PM	R56807
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	1/4/2019 4:41:41 PM	R56807
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	1/4/2019 4:41:41 PM	R56807
Surr: Dibromofluoromethane	105	70-130		%Rec	1	1/4/2019 4:41:41 PM	R56807
Surr: Toluene-d8	100	70-130		%Rec	1	1/4/2019 4:41:41 PM	R56807

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 3-02

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 10:05:00 AM

Lab ID: 1901055-002

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
Toluene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
Naphthalene	ND	2.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
Acetone	ND	10		µg/L	1	1/4/2019 5:11:06 PM	R56807
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
Bromoform	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
Bromomethane	ND	3.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
2-Butanone	ND	10		µg/L	1	1/4/2019 5:11:06 PM	R56807
Carbon disulfide	ND	10		µg/L	1	1/4/2019 5:11:06 PM	R56807
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
Chloroethane	ND	2.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
Chloroform	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
Chloromethane	ND	3.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 5:11:06 PM	R56807

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 3-02

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 10:05:00 AM

Lab ID: 1901055-002

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
2-Hexanone	ND	10		µg/L	1	1/4/2019 5:11:06 PM	R56807
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 5:11:06 PM	R56807
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
Styrene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 5:11:06 PM	R56807
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 5:11:06 PM	R56807
Surr: 1,2-Dichloroethane-d4	97.0	70-130		%Rec	1	1/4/2019 5:11:06 PM	R56807
Surr: 4-Bromofluorobenzene	98.0	70-130		%Rec	1	1/4/2019 5:11:06 PM	R56807
Surr: Dibromofluoromethane	99.3	70-130		%Rec	1	1/4/2019 5:11:06 PM	R56807
Surr: Toluene-d8	102	70-130		%Rec	1	1/4/2019 5:11:06 PM	R56807

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 3-03

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 10:23:00 AM

Lab ID: 1901055-003

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
Toluene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
Naphthalene	ND	2.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
Acetone	ND	10		µg/L	1	1/4/2019 5:40:27 PM	R56807
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
Bromoform	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
Bromomethane	ND	3.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
2-Butanone	ND	10		µg/L	1	1/4/2019 5:40:27 PM	R56807
Carbon disulfide	ND	10		µg/L	1	1/4/2019 5:40:27 PM	R56807
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
Chloroethane	ND	2.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
Chloroform	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
Chloromethane	ND	3.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 5:40:27 PM	R56807

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 3-03

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 10:23:00 AM

Lab ID: 1901055-003

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
2-Hexanone	ND	10		µg/L	1	1/4/2019 5:40:27 PM	R56807
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 5:40:27 PM	R56807
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
Styrene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 5:40:27 PM	R56807
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 5:40:27 PM	R56807
Surr: 1,2-Dichloroethane-d4	98.7	70-130		%Rec	1	1/4/2019 5:40:27 PM	R56807
Surr: 4-Bromofluorobenzene	99.5	70-130		%Rec	1	1/4/2019 5:40:27 PM	R56807
Surr: Dibromofluoromethane	105	70-130		%Rec	1	1/4/2019 5:40:27 PM	R56807
Surr: Toluene-d8	103	70-130		%Rec	1	1/4/2019 5:40:27 PM	R56807

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 3-04

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 10:30:00 AM

Lab ID: 1901055-004

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
Toluene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
Naphthalene	ND	2.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
Acetone	ND	10		µg/L	1	1/4/2019 6:09:51 PM	R56807
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
Bromoform	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
Bromomethane	ND	3.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
2-Butanone	ND	10		µg/L	1	1/4/2019 6:09:51 PM	R56807
Carbon disulfide	ND	10		µg/L	1	1/4/2019 6:09:51 PM	R56807
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
Chloroethane	ND	2.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
Chloroform	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
Chloromethane	ND	3.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 6:09:51 PM	R56807

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 3-04

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 10:30:00 AM

Lab ID: 1901055-004

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
2-Hexanone	ND	10		µg/L	1	1/4/2019 6:09:51 PM	R56807
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 6:09:51 PM	R56807
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
Styrene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 6:09:51 PM	R56807
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 6:09:51 PM	R56807
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	1/4/2019 6:09:51 PM	R56807
Surr: 4-Bromofluorobenzene	98.2	70-130		%Rec	1	1/4/2019 6:09:51 PM	R56807
Surr: Dibromofluoromethane	112	70-130		%Rec	1	1/4/2019 6:09:51 PM	R56807
Surr: Toluene-d8	94.8	70-130		%Rec	1	1/4/2019 6:09:51 PM	R56807

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 3-04 Dup

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 10:37:00 AM

Lab ID: 1901055-005

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
Toluene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
Naphthalene	ND	2.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
Acetone	ND	10		µg/L	1	1/4/2019 7:37:23 PM	R56807
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
Bromoform	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
Bromomethane	ND	3.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
2-Butanone	ND	10		µg/L	1	1/4/2019 7:37:23 PM	R56807
Carbon disulfide	ND	10		µg/L	1	1/4/2019 7:37:23 PM	R56807
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
Chloroethane	ND	2.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
Chloroform	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
Chloromethane	ND	3.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 7:37:23 PM	R56807

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 3-04 Dup

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 10:37:00 AM

Lab ID: 1901055-005

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
2-Hexanone	ND	10		µg/L	1	1/4/2019 7:37:23 PM	R56807
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 7:37:23 PM	R56807
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
Styrene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 7:37:23 PM	R56807
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 7:37:23 PM	R56807
Surr: 1,2-Dichloroethane-d4	96.6	70-130		%Rec	1	1/4/2019 7:37:23 PM	R56807
Surr: 4-Bromofluorobenzene	95.1	70-130		%Rec	1	1/4/2019 7:37:23 PM	R56807
Surr: Dibromofluoromethane	101	70-130		%Rec	1	1/4/2019 7:37:23 PM	R56807
Surr: Toluene-d8	99.5	70-130		%Rec	1	1/4/2019 7:37:23 PM	R56807

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 3-05

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 10:53:00 AM

Lab ID: 1901055-007

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
Toluene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
Naphthalene	ND	2.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
Acetone	ND	10		µg/L	1	1/4/2019 8:06:35 PM	R56807
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
Bromoform	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
Bromomethane	ND	3.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
2-Butanone	ND	10		µg/L	1	1/4/2019 8:06:35 PM	R56807
Carbon disulfide	ND	10		µg/L	1	1/4/2019 8:06:35 PM	R56807
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
Chloroethane	ND	2.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
Chloroform	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
Chloromethane	ND	3.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 8:06:35 PM	R56807

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 3-05

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 10:53:00 AM

Lab ID: 1901055-007

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
2-Hexanone	ND	10		µg/L	1	1/4/2019 8:06:35 PM	R56807
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 8:06:35 PM	R56807
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
Styrene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 8:06:35 PM	R56807
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 8:06:35 PM	R56807
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	1/4/2019 8:06:35 PM	R56807
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	1/4/2019 8:06:35 PM	R56807
Surr: Dibromofluoromethane	106	70-130		%Rec	1	1/4/2019 8:06:35 PM	R56807
Surr: Toluene-d8	102	70-130		%Rec	1	1/4/2019 8:06:35 PM	R56807

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 3-06

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 11:03:00 AM

Lab ID: 1901055-008

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
Toluene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
Naphthalene	ND	2.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
Acetone	ND	10		µg/L	1	1/4/2019 8:35:46 PM	R56807
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
Bromoform	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
Bromomethane	ND	3.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
2-Butanone	ND	10		µg/L	1	1/4/2019 8:35:46 PM	R56807
Carbon disulfide	ND	10		µg/L	1	1/4/2019 8:35:46 PM	R56807
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
Chloroethane	ND	2.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
Chloroform	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
Chloromethane	ND	3.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 8:35:46 PM	R56807

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 3-06

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 11:03:00 AM

Lab ID: 1901055-008

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
2-Hexanone	ND	10		µg/L	1	1/4/2019 8:35:46 PM	R56807
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 8:35:46 PM	R56807
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
Styrene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 8:35:46 PM	R56807
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 8:35:46 PM	R56807
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	1/4/2019 8:35:46 PM	R56807
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	1/4/2019 8:35:46 PM	R56807
Surr: Dibromofluoromethane	109	70-130		%Rec	1	1/4/2019 8:35:46 PM	R56807
Surr: Toluene-d8	101	70-130		%Rec	1	1/4/2019 8:35:46 PM	R56807

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 3-07

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 11:12:00 AM

Lab ID: 1901055-009

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
Toluene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
Naphthalene	ND	2.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
Acetone	ND	10		µg/L	1	1/4/2019 9:04:47 PM	R56807
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
Bromoform	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
Bromomethane	ND	3.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
2-Butanone	ND	10		µg/L	1	1/4/2019 9:04:47 PM	R56807
Carbon disulfide	ND	10		µg/L	1	1/4/2019 9:04:47 PM	R56807
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
Chloroethane	ND	2.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
Chloroform	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
Chloromethane	ND	3.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 9:04:47 PM	R56807

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 3-07

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 11:12:00 AM

Lab ID: 1901055-009

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
2-Hexanone	ND	10		µg/L	1	1/4/2019 9:04:47 PM	R56807
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 9:04:47 PM	R56807
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
Styrene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 9:04:47 PM	R56807
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 9:04:47 PM	R56807
Surr: 1,2-Dichloroethane-d4	97.3	70-130		%Rec	1	1/4/2019 9:04:47 PM	R56807
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	1/4/2019 9:04:47 PM	R56807
Surr: Dibromofluoromethane	106	70-130		%Rec	1	1/4/2019 9:04:47 PM	R56807
Surr: Toluene-d8	99.6	70-130		%Rec	1	1/4/2019 9:04:47 PM	R56807

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 3-08

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 11:22:00 AM

Lab ID: 1901055-010

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
Toluene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
Naphthalene	ND	2.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
Acetone	ND	10		µg/L	1	1/4/2019 9:33:50 PM	R56807
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
Bromoform	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
Bromomethane	ND	3.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
2-Butanone	ND	10		µg/L	1	1/4/2019 9:33:50 PM	R56807
Carbon disulfide	ND	10		µg/L	1	1/4/2019 9:33:50 PM	R56807
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
Chloroethane	ND	2.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
Chloroform	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
Chloromethane	ND	3.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 9:33:50 PM	R56807

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 3-08

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 11:22:00 AM

Lab ID: 1901055-010

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
2-Hexanone	ND	10		µg/L	1	1/4/2019 9:33:50 PM	R56807
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 9:33:50 PM	R56807
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
Styrene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 9:33:50 PM	R56807
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 9:33:50 PM	R56807
Surr: 1,2-Dichloroethane-d4	99.9	70-130		%Rec	1	1/4/2019 9:33:50 PM	R56807
Surr: 4-Bromofluorobenzene	99.2	70-130		%Rec	1	1/4/2019 9:33:50 PM	R56807
Surr: Dibromofluoromethane	105	70-130		%Rec	1	1/4/2019 9:33:50 PM	R56807
Surr: Toluene-d8	97.1	70-130		%Rec	1	1/4/2019 9:33:50 PM	R56807

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 1-01

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 1:50:00 PM

Lab ID: 1901055-011

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
Toluene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
Naphthalene	ND	2.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
Acetone	ND	10		µg/L	1	1/4/2019 12:55:00 PM	R56767
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
Bromoform	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
Bromomethane	ND	3.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
2-Butanone	ND	10		µg/L	1	1/4/2019 12:55:00 PM	R56767
Carbon disulfide	ND	10		µg/L	1	1/4/2019 12:55:00 PM	R56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
Chloroethane	ND	2.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
Chloroform	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
Chloromethane	ND	3.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 12:55:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 1-01

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 1:50:00 PM

Lab ID: 1901055-011

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
2-Hexanone	ND	10		µg/L	1	1/4/2019 12:55:00 PM	R56767
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 12:55:00 PM	R56767
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
Styrene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 12:55:00 PM	R56767
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 12:55:00 PM	R56767
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	1	1/4/2019 12:55:00 PM	R56767
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	1/4/2019 12:55:00 PM	R56767
Surr: Dibromofluoromethane	111	70-130		%Rec	1	1/4/2019 12:55:00 PM	R56767
Surr: Toluene-d8	98.3	70-130		%Rec	1	1/4/2019 12:55:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 1-02

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 2:00:00 PM

Lab ID: 1901055-012

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
Toluene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
Naphthalene	ND	2.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
Acetone	ND	10		µg/L	1	1/4/2019 2:07:00 PM	R56767
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
Bromoform	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
Bromomethane	ND	3.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
2-Butanone	ND	10		µg/L	1	1/4/2019 2:07:00 PM	R56767
Carbon disulfide	ND	10		µg/L	1	1/4/2019 2:07:00 PM	R56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
Chloroethane	ND	2.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
Chloroform	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
Chloromethane	ND	3.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 2:07:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 1-02

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 2:00:00 PM

Lab ID: 1901055-012

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
2-Hexanone	ND	10		µg/L	1	1/4/2019 2:07:00 PM	R56767
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 2:07:00 PM	R56767
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
Styrene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 2:07:00 PM	R56767
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 2:07:00 PM	R56767
Surr: 1,2-Dichloroethane-d4	112	70-130		%Rec	1	1/4/2019 2:07:00 PM	R56767
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	1/4/2019 2:07:00 PM	R56767
Surr: Dibromofluoromethane	113	70-130		%Rec	1	1/4/2019 2:07:00 PM	R56767
Surr: Toluene-d8	97.0	70-130		%Rec	1	1/4/2019 2:07:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 1-03

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 2:06:00 PM

Lab ID: 1901055-013

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
Toluene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
Naphthalene	ND	2.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
Acetone	ND	10		µg/L	1	1/4/2019 2:32:00 PM	R56767
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
Bromoform	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
Bromomethane	ND	3.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
2-Butanone	ND	10		µg/L	1	1/4/2019 2:32:00 PM	R56767
Carbon disulfide	ND	10		µg/L	1	1/4/2019 2:32:00 PM	R56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
Chloroethane	ND	2.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
Chloroform	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
Chloromethane	ND	3.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 2:32:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 1-03

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 2:06:00 PM

Lab ID: 1901055-013

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
2-Hexanone	ND	10		µg/L	1	1/4/2019 2:32:00 PM	R56767
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 2:32:00 PM	R56767
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
Styrene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 2:32:00 PM	R56767
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 2:32:00 PM	R56767
Surr: 1,2-Dichloroethane-d4	112	70-130		%Rec	1	1/4/2019 2:32:00 PM	R56767
Surr: 4-Bromofluorobenzene	99.9	70-130		%Rec	1	1/4/2019 2:32:00 PM	R56767
Surr: Dibromofluoromethane	112	70-130		%Rec	1	1/4/2019 2:32:00 PM	R56767
Surr: Toluene-d8	97.8	70-130		%Rec	1	1/4/2019 2:32:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 1-04

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 2:25:00 PM

Lab ID: 1901055-014

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
Toluene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
Naphthalene	ND	2.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
Acetone	ND	10		µg/L	1	1/4/2019 2:56:00 PM	R56767
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
Bromoform	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
Bromomethane	ND	3.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
2-Butanone	ND	10		µg/L	1	1/4/2019 2:56:00 PM	R56767
Carbon disulfide	ND	10		µg/L	1	1/4/2019 2:56:00 PM	R56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
Chloroethane	ND	2.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
Chloroform	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
Chloromethane	ND	3.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 2:56:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 1-04

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 2:25:00 PM

Lab ID: 1901055-014

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
2-Hexanone	ND	10		µg/L	1	1/4/2019 2:56:00 PM	R56767
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 2:56:00 PM	R56767
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
Styrene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 2:56:00 PM	R56767
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 2:56:00 PM	R56767
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	1/4/2019 2:56:00 PM	R56767
Surr: 4-Bromofluorobenzene	98.1	70-130		%Rec	1	1/4/2019 2:56:00 PM	R56767
Surr: Dibromofluoromethane	113	70-130		%Rec	1	1/4/2019 2:56:00 PM	R56767
Surr: Toluene-d8	97.2	70-130		%Rec	1	1/4/2019 2:56:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 1-05

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 2:34:00 PM

Lab ID: 1901055-015

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
Toluene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
Naphthalene	ND	2.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
Acetone	ND	10		µg/L	1	1/4/2019 3:20:00 PM	R56767
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
Bromoform	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
Bromomethane	ND	3.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
2-Butanone	ND	10		µg/L	1	1/4/2019 3:20:00 PM	R56767
Carbon disulfide	ND	10		µg/L	1	1/4/2019 3:20:00 PM	R56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
Chloroethane	ND	2.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
Chloroform	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
Chloromethane	ND	3.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 3:20:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 1-05

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 2:34:00 PM

Lab ID: 1901055-015

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
2-Hexanone	ND	10		µg/L	1	1/4/2019 3:20:00 PM	R56767
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 3:20:00 PM	R56767
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
Styrene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 3:20:00 PM	R56767
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 3:20:00 PM	R56767
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	1/4/2019 3:20:00 PM	R56767
Surr: 4-Bromofluorobenzene	98.5	70-130		%Rec	1	1/4/2019 3:20:00 PM	R56767
Surr: Dibromofluoromethane	113	70-130		%Rec	1	1/4/2019 3:20:00 PM	R56767
Surr: Toluene-d8	97.1	70-130		%Rec	1	1/4/2019 3:20:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 1-06

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 2:40:00 PM

Lab ID: 1901055-016

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
Toluene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
Naphthalene	ND	2.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
Acetone	ND	10		µg/L	1	1/4/2019 3:44:00 PM	R56767
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
Bromoform	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
Bromomethane	ND	3.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
2-Butanone	ND	10		µg/L	1	1/4/2019 3:44:00 PM	R56767
Carbon disulfide	ND	10		µg/L	1	1/4/2019 3:44:00 PM	R56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
Chloroethane	ND	2.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
Chloroform	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
Chloromethane	ND	3.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 3:44:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 1-06

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 2:40:00 PM

Lab ID: 1901055-016

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
2-Hexanone	ND	10		µg/L	1	1/4/2019 3:44:00 PM	R56767
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 3:44:00 PM	R56767
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
Styrene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 3:44:00 PM	R56767
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 3:44:00 PM	R56767
Surr: 1,2-Dichloroethane-d4	112	70-130		%Rec	1	1/4/2019 3:44:00 PM	R56767
Surr: 4-Bromofluorobenzene	98.7	70-130		%Rec	1	1/4/2019 3:44:00 PM	R56767
Surr: Dibromofluoromethane	114	70-130		%Rec	1	1/4/2019 3:44:00 PM	R56767
Surr: Toluene-d8	96.9	70-130		%Rec	1	1/4/2019 3:44:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 1-06 Dup

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 2:45:00 PM

Lab ID: 1901055-017

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
Toluene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
Naphthalene	ND	2.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
Acetone	ND	10		µg/L	1	1/4/2019 4:08:00 PM	R56767
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
Bromoform	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
Bromomethane	ND	3.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
2-Butanone	ND	10		µg/L	1	1/4/2019 4:08:00 PM	R56767
Carbon disulfide	ND	10		µg/L	1	1/4/2019 4:08:00 PM	R56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
Chloroethane	ND	2.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
Chloroform	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
Chloromethane	ND	3.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 4:08:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 1-06 Dup

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 2:45:00 PM

Lab ID: 1901055-017

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
2-Hexanone	ND	10		µg/L	1	1/4/2019 4:08:00 PM	R56767
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 4:08:00 PM	R56767
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
Styrene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 4:08:00 PM	R56767
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 4:08:00 PM	R56767
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	1	1/4/2019 4:08:00 PM	R56767
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	1/4/2019 4:08:00 PM	R56767
Surr: Dibromofluoromethane	112	70-130		%Rec	1	1/4/2019 4:08:00 PM	R56767
Surr: Toluene-d8	98.0	70-130		%Rec	1	1/4/2019 4:08:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 1-07

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 2:50:00 PM

Lab ID: 1901055-018

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
Toluene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
Naphthalene	ND	2.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
Acetone	ND	10		µg/L	1	1/4/2019 4:32:00 PM	R56767
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
Bromoform	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
Bromomethane	ND	3.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
2-Butanone	ND	10		µg/L	1	1/4/2019 4:32:00 PM	R56767
Carbon disulfide	ND	10		µg/L	1	1/4/2019 4:32:00 PM	R56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
Chloroethane	ND	2.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
Chloroform	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
Chloromethane	ND	3.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 4:32:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 1-07

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 2:50:00 PM

Lab ID: 1901055-018

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
2-Hexanone	ND	10		µg/L	1	1/4/2019 4:32:00 PM	R56767
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 4:32:00 PM	R56767
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
Styrene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 4:32:00 PM	R56767
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 4:32:00 PM	R56767
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	1/4/2019 4:32:00 PM	R56767
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	1/4/2019 4:32:00 PM	R56767
Surr: Dibromofluoromethane	112	70-130		%Rec	1	1/4/2019 4:32:00 PM	R56767
Surr: Toluene-d8	97.6	70-130		%Rec	1	1/4/2019 4:32:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 1-08

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 2:55:00 PM

Lab ID: 1901055-019

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
Toluene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
Naphthalene	ND	2.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
Acetone	ND	10		µg/L	1	1/4/2019 4:56:00 PM	R56767
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
Bromoform	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
Bromomethane	ND	3.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
2-Butanone	ND	10		µg/L	1	1/4/2019 4:56:00 PM	R56767
Carbon disulfide	ND	10		µg/L	1	1/4/2019 4:56:00 PM	R56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
Chloroethane	ND	2.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
Chloroform	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
Chloromethane	ND	3.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 4:56:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 1-08

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 2:55:00 PM

Lab ID: 1901055-019

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
2-Hexanone	ND	10		µg/L	1	1/4/2019 4:56:00 PM	R56767
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 4:56:00 PM	R56767
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
Styrene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 4:56:00 PM	R56767
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 4:56:00 PM	R56767
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	1/4/2019 4:56:00 PM	R56767
Surr: 4-Bromofluorobenzene	99.5	70-130		%Rec	1	1/4/2019 4:56:00 PM	R56767
Surr: Dibromofluoromethane	113	70-130		%Rec	1	1/4/2019 4:56:00 PM	R56767
Surr: Toluene-d8	97.0	70-130		%Rec	1	1/4/2019 4:56:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 1-09

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 3:00:00 PM

Lab ID: 1901055-020

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
Toluene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
Naphthalene	ND	2.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
Acetone	ND	10		µg/L	1	1/4/2019 5:21:00 PM	R56767
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
Bromoform	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
Bromomethane	ND	3.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
2-Butanone	ND	10		µg/L	1	1/4/2019 5:21:00 PM	R56767
Carbon disulfide	ND	10		µg/L	1	1/4/2019 5:21:00 PM	R56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
Chloroethane	ND	2.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
Chloroform	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
Chloromethane	ND	3.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 5:21:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 1-09

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 3:00:00 PM

Lab ID: 1901055-020

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
2-Hexanone	ND	10		µg/L	1	1/4/2019 5:21:00 PM	R56767
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 5:21:00 PM	R56767
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
Styrene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 5:21:00 PM	R56767
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 5:21:00 PM	R56767
Surr: 1,2-Dichloroethane-d4	112	70-130		%Rec	1	1/4/2019 5:21:00 PM	R56767
Surr: 4-Bromofluorobenzene	99.0	70-130		%Rec	1	1/4/2019 5:21:00 PM	R56767
Surr: Dibromofluoromethane	114	70-130		%Rec	1	1/4/2019 5:21:00 PM	R56767
Surr: Toluene-d8	96.8	70-130		%Rec	1	1/4/2019 5:21:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 1-10

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 3:08:00 PM

Lab ID: 1901055-021

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
Toluene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
Naphthalene	ND	2.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
Acetone	ND	10		µg/L	1	1/4/2019 5:45:00 PM	R56767
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
Bromoform	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
Bromomethane	ND	3.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
2-Butanone	ND	10		µg/L	1	1/4/2019 5:45:00 PM	R56767
Carbon disulfide	ND	10		µg/L	1	1/4/2019 5:45:00 PM	R56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
Chloroethane	ND	2.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
Chloroform	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
Chloromethane	ND	3.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 5:45:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: NGMW 1-10

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 3:08:00 PM

Lab ID: 1901055-021

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
2-Hexanone	ND	10		µg/L	1	1/4/2019 5:45:00 PM	R56767
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 5:45:00 PM	R56767
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
Styrene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 5:45:00 PM	R56767
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 5:45:00 PM	R56767
Surr: 1,2-Dichloroethane-d4	112	70-130		%Rec	1	1/4/2019 5:45:00 PM	R56767
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	1/4/2019 5:45:00 PM	R56767
Surr: Dibromofluoromethane	112	70-130		%Rec	1	1/4/2019 5:45:00 PM	R56767
Surr: Toluene-d8	96.2	70-130		%Rec	1	1/4/2019 5:45:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: FB190201

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 3:50:00 PM

Lab ID: 1901055-022

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
Toluene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
Naphthalene	ND	2.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
Acetone	ND	10		µg/L	1	1/4/2019 6:09:00 PM	R56767
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
Bromodichloromethane	1.0	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
Bromoform	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
Bromomethane	ND	3.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
2-Butanone	ND	10		µg/L	1	1/4/2019 6:09:00 PM	R56767
Carbon disulfide	ND	10		µg/L	1	1/4/2019 6:09:00 PM	R56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
Chloroethane	ND	2.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
Chloroform	1.0	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
Chloromethane	ND	3.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 6:09:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: FB190201

Project: CLC Griggs and Walnut

Collection Date: 1/2/2019 3:50:00 PM

Lab ID: 1901055-022

Matrix: AQUEOUS

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
2-Hexanone	ND	10		µg/L	1	1/4/2019 6:09:00 PM	R56767
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 6:09:00 PM	R56767
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
Styrene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 6:09:00 PM	R56767
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 6:09:00 PM	R56767
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	1/4/2019 6:09:00 PM	R56767
Surr: 4-Bromofluorobenzene	99.6	70-130		%Rec	1	1/4/2019 6:09:00 PM	R56767
Surr: Dibromofluoromethane	111	70-130		%Rec	1	1/4/2019 6:09:00 PM	R56767
Surr: Toluene-d8	96.9	70-130		%Rec	1	1/4/2019 6:09:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: Trip Blank

Project: CLC Griggs and Walnut

Collection Date:

Lab ID: 1901055-023

Matrix: TRIP BLANK

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
Toluene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
Naphthalene	ND	2.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
Acetone	ND	10		µg/L	1	1/4/2019 6:33:00 PM	R56767
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
Bromoform	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
Bromomethane	ND	3.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
2-Butanone	ND	10		µg/L	1	1/4/2019 6:33:00 PM	R56767
Carbon disulfide	ND	10		µg/L	1	1/4/2019 6:33:00 PM	R56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
Chloroethane	ND	2.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
Chloroform	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
Chloromethane	ND	3.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 6:33:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901055

Date Reported: 1/8/2019

CLIENT: Terracon

Client Sample ID: Trip Blank

Project: CLC Griggs and Walnut

Collection Date:

Lab ID: 1901055-023

Matrix: TRIP BLANK

Received Date: 1/3/2019 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
2-Hexanone	ND	10		µg/L	1	1/4/2019 6:33:00 PM	R56767
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 6:33:00 PM	R56767
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
Styrene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 6:33:00 PM	R56767
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 6:33:00 PM	R56767
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	1/4/2019 6:33:00 PM	R56767
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	1/4/2019 6:33:00 PM	R56767
Surr: Dibromofluoromethane	109	70-130		%Rec	1	1/4/2019 6:33:00 PM	R56767
Surr: Toluene-d8	96.5	70-130		%Rec	1	1/4/2019 6:33:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901055

08-Jan-19

Client: Terracon
Project: CLC Griggs and Walnut

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES								
Client ID: LCSW	Batch ID: R56767	RunNo: 56767								
Prep Date:	Analysis Date: 1/4/2019	SeqNo: 1900777 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	112	70	130			
Toluene	20	1.0	20.00	0	100	70	130			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	118	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	108	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		111	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	9.7		10.00		97.3	70	130			

Sample ID: rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R56767	RunNo: 56767								
Prep Date:	Analysis Date: 1/4/2019	SeqNo: 1900778 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901055

08-Jan-19

Client: Terracon
Project: CLC Griggs and Walnut

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R56767	RunNo:	56767					
Prep Date:		Analysis Date:	1/4/2019	SeqNo:	1900778	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901055

08-Jan-19

Client: Terracon
Project: CLC Griggs and Walnut

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R56767		RunNo: 56767							
Prep Date:	Analysis Date: 1/4/2019		SeqNo: 1900778		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		110	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.3	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	9.9		10.00		98.8	70	130			

Sample ID 1901055-011ams	SampType: MS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: NGMW 1-01	Batch ID: R56767		RunNo: 56767							
Prep Date:	Analysis Date: 1/4/2019		SeqNo: 1900782		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	113	70	130			
Toluene	20	1.0	20.00	0	99.1	70	130			
Chlorobenzene	20	1.0	20.00	0	100	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	118	67.6	130			
Trichloroethene (TCE)	22	1.0	20.00	0	109	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		114	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	12		10.00		115	70	130			
Surr: Toluene-d8	9.8		10.00		97.5	70	130			

Sample ID 1901055-011amsd	SampType: MSD		TestCode: EPA Method 8260B: VOLATILES							
Client ID: NGMW 1-01	Batch ID: R56767		RunNo: 56767							
Prep Date:	Analysis Date: 1/4/2019		SeqNo: 1900783		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130	6.19	20	
Toluene	19	1.0	20.00	0	94.4	70	130	4.93	20	
Chlorobenzene	19	1.0	20.00	0	95.8	70	130	4.74	20	
1,1-Dichloroethene	22	1.0	20.00	0	111	67.6	130	5.84	20	
Trichloroethene (TCE)	21	1.0	20.00	0	103	70	130	5.56	20	
Surr: 1,2-Dichloroethane-d4	11		10.00		112	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.8		10.00		98.1	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		111	70	130	0	0	
Surr: Toluene-d8	9.7		10.00		97.0	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901055

08-Jan-19

Client: Terracon
Project: CLC Griggs and Walnut

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES						
Client ID:	LCSW	Batch ID:	R56807	RunNo:	56807						
Prep Date:		Analysis Date:	1/4/2019	SeqNo:	1901185	Units:	µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	18	1.0	20.00	0	88.4	70	130				
Toluene	20	1.0	20.00	0	101	70	130				
Chlorobenzene	19	1.0	20.00	0	96.0	70	130				
1,1-Dichloroethene	19	1.0	20.00	0	96.9	70	130				
Trichloroethene (TCE)	17	1.0	20.00	0	85.3	70	130				
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.6	70	130				
Surr: 4-Bromofluorobenzene	10		10.00		99.6	70	130				
Surr: Dibromofluoromethane	9.9		10.00		99.0	70	130				
Surr: Toluene-d8	11		10.00		107	70	130				

Sample ID	1901055-004a ms	SampType:	MS	TestCode:	EPA Method 8260B: VOLATILES						
Client ID:	NGMW 3-04	Batch ID:	R56807	RunNo:	56807						
Prep Date:		Analysis Date:	1/4/2019	SeqNo:	1901190	Units:	µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	20	1.0	20.00	0	98.9	70	130				
Toluene	20	1.0	20.00	0	99.2	70	130				
Chlorobenzene	20	1.0	20.00	0	98.2	70	130				
1,1-Dichloroethene	21	1.0	20.00	0	104	67.6	130				
Trichloroethene (TCE)	18	1.0	20.00	0	90.7	70	130				
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130				
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130				
Surr: Dibromofluoromethane	11		10.00		107	70	130				
Surr: Toluene-d8	10		10.00		104	70	130				

Sample ID	1901055-004a msd	SampType:	MSD	TestCode:	EPA Method 8260B: VOLATILES						
Client ID:	NGMW 3-04	Batch ID:	R56807	RunNo:	56807						
Prep Date:		Analysis Date:	1/4/2019	SeqNo:	1901191	Units:	µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	19	1.0	20.00	0	97.0	70	130	1.91	20		
Toluene	19	1.0	20.00	0	92.8	70	130	6.63	20		
Chlorobenzene	18	1.0	20.00	0	91.8	70	130	6.67	20		
1,1-Dichloroethene	21	1.0	20.00	0	103	67.6	130	0.738	20		
Trichloroethene (TCE)	18	1.0	20.00	0	89.1	70	130	1.82	20		
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130	0	0		
Surr: 4-Bromofluorobenzene	10		10.00		99.7	70	130	0	0		
Surr: Dibromofluoromethane	11		10.00		112	70	130	0	0		
Surr: Toluene-d8	10		10.00		101	70	130	0	0		

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901055

08-Jan-19

Client: Terracon
Project: CLC Griggs and Walnut

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R56807	RunNo:	56807					
Prep Date:		Analysis Date:	1/4/2019	SeqNo:	1901198					
				Units:	µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901055

08-Jan-19

Client: Terracon
Project: CLC Griggs and Walnut

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R56807	RunNo:	56807					
Prep Date:		Analysis Date:	1/4/2019	SeqNo:	1901198	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.3	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
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- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
 4961 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4167
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: TER-LC

Work Order Number: 1901055

RcptNo: 1

Received By: Victoria Zellar 1/3/2019 9:30:00 AM

Victoria Zellar

Completed By: Erin Melendrez 1/3/2019 11:49:31 AM

EM

Reviewed By: ENM 1/3/19

LB: DAD 1/3/19

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? FedEx

Log in

3. Was an attempt made to cool the samples? Yes No NA
4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
5. Sample(s) in proper container(s)? Yes No
6. Sufficient sample volume for indicated test(s)? Yes No
7. Are samples (except VOA and ONG) properly preserved? Yes No
8. Was preservative added to bottles? Yes No NA
9. VOA vials have zero headspace? Yes No No VOA Vials
10. Were any sample containers received broken? Yes No
11. Does paperwork match bottle labels?
 (Note discrepancies on chain of custody) Yes No
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Is it clear what analyses were requested? Yes No
14. Were all holding times able to be met?
 (If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: DAD 1/3/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Terracota Las Cruces
 Mailing Address: 4450 Patagon Memorial East
Las Cruces, NM 88012
 Phone #: 575.527.1700
 email or Fax#: Larri.Erstad@Terracota.com

QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation: Az Compliance
 NELAC Other
 EDD (Type)

Turn-Around Time: Standard Rush
 Project Name: CLE Griggs + Windnut
 Project #: USRR186 Task 2
 Project Manager: Swasi Gandara

Sampler: Larri Erstad
 On Ice: Yes No
 # of Coolers: 1
 Cooler Temp (including CP): 10

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
1/2/19	0956	water	NGmw3-01	3	HCl	ENV1757A
	1005		NGmw3-02	3		1872901055
	1023		NGmw3-03	3		
	1030		NGmw3-04	3		
	1037		NGmw3-04 Dup	3		
	1041		NGmw3-04 MSD	3		
	1053		NGmw3-05	3		
	1103		NGmw3-06	3		
	1112		NGmw3-07	3		
	1122		NGmw3-08	3		
1/2/19	1350	water	NGmw1-01	3	HCl	
1/2/19	1400	water	NGmw1-02	3	HCl	

Reinquired by: Swasi Gandara Date: 1/2/19 Time: 1700
 Received by: William Gellan Date: 1/3/19 Time: 9:30
 Via: FEDEx
 Remarks:



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260(VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
							X	X	
							X	X	
							X	X	
							X	X	
							X	X	
							X	X	
							X	X	
							X	X	
							X	X	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: Texasan Las Cruces

Mailing Address: 44450 Bataan Memorial East

Las Cruces, NM 88012

Phone #: 505.527.1700

email or Fax#: karr.erstad@txenv.com

QA/QC Package: Standard Level 4 (Full Validation)

Accreditation: Az Compliance NELAC Other

EDD (Type)

Turn-Around Time: Standard Rush

Project Name: CUC Griggs & Walnut

Project #: 6818P186 Task 2

Project Manager: Surasi Gandara

Sampler: Lori Erstad

On Ice: Yes No

of Coolers: 10

Cooler Temp (including CF): 10

Container Type and #

Preservative Type

HEAL No

9 ENH 151A

1801055

-013

-014

-015

-016

-017

-018

-019

-020

-021

-022

-023

2

Trip blank

Received by: Stimul Bolton

Via: FEDEX

Date: 11/3/19

Time: 9:30

Analysis Request

TPH:8015D(GRO / DRO / MRO)

8081 Pesticides/8082 PCB's

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

RCA 8 Metals

Cl, F, Br, NO₂, NO₃, PO₄, SO₄

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)

BTEX / MTBE / TMB's (8021)

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Analysis Request

Analysis Request

Analysis Request

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Date: 11/3/19

Time: 1700

Date: 11/3/19

Time: 1700

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 09, 2019

Surasi Gandara
City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3635
FAX (575) 528-3513

RE: CLC Griggs Walnut

OrderNo.: 1901113

Dear Surasi Gandara:

Hall Environmental Analysis Laboratory received 12 sample(s) on 1/4/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW2-01

Project: CLC Griggs Walnut

Collection Date: 1/3/2019 10:10:00 AM

Lab ID: 1901113-001

Matrix: AQUEOUS

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
Toluene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
Naphthalene	ND	2.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
Acetone	ND	10		µg/L	1	1/4/2019 6:57:00 PM	R56767
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
Bromoform	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
Bromomethane	ND	3.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
2-Butanone	ND	10		µg/L	1	1/4/2019 6:57:00 PM	R56767
Carbon disulfide	ND	10		µg/L	1	1/4/2019 6:57:00 PM	R56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
Chloroethane	ND	2.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
Chloroform	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
Chloromethane	ND	3.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 6:57:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW2-01

Project: CLC Griggs Walnut

Collection Date: 1/3/2019 10:10:00 AM

Lab ID: 1901113-001

Matrix: AQUEOUS

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
2-Hexanone	ND	10		µg/L	1	1/4/2019 6:57:00 PM	R56767
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 6:57:00 PM	R56767
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
Styrene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 6:57:00 PM	R56767
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 6:57:00 PM	R56767
Surr: 1,2-Dichloroethane-d4	114	70-130		%Rec	1	1/4/2019 6:57:00 PM	R56767
Surr: 4-Bromofluorobenzene	98.3	70-130		%Rec	1	1/4/2019 6:57:00 PM	R56767
Surr: Dibromofluoromethane	112	70-130		%Rec	1	1/4/2019 6:57:00 PM	R56767
Surr: Toluene-d8	97.1	70-130		%Rec	1	1/4/2019 6:57:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW2-02

Project: CLC Griggs Walnut

Collection Date: 1/3/2019 10:18:00 AM

Lab ID: 1901113-002

Matrix: AQUEOUS

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
Toluene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
Naphthalene	ND	2.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
Acetone	ND	10		µg/L	1	1/4/2019 7:21:00 PM	R56767
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
Bromoform	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
Bromomethane	ND	3.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
2-Butanone	ND	10		µg/L	1	1/4/2019 7:21:00 PM	R56767
Carbon disulfide	ND	10		µg/L	1	1/4/2019 7:21:00 PM	R56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
Chloroethane	ND	2.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
Chloroform	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
Chloromethane	ND	3.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 7:21:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW2-02

Project: CLC Griggs Walnut

Collection Date: 1/3/2019 10:18:00 AM

Lab ID: 1901113-002

Matrix: AQUEOUS

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
2-Hexanone	ND	10		µg/L	1	1/4/2019 7:21:00 PM	R56767
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 7:21:00 PM	R56767
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
Styrene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 7:21:00 PM	R56767
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 7:21:00 PM	R56767
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	1/4/2019 7:21:00 PM	R56767
Surr: 4-Bromofluorobenzene	98.2	70-130		%Rec	1	1/4/2019 7:21:00 PM	R56767
Surr: Dibromofluoromethane	111	70-130		%Rec	1	1/4/2019 7:21:00 PM	R56767
Surr: Toluene-d8	97.2	70-130		%Rec	1	1/4/2019 7:21:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW2-03

Project: CLC Griggs Walnut

Collection Date: 1/3/2019 10:25:00 AM

Lab ID: 1901113-003

Matrix: AQUEOUS

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
Toluene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
Naphthalene	ND	2.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
Acetone	ND	10		µg/L	1	1/4/2019 7:44:00 PM	R56767
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
Bromoform	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
Bromomethane	ND	3.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
2-Butanone	ND	10		µg/L	1	1/4/2019 7:44:00 PM	R56767
Carbon disulfide	ND	10		µg/L	1	1/4/2019 7:44:00 PM	R56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
Chloroethane	ND	2.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
Chloroform	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
Chloromethane	ND	3.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 7:44:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW2-03

Project: CLC Griggs Walnut

Collection Date: 1/3/2019 10:25:00 AM

Lab ID: 1901113-003

Matrix: AQUEOUS

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
2-Hexanone	ND	10		µg/L	1	1/4/2019 7:44:00 PM	R56767
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 7:44:00 PM	R56767
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
Styrene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 7:44:00 PM	R56767
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 7:44:00 PM	R56767
Surr: 1,2-Dichloroethane-d4	115	70-130		%Rec	1	1/4/2019 7:44:00 PM	R56767
Surr: 4-Bromofluorobenzene	98.6	70-130		%Rec	1	1/4/2019 7:44:00 PM	R56767
Surr: Dibromofluoromethane	116	70-130		%Rec	1	1/4/2019 7:44:00 PM	R56767
Surr: Toluene-d8	97.0	70-130		%Rec	1	1/4/2019 7:44:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW2-04

Project: CLC Griggs Walnut

Collection Date: 1/3/2019 10:35:00 AM

Lab ID: 1901113-004

Matrix: AQUEOUS

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
Toluene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
Naphthalene	ND	2.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
Acetone	ND	10		µg/L	1	1/4/2019 8:08:00 PM	R56767
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
Bromoform	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
Bromomethane	ND	3.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
2-Butanone	ND	10		µg/L	1	1/4/2019 8:08:00 PM	R56767
Carbon disulfide	ND	10		µg/L	1	1/4/2019 8:08:00 PM	R56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
Chloroethane	ND	2.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
Chloroform	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
Chloromethane	ND	3.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 8:08:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW2-04

Project: CLC Griggs Walnut

Collection Date: 1/3/2019 10:35:00 AM

Lab ID: 1901113-004

Matrix: AQUEOUS

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
2-Hexanone	ND	10		µg/L	1	1/4/2019 8:08:00 PM	R56767
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 8:08:00 PM	R56767
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
Styrene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 8:08:00 PM	R56767
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 8:08:00 PM	R56767
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	1/4/2019 8:08:00 PM	R56767
Surr: 4-Bromofluorobenzene	98.7	70-130		%Rec	1	1/4/2019 8:08:00 PM	R56767
Surr: Dibromofluoromethane	112	70-130		%Rec	1	1/4/2019 8:08:00 PM	R56767
Surr: Toluene-d8	96.9	70-130		%Rec	1	1/4/2019 8:08:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW2-05

Project: CLC Griggs Walnut

Collection Date: 1/3/2019 10:45:00 AM

Lab ID: 1901113-005

Matrix: AQUEOUS

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
Toluene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
Naphthalene	ND	2.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
Acetone	ND	10		µg/L	1	1/4/2019 8:32:00 PM	R56767
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
Bromoform	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
Bromomethane	ND	3.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
2-Butanone	ND	10		µg/L	1	1/4/2019 8:32:00 PM	R56767
Carbon disulfide	ND	10		µg/L	1	1/4/2019 8:32:00 PM	R56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
Chloroethane	ND	2.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
Chloroform	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
Chloromethane	ND	3.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 8:32:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW2-05

Project: CLC Griggs Walnut

Collection Date: 1/3/2019 10:45:00 AM

Lab ID: 1901113-005

Matrix: AQUEOUS

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
2-Hexanone	ND	10		µg/L	1	1/4/2019 8:32:00 PM	R56767
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 8:32:00 PM	R56767
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
Styrene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 8:32:00 PM	R56767
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 8:32:00 PM	R56767
Surr: 1,2-Dichloroethane-d4	112	70-130		%Rec	1	1/4/2019 8:32:00 PM	R56767
Surr: 4-Bromofluorobenzene	99.7	70-130		%Rec	1	1/4/2019 8:32:00 PM	R56767
Surr: Dibromofluoromethane	112	70-130		%Rec	1	1/4/2019 8:32:00 PM	R56767
Surr: Toluene-d8	97.3	70-130		%Rec	1	1/4/2019 8:32:00 PM	R56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW2-06

Project: CLC Griggs Walnut

Collection Date: 1/3/2019 10:56:00 AM

Lab ID: 1901113-006

Matrix: AQUEOUS

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
Toluene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
Naphthalene	ND	2.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
Acetone	ND	10		µg/L	1	1/4/2019 8:56:00 PM	B56767
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
Bromoform	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
Bromomethane	ND	3.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
2-Butanone	ND	10		µg/L	1	1/4/2019 8:56:00 PM	B56767
Carbon disulfide	ND	10		µg/L	1	1/4/2019 8:56:00 PM	B56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
Chloroethane	ND	2.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
Chloroform	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
Chloromethane	ND	3.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 8:56:00 PM	B56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW2-06

Project: CLC Griggs Walnut

Collection Date: 1/3/2019 10:56:00 AM

Lab ID: 1901113-006

Matrix: AQUEOUS

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
2-Hexanone	ND	10		µg/L	1	1/4/2019 8:56:00 PM	B56767
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 8:56:00 PM	B56767
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
Styrene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 8:56:00 PM	B56767
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 8:56:00 PM	B56767
Surr: 1,2-Dichloroethane-d4	112	70-130		%Rec	1	1/4/2019 8:56:00 PM	B56767
Surr: 4-Bromofluorobenzene	96.7	70-130		%Rec	1	1/4/2019 8:56:00 PM	B56767
Surr: Dibromofluoromethane	113	70-130		%Rec	1	1/4/2019 8:56:00 PM	B56767
Surr: Toluene-d8	97.8	70-130		%Rec	1	1/4/2019 8:56:00 PM	B56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW2-06 Dup

Project: CLC Griggs Walnut

Collection Date: 1/3/2019 11:02:00 AM

Lab ID: 1901113-007

Matrix: AQUEOUS

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
Toluene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
Naphthalene	ND	2.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
Acetone	ND	10		µg/L	1	1/4/2019 10:09:00 PM	B56767
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
Bromoform	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
Bromomethane	ND	3.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
2-Butanone	ND	10		µg/L	1	1/4/2019 10:09:00 PM	B56767
Carbon disulfide	ND	10		µg/L	1	1/4/2019 10:09:00 PM	B56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
Chloroethane	ND	2.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
Chloroform	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
Chloromethane	ND	3.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 10:09:00 PM	B56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW2-06 Dup

Project: CLC Griggs Walnut

Collection Date: 1/3/2019 11:02:00 AM

Lab ID: 1901113-007

Matrix: AQUEOUS

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
2-Hexanone	ND	10		µg/L	1	1/4/2019 10:09:00 PM	B56767
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 10:09:00 PM	B56767
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
Styrene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 10:09:00 PM	B56767
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 10:09:00 PM	B56767
Surr: 1,2-Dichloroethane-d4	112	70-130		%Rec	1	1/4/2019 10:09:00 PM	B56767
Surr: 4-Bromofluorobenzene	98.2	70-130		%Rec	1	1/4/2019 10:09:00 PM	B56767
Surr: Dibromofluoromethane	113	70-130		%Rec	1	1/4/2019 10:09:00 PM	B56767
Surr: Toluene-d8	95.3	70-130		%Rec	1	1/4/2019 10:09:00 PM	B56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW2-07

Project: CLC Griggs Walnut

Collection Date: 1/3/2019 11:24:00 AM

Lab ID: 1901113-008

Matrix: AQUEOUS

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
Toluene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
Naphthalene	ND	2.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
Acetone	ND	10		µg/L	1	1/4/2019 10:33:00 PM	B56767
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
Bromoform	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
Bromomethane	ND	3.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
2-Butanone	ND	10		µg/L	1	1/4/2019 10:33:00 PM	B56767
Carbon disulfide	ND	10		µg/L	1	1/4/2019 10:33:00 PM	B56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
Chloroethane	ND	2.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
Chloroform	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
Chloromethane	ND	3.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 10:33:00 PM	B56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW2-07

Project: CLC Griggs Walnut

Collection Date: 1/3/2019 11:24:00 AM

Lab ID: 1901113-008

Matrix: AQUEOUS

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
2-Hexanone	ND	10		µg/L	1	1/4/2019 10:33:00 PM	B56767
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 10:33:00 PM	B56767
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
Styrene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 10:33:00 PM	B56767
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 10:33:00 PM	B56767
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	1/4/2019 10:33:00 PM	B56767
Surr: 4-Bromofluorobenzene	98.5	70-130		%Rec	1	1/4/2019 10:33:00 PM	B56767
Surr: Dibromofluoromethane	114	70-130		%Rec	1	1/4/2019 10:33:00 PM	B56767
Surr: Toluene-d8	95.8	70-130		%Rec	1	1/4/2019 10:33:00 PM	B56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW2-08

Project: CLC Griggs Walnut

Collection Date: 1/3/2019 11:31:00 AM

Lab ID: 1901113-009

Matrix: AQUEOUS

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
Toluene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
Ethylbenzene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
Naphthalene	ND	2.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
Acetone	ND	10		µg/L	1	1/4/2019 10:57:00 PM	B56767
Bromobenzene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
Bromoform	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
Bromomethane	ND	3.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
2-Butanone	ND	10		µg/L	1	1/4/2019 10:57:00 PM	B56767
Carbon disulfide	ND	10		µg/L	1	1/4/2019 10:57:00 PM	B56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
Chlorobenzene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
Chloroethane	ND	2.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
Chloroform	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
Chloromethane	ND	3.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
Dibromomethane	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2019 10:57:00 PM	B56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW2-08

Project: CLC Griggs Walnut

Collection Date: 1/3/2019 11:31:00 AM

Lab ID: 1901113-009

Matrix: AQUEOUS

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
2-Hexanone	ND	10		µg/L	1	1/4/2019 10:57:00 PM	B56767
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2019 10:57:00 PM	B56767
Methylene Chloride	ND	3.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
Styrene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
Vinyl chloride	ND	1.0		µg/L	1	1/4/2019 10:57:00 PM	B56767
Xylenes, Total	ND	1.5		µg/L	1	1/4/2019 10:57:00 PM	B56767
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	1	1/4/2019 10:57:00 PM	B56767
Surr: 4-Bromofluorobenzene	98.2	70-130		%Rec	1	1/4/2019 10:57:00 PM	B56767
Surr: Dibromofluoromethane	113	70-130		%Rec	1	1/4/2019 10:57:00 PM	B56767
Surr: Toluene-d8	96.5	70-130		%Rec	1	1/4/2019 10:57:00 PM	B56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW2-09

Project: CLC Griggs Walnut

Collection Date: 1/3/2019 11:40:00 AM

Lab ID: 1901113-010

Matrix: AQUEOUS

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
Toluene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
Ethylbenzene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
Naphthalene	ND	2.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
1-Methylnaphthalene	ND	4.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
2-Methylnaphthalene	ND	4.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
Acetone	ND	10		µg/L	1	1/8/2019 11:51:00 AM	R56851
Bromobenzene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
Bromodichloromethane	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
Bromoform	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
Bromomethane	ND	3.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
2-Butanone	ND	10		µg/L	1	1/8/2019 11:51:00 AM	R56851
Carbon disulfide	ND	10		µg/L	1	1/8/2019 11:51:00 AM	R56851
Carbon Tetrachloride	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
Chlorobenzene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
Chloroethane	ND	2.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
Chloroform	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
Chloromethane	ND	3.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
2-Chlorotoluene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
4-Chlorotoluene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
cis-1,2-DCE	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
Dibromochloromethane	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
Dibromomethane	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
1,1-Dichloroethane	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
1,1-Dichloroethene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
1,2-Dichloropropane	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
1,3-Dichloropropane	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
2,2-Dichloropropane	ND	2.0		µg/L	1	1/8/2019 11:51:00 AM	R56851

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW2-09

Project: CLC Griggs Walnut

Collection Date: 1/3/2019 11:40:00 AM

Lab ID: 1901113-010

Matrix: AQUEOUS

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
Hexachlorobutadiene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
2-Hexanone	ND	10		µg/L	1	1/8/2019 11:51:00 AM	R56851
Isopropylbenzene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
4-Isopropyltoluene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
4-Methyl-2-pentanone	ND	10		µg/L	1	1/8/2019 11:51:00 AM	R56851
Methylene Chloride	ND	3.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
n-Butylbenzene	ND	3.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
n-Propylbenzene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
sec-Butylbenzene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
Styrene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
tert-Butylbenzene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
trans-1,2-DCE	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
Trichlorofluoromethane	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
Vinyl chloride	ND	1.0		µg/L	1	1/8/2019 11:51:00 AM	R56851
Xylenes, Total	ND	1.5		µg/L	1	1/8/2019 11:51:00 AM	R56851
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	1/8/2019 11:51:00 AM	R56851
Surr: 4-Bromofluorobenzene	96.0	70-130		%Rec	1	1/8/2019 11:51:00 AM	R56851
Surr: Dibromofluoromethane	111	70-130		%Rec	1	1/8/2019 11:51:00 AM	R56851
Surr: Toluene-d8	96.9	70-130		%Rec	1	1/8/2019 11:51:00 AM	R56851

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: FB190301

Project: CLC Griggs Walnut

Collection Date: 1/3/2019 1:45:00 PM

Lab ID: 1901113-011

Matrix: AQUEOUS

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
Toluene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
Ethylbenzene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
Naphthalene	ND	2.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
Acetone	ND	10		µg/L	1	1/5/2019 1:20:00 AM	B56767
Bromobenzene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
Bromodichloromethane	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
Bromoform	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
Bromomethane	ND	3.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
2-Butanone	ND	10		µg/L	1	1/5/2019 1:20:00 AM	B56767
Carbon disulfide	ND	10		µg/L	1	1/5/2019 1:20:00 AM	B56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
Chlorobenzene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
Chloroethane	ND	2.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
Chloroform	1.0	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
Chloromethane	ND	3.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
Dibromochloromethane	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
Dibromomethane	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/5/2019 1:20:00 AM	B56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: FB190301

Project: CLC Griggs Walnut

Collection Date: 1/3/2019 1:45:00 PM

Lab ID: 1901113-011

Matrix: AQUEOUS

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
2-Hexanone	ND	10		µg/L	1	1/5/2019 1:20:00 AM	B56767
Isopropylbenzene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/5/2019 1:20:00 AM	B56767
Methylene Chloride	ND	3.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
n-Butylbenzene	ND	3.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
n-Propylbenzene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
Styrene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
Vinyl chloride	ND	1.0		µg/L	1	1/5/2019 1:20:00 AM	B56767
Xylenes, Total	ND	1.5		µg/L	1	1/5/2019 1:20:00 AM	B56767
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	1/5/2019 1:20:00 AM	B56767
Surr: 4-Bromofluorobenzene	99.9	70-130		%Rec	1	1/5/2019 1:20:00 AM	B56767
Surr: Dibromofluoromethane	113	70-130		%Rec	1	1/5/2019 1:20:00 AM	B56767
Surr: Toluene-d8	96.2	70-130		%Rec	1	1/5/2019 1:20:00 AM	B56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: Trip Blank

Project: CLC Griggs Walnut

Collection Date:

Lab ID: 1901113-012

Matrix: TRIP BLANK

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
Toluene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
Ethylbenzene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
Naphthalene	ND	2.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
1-Methylnaphthalene	ND	4.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
2-Methylnaphthalene	ND	4.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
Acetone	ND	10		µg/L	1	1/5/2019 1:43:00 AM	B56767
Bromobenzene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
Bromodichloromethane	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
Bromoform	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
Bromomethane	ND	3.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
2-Butanone	ND	10		µg/L	1	1/5/2019 1:43:00 AM	B56767
Carbon disulfide	ND	10		µg/L	1	1/5/2019 1:43:00 AM	B56767
Carbon Tetrachloride	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
Chlorobenzene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
Chloroethane	ND	2.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
Chloroform	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
Chloromethane	ND	3.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
2-Chlorotoluene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
4-Chlorotoluene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
cis-1,2-DCE	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
Dibromochloromethane	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
Dibromomethane	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
1,1-Dichloroethane	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
1,1-Dichloroethene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
1,2-Dichloropropane	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
1,3-Dichloropropane	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
2,2-Dichloropropane	ND	2.0		µg/L	1	1/5/2019 1:43:00 AM	B56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901113

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: Trip Blank

Project: CLC Griggs Walnut

Collection Date:

Lab ID: 1901113-012

Matrix: TRIP BLANK

Received Date: 1/4/2019 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
Hexachlorobutadiene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
2-Hexanone	ND	10		µg/L	1	1/5/2019 1:43:00 AM	B56767
Isopropylbenzene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
4-Isopropyltoluene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
4-Methyl-2-pentanone	ND	10		µg/L	1	1/5/2019 1:43:00 AM	B56767
Methylene Chloride	ND	3.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
n-Butylbenzene	ND	3.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
n-Propylbenzene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
sec-Butylbenzene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
Styrene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
tert-Butylbenzene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
trans-1,2-DCE	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
Trichlorofluoromethane	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
Vinyl chloride	ND	1.0		µg/L	1	1/5/2019 1:43:00 AM	B56767
Xylenes, Total	ND	1.5		µg/L	1	1/5/2019 1:43:00 AM	B56767
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	1/5/2019 1:43:00 AM	B56767
Surr: 4-Bromofluorobenzene	99.7	70-130		%Rec	1	1/5/2019 1:43:00 AM	B56767
Surr: Dibromofluoromethane	111	70-130		%Rec	1	1/5/2019 1:43:00 AM	B56767
Surr: Toluene-d8	96.2	70-130		%Rec	1	1/5/2019 1:43:00 AM	B56767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901113

09-Jan-19

Client: City of Las Cruces
Project: CLC Griggs Walnut

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R56767		RunNo: 56767							
Prep Date:	Analysis Date: 1/4/2019		SeqNo: 1900777		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	112	70	130			
Toluene	20	1.0	20.00	0	100	70	130			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	118	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	108	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		111	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	9.7		10.00		97.3	70	130			

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R56767		RunNo: 56767							
Prep Date:	Analysis Date: 1/4/2019		SeqNo: 1900778		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901113

09-Jan-19

Client: City of Las Cruces
Project: CLC Griggs Walnut

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R56767	RunNo:	56767					
Prep Date:		Analysis Date:	1/4/2019	SeqNo:	1900778	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901113

09-Jan-19

Client: City of Las Cruces
Project: CLC Griggs Walnut

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R56767		RunNo: 56767							
Prep Date:	Analysis Date: 1/4/2019		SeqNo: 1900778		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		110	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.3	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	9.9		10.00		98.8	70	130			

Sample ID 1901113-006ams	SampType: MS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: NGMW2-06	Batch ID: B56767		RunNo: 56767							
Prep Date:	Analysis Date: 1/4/2019		SeqNo: 1900813		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	113	70	130			
Toluene	20	1.0	20.00	0	100	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	116	67.6	130			
Trichloroethene (TCE)	22	1.0	20.00	0	109	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		109	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.3	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	9.7		10.00		96.5	70	130			

Sample ID 1901113-006amsd	SampType: MSD		TestCode: EPA Method 8260B: VOLATILES							
Client ID: NGMW2-06	Batch ID: B56767		RunNo: 56767							
Prep Date:	Analysis Date: 1/4/2019		SeqNo: 1900814		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130	5.39	20	
Toluene	19	1.0	20.00	0	95.5	70	130	5.07	20	
Chlorobenzene	20	1.0	20.00	0	97.6	70	130	3.93	20	
1,1-Dichloroethene	22	1.0	20.00	0	109	67.6	130	6.31	20	
Trichloroethene (TCE)	21	1.0	20.00	0	104	70	130	5.43	20	
Surr: 1,2-Dichloroethane-d4	11		10.00		111	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.9		10.00		99.0	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		111	70	130	0	0	
Surr: Toluene-d8	9.7		10.00		97.4	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901113

09-Jan-19

Client: City of Las Cruces
Project: CLC Griggs Walnut

Sample ID 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: B56767		RunNo: 56767							
Prep Date:	Analysis Date: 1/5/2019		SeqNo: 1900820		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	110	70	130			
Toluene	20	1.0	20.00	0	99.7	70	130			
Chlorobenzene	20	1.0	20.00	0	100	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	114	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	106	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		108	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.0	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	9.8		10.00		97.9	70	130			

Sample ID rb2	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: B56767		RunNo: 56767							
Prep Date:	Analysis Date: 1/5/2019		SeqNo: 1900889		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901113

09-Jan-19

Client: City of Las Cruces
Project: CLC Griggs Walnut

Sample ID: rb2	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: B56767	RunNo: 56767
Prep Date:	Analysis Date: 1/5/2019	SeqNo: 1900889 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901113

09-Jan-19

Client: City of Las Cruces
Project: CLC Griggs Walnut

Sample ID rb2	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: B56767		RunNo: 56767							
Prep Date:	Analysis Date: 1/5/2019		SeqNo: 1900889		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		111	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.7	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	9.6		10.00		96.3	70	130			

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R56851		RunNo: 56851							
Prep Date:	Analysis Date: 1/8/2019		SeqNo: 1902888		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	20	1.0	20.00	0	98.9	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	109	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	104	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.7		10.00		96.5	70	130			

Sample ID RB	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R56851		RunNo: 56851							
Prep Date:	Analysis Date: 1/8/2019		SeqNo: 1902903		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901113

09-Jan-19

Client: City of Las Cruces
Project: CLC Griggs Walnut

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R56851	RunNo:	56851					
Prep Date:		Analysis Date:	1/8/2019	SeqNo:	1902903	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901113

09-Jan-19

Client: City of Las Cruces
Project: CLC Griggs Walnut

Sample ID	RB	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R56851		RunNo: 56851						
Prep Date:		Analysis Date: 1/8/2019		SeqNo: 1902903			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.8	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	9.7		10.00		96.5	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: **TER-LC**

Work Order Number: **1901113**

RcptNo: 1

Received By: **Erin Melendrez** 1/4/2019 8:45:00 AM

EM

Completed By: **Erin Melendrez** 1/4/2019 11:22:29 AM

EM

Reviewed By: **ENM** 1/4/19

LB: DAD 01/04/19

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: DAD 01/04/19

Special Handling (if applicable)

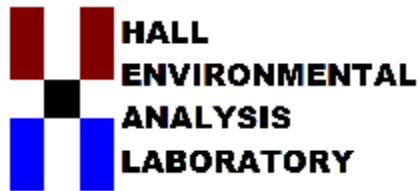
15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

16. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 09, 2019

Surasi Gandara
City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3635
FAX (575) 528-3513

RE: CLC Griggs Walnut

OrderNo.: 1901166

Dear Surasi Gandara:

Hall Environmental Analysis Laboratory received 7 sample(s) on 1/5/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901166

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW-08-03

Project: CLC Griggs Walnut

Collection Date: 1/4/2019 1:54:00 PM

Lab ID: 1901166-001

Matrix: AQUEOUS

Received Date: 1/5/2019 11:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
Toluene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
Ethylbenzene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
Naphthalene	ND	2.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
1-Methylnaphthalene	ND	4.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
2-Methylnaphthalene	ND	4.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
Acetone	10	10		µg/L	1	1/8/2019 3:51:00 PM	R56851
Bromobenzene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
Bromodichloromethane	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
Bromoform	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
Bromomethane	ND	3.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
2-Butanone	ND	10		µg/L	1	1/8/2019 3:51:00 PM	R56851
Carbon disulfide	ND	10		µg/L	1	1/8/2019 3:51:00 PM	R56851
Carbon Tetrachloride	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
Chlorobenzene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
Chloroethane	ND	2.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
Chloroform	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
Chloromethane	ND	3.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
2-Chlorotoluene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
4-Chlorotoluene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
cis-1,2-DCE	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
Dibromochloromethane	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
Dibromomethane	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
1,1-Dichloroethane	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
1,1-Dichloroethene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
1,2-Dichloropropane	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
1,3-Dichloropropane	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
2,2-Dichloropropane	ND	2.0		µg/L	1	1/8/2019 3:51:00 PM	R56851

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901166

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW-08-03

Project: CLC Griggs Walnut

Collection Date: 1/4/2019 1:54:00 PM

Lab ID: 1901166-001

Matrix: AQUEOUS

Received Date: 1/5/2019 11:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
Hexachlorobutadiene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
2-Hexanone	ND	10		µg/L	1	1/8/2019 3:51:00 PM	R56851
Isopropylbenzene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
4-Isopropyltoluene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
4-Methyl-2-pentanone	ND	10		µg/L	1	1/8/2019 3:51:00 PM	R56851
Methylene Chloride	ND	3.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
n-Butylbenzene	ND	3.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
n-Propylbenzene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
sec-Butylbenzene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
Styrene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
tert-Butylbenzene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
trans-1,2-DCE	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
Trichlorofluoromethane	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
Vinyl chloride	ND	1.0		µg/L	1	1/8/2019 3:51:00 PM	R56851
Xylenes, Total	ND	1.5		µg/L	1	1/8/2019 3:51:00 PM	R56851
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	1/8/2019 3:51:00 PM	R56851
Surr: 4-Bromofluorobenzene	97.4	70-130		%Rec	1	1/8/2019 3:51:00 PM	R56851
Surr: Dibromofluoromethane	118	70-130		%Rec	1	1/8/2019 3:51:00 PM	R56851
Surr: Toluene-d8	95.1	70-130		%Rec	1	1/8/2019 3:51:00 PM	R56851

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901166

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW-08-04

Project: CLC Griggs Walnut

Collection Date: 1/4/2019 2:05:00 PM

Lab ID: 1901166-002

Matrix: AQUEOUS

Received Date: 1/5/2019 11:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
Toluene	1.5	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
Ethylbenzene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
Naphthalene	ND	2.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
1-Methylnaphthalene	ND	4.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
2-Methylnaphthalene	ND	4.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
Acetone	ND	10		µg/L	1	1/8/2019 4:15:00 PM	R56851
Bromobenzene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
Bromodichloromethane	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
Bromoform	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
Bromomethane	ND	3.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
2-Butanone	ND	10		µg/L	1	1/8/2019 4:15:00 PM	R56851
Carbon disulfide	ND	10		µg/L	1	1/8/2019 4:15:00 PM	R56851
Carbon Tetrachloride	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
Chlorobenzene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
Chloroethane	ND	2.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
Chloroform	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
Chloromethane	ND	3.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
2-Chlorotoluene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
4-Chlorotoluene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
cis-1,2-DCE	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
Dibromochloromethane	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
Dibromomethane	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
1,1-Dichloroethane	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
1,1-Dichloroethene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
1,2-Dichloropropane	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
1,3-Dichloropropane	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
2,2-Dichloropropane	ND	2.0		µg/L	1	1/8/2019 4:15:00 PM	R56851

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901166

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW-08-04

Project: CLC Griggs Walnut

Collection Date: 1/4/2019 2:05:00 PM

Lab ID: 1901166-002

Matrix: AQUEOUS

Received Date: 1/5/2019 11:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
Hexachlorobutadiene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
2-Hexanone	ND	10		µg/L	1	1/8/2019 4:15:00 PM	R56851
Isopropylbenzene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
4-Isopropyltoluene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
4-Methyl-2-pentanone	ND	10		µg/L	1	1/8/2019 4:15:00 PM	R56851
Methylene Chloride	ND	3.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
n-Butylbenzene	ND	3.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
n-Propylbenzene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
sec-Butylbenzene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
Styrene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
tert-Butylbenzene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
trans-1,2-DCE	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
Trichlorofluoromethane	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
Vinyl chloride	ND	1.0		µg/L	1	1/8/2019 4:15:00 PM	R56851
Xylenes, Total	ND	1.5		µg/L	1	1/8/2019 4:15:00 PM	R56851
Surr: 1,2-Dichloroethane-d4	118	70-130		%Rec	1	1/8/2019 4:15:00 PM	R56851
Surr: 4-Bromofluorobenzene	96.9	70-130		%Rec	1	1/8/2019 4:15:00 PM	R56851
Surr: Dibromofluoromethane	122	70-130		%Rec	1	1/8/2019 4:15:00 PM	R56851
Surr: Toluene-d8	94.4	70-130		%Rec	1	1/8/2019 4:15:00 PM	R56851

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901166

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW-08-05

Project: CLC Griggs Walnut

Collection Date: 1/4/2019 2:24:00 PM

Lab ID: 1901166-003

Matrix: AQUEOUS

Received Date: 1/5/2019 11:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
Toluene	2.1	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
Ethylbenzene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
Naphthalene	ND	2.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
1-Methylnaphthalene	ND	4.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
2-Methylnaphthalene	ND	4.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
Acetone	ND	10		µg/L	1	1/8/2019 4:38:00 PM	R56851
Bromobenzene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
Bromodichloromethane	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
Bromoform	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
Bromomethane	ND	3.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
2-Butanone	ND	10		µg/L	1	1/8/2019 4:38:00 PM	R56851
Carbon disulfide	ND	10		µg/L	1	1/8/2019 4:38:00 PM	R56851
Carbon Tetrachloride	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
Chlorobenzene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
Chloroethane	ND	2.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
Chloroform	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
Chloromethane	ND	3.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
2-Chlorotoluene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
4-Chlorotoluene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
cis-1,2-DCE	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
Dibromochloromethane	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
Dibromomethane	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
1,1-Dichloroethane	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
1,1-Dichloroethene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
1,2-Dichloropropane	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
1,3-Dichloropropane	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
2,2-Dichloropropane	ND	2.0		µg/L	1	1/8/2019 4:38:00 PM	R56851

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901166

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW-08-05

Project: CLC Griggs Walnut

Collection Date: 1/4/2019 2:24:00 PM

Lab ID: 1901166-003

Matrix: AQUEOUS

Received Date: 1/5/2019 11:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
Hexachlorobutadiene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
2-Hexanone	ND	10		µg/L	1	1/8/2019 4:38:00 PM	R56851
Isopropylbenzene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
4-Isopropyltoluene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
4-Methyl-2-pentanone	ND	10		µg/L	1	1/8/2019 4:38:00 PM	R56851
Methylene Chloride	ND	3.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
n-Butylbenzene	ND	3.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
n-Propylbenzene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
sec-Butylbenzene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
Styrene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
tert-Butylbenzene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
trans-1,2-DCE	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
Trichlorofluoromethane	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
Vinyl chloride	ND	1.0		µg/L	1	1/8/2019 4:38:00 PM	R56851
Xylenes, Total	ND	1.5		µg/L	1	1/8/2019 4:38:00 PM	R56851
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	1	1/8/2019 4:38:00 PM	R56851
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	1/8/2019 4:38:00 PM	R56851
Surr: Dibromofluoromethane	116	70-130		%Rec	1	1/8/2019 4:38:00 PM	R56851
Surr: Toluene-d8	96.9	70-130		%Rec	1	1/8/2019 4:38:00 PM	R56851

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901166

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW-08-06

Project: CLC Griggs Walnut

Collection Date: 1/4/2019 2:40:00 PM

Lab ID: 1901166-004

Matrix: AQUEOUS

Received Date: 1/5/2019 11:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
Toluene	1.9	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
Ethylbenzene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
Naphthalene	ND	2.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
1-Methylnaphthalene	ND	4.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
2-Methylnaphthalene	ND	4.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
Acetone	ND	10		µg/L	1	1/8/2019 5:02:00 PM	R56851
Bromobenzene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
Bromodichloromethane	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
Bromoform	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
Bromomethane	ND	3.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
2-Butanone	ND	10		µg/L	1	1/8/2019 5:02:00 PM	R56851
Carbon disulfide	ND	10		µg/L	1	1/8/2019 5:02:00 PM	R56851
Carbon Tetrachloride	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
Chlorobenzene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
Chloroethane	ND	2.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
Chloroform	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
Chloromethane	ND	3.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
2-Chlorotoluene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
4-Chlorotoluene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
cis-1,2-DCE	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
Dibromochloromethane	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
Dibromomethane	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
1,1-Dichloroethane	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
1,1-Dichloroethene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
1,2-Dichloropropane	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
1,3-Dichloropropane	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
2,2-Dichloropropane	ND	2.0		µg/L	1	1/8/2019 5:02:00 PM	R56851

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901166

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW-08-06

Project: CLC Griggs Walnut

Collection Date: 1/4/2019 2:40:00 PM

Lab ID: 1901166-004

Matrix: AQUEOUS

Received Date: 1/5/2019 11:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
Hexachlorobutadiene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
2-Hexanone	ND	10		µg/L	1	1/8/2019 5:02:00 PM	R56851
Isopropylbenzene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
4-Isopropyltoluene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
4-Methyl-2-pentanone	ND	10		µg/L	1	1/8/2019 5:02:00 PM	R56851
Methylene Chloride	ND	3.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
n-Butylbenzene	ND	3.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
n-Propylbenzene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
sec-Butylbenzene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
Styrene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
tert-Butylbenzene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
trans-1,2-DCE	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
Trichlorofluoromethane	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
Vinyl chloride	ND	1.0		µg/L	1	1/8/2019 5:02:00 PM	R56851
Xylenes, Total	ND	1.5		µg/L	1	1/8/2019 5:02:00 PM	R56851
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	1/8/2019 5:02:00 PM	R56851
Surr: 4-Bromofluorobenzene	96.8	70-130		%Rec	1	1/8/2019 5:02:00 PM	R56851
Surr: Dibromofluoromethane	119	70-130		%Rec	1	1/8/2019 5:02:00 PM	R56851
Surr: Toluene-d8	96.0	70-130		%Rec	1	1/8/2019 5:02:00 PM	R56851

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901166

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW-08-07

Project: CLC Griggs Walnut

Collection Date: 1/4/2019 2:48:00 PM

Lab ID: 1901166-005

Matrix: AQUEOUS

Received Date: 1/5/2019 11:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
Toluene	2.3	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
Ethylbenzene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
Naphthalene	ND	2.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
1-Methylnaphthalene	ND	4.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
2-Methylnaphthalene	ND	4.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
Acetone	11	10		µg/L	1	1/8/2019 5:26:00 PM	R56851
Bromobenzene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
Bromodichloromethane	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
Bromoform	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
Bromomethane	ND	3.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
2-Butanone	ND	10		µg/L	1	1/8/2019 5:26:00 PM	R56851
Carbon disulfide	ND	10		µg/L	1	1/8/2019 5:26:00 PM	R56851
Carbon Tetrachloride	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
Chlorobenzene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
Chloroethane	ND	2.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
Chloroform	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
Chloromethane	ND	3.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
2-Chlorotoluene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
4-Chlorotoluene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
cis-1,2-DCE	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
Dibromochloromethane	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
Dibromomethane	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
1,1-Dichloroethane	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
1,1-Dichloroethene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
1,2-Dichloropropane	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
1,3-Dichloropropane	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
2,2-Dichloropropane	ND	2.0		µg/L	1	1/8/2019 5:26:00 PM	R56851

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901166

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW-08-07

Project: CLC Griggs Walnut

Collection Date: 1/4/2019 2:48:00 PM

Lab ID: 1901166-005

Matrix: AQUEOUS

Received Date: 1/5/2019 11:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
Hexachlorobutadiene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
2-Hexanone	ND	10		µg/L	1	1/8/2019 5:26:00 PM	R56851
Isopropylbenzene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
4-Isopropyltoluene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
4-Methyl-2-pentanone	ND	10		µg/L	1	1/8/2019 5:26:00 PM	R56851
Methylene Chloride	ND	3.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
n-Butylbenzene	ND	3.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
n-Propylbenzene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
sec-Butylbenzene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
Styrene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
tert-Butylbenzene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
trans-1,2-DCE	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
Trichlorofluoromethane	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
Vinyl chloride	ND	1.0		µg/L	1	1/8/2019 5:26:00 PM	R56851
Xylenes, Total	ND	1.5		µg/L	1	1/8/2019 5:26:00 PM	R56851
Surr: 1,2-Dichloroethane-d4	116	70-130		%Rec	1	1/8/2019 5:26:00 PM	R56851
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	1/8/2019 5:26:00 PM	R56851
Surr: Dibromofluoromethane	120	70-130		%Rec	1	1/8/2019 5:26:00 PM	R56851
Surr: Toluene-d8	95.7	70-130		%Rec	1	1/8/2019 5:26:00 PM	R56851

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901166

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: FB 190401

Project: CLC Griggs Walnut

Collection Date: 1/4/2019 4:45:00 PM

Lab ID: 1901166-006

Matrix: AQUEOUS

Received Date: 1/5/2019 11:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
Toluene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
Ethylbenzene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
Naphthalene	ND	2.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
1-Methylnaphthalene	ND	4.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
2-Methylnaphthalene	ND	4.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
Acetone	ND	10		µg/L	1	1/8/2019 5:50:00 PM	R56851
Bromobenzene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
Bromodichloromethane	1.0	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
Bromoform	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
Bromomethane	ND	3.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
2-Butanone	ND	10		µg/L	1	1/8/2019 5:50:00 PM	R56851
Carbon disulfide	ND	10		µg/L	1	1/8/2019 5:50:00 PM	R56851
Carbon Tetrachloride	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
Chlorobenzene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
Chloroethane	ND	2.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
Chloroform	1.1	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
Chloromethane	ND	3.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
2-Chlorotoluene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
4-Chlorotoluene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
cis-1,2-DCE	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
Dibromochloromethane	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
Dibromomethane	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
1,1-Dichloroethane	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
1,1-Dichloroethene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
1,2-Dichloropropane	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
1,3-Dichloropropane	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
2,2-Dichloropropane	ND	2.0		µg/L	1	1/8/2019 5:50:00 PM	R56851

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901166

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: FB 190401

Project: CLC Griggs Walnut

Collection Date: 1/4/2019 4:45:00 PM

Lab ID: 1901166-006

Matrix: AQUEOUS

Received Date: 1/5/2019 11:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
Hexachlorobutadiene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
2-Hexanone	ND	10		µg/L	1	1/8/2019 5:50:00 PM	R56851
Isopropylbenzene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
4-Isopropyltoluene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
4-Methyl-2-pentanone	ND	10		µg/L	1	1/8/2019 5:50:00 PM	R56851
Methylene Chloride	ND	3.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
n-Butylbenzene	ND	3.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
n-Propylbenzene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
sec-Butylbenzene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
Styrene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
tert-Butylbenzene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
trans-1,2-DCE	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
Trichlorofluoromethane	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
Vinyl chloride	ND	1.0		µg/L	1	1/8/2019 5:50:00 PM	R56851
Xylenes, Total	ND	1.5		µg/L	1	1/8/2019 5:50:00 PM	R56851
Surr: 1,2-Dichloroethane-d4	117	70-130		%Rec	1	1/8/2019 5:50:00 PM	R56851
Surr: 4-Bromofluorobenzene	97.1	70-130		%Rec	1	1/8/2019 5:50:00 PM	R56851
Surr: Dibromofluoromethane	121	70-130		%Rec	1	1/8/2019 5:50:00 PM	R56851
Surr: Toluene-d8	95.2	70-130		%Rec	1	1/8/2019 5:50:00 PM	R56851

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901166

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: Trip Blank

Project: CLC Griggs Walnut

Collection Date:

Lab ID: 1901166-007

Matrix: AQUEOUS

Received Date: 1/5/2019 11:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
Toluene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
Ethylbenzene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
Naphthalene	ND	2.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
1-Methylnaphthalene	ND	4.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
2-Methylnaphthalene	ND	4.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
Acetone	ND	10		µg/L	1	1/8/2019 6:14:00 PM	R56851
Bromobenzene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
Bromodichloromethane	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
Bromoform	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
Bromomethane	ND	3.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
2-Butanone	ND	10		µg/L	1	1/8/2019 6:14:00 PM	R56851
Carbon disulfide	ND	10		µg/L	1	1/8/2019 6:14:00 PM	R56851
Carbon Tetrachloride	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
Chlorobenzene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
Chloroethane	ND	2.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
Chloroform	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
Chloromethane	ND	3.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
2-Chlorotoluene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
4-Chlorotoluene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
cis-1,2-DCE	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
Dibromochloromethane	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
Dibromomethane	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
1,1-Dichloroethane	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
1,1-Dichloroethene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
1,2-Dichloropropane	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
1,3-Dichloropropane	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
2,2-Dichloropropane	ND	2.0		µg/L	1	1/8/2019 6:14:00 PM	R56851

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901166

Date Reported: 1/9/2019

CLIENT: City of Las Cruces

Client Sample ID: Trip Blank

Project: CLC Griggs Walnut

Collection Date:

Lab ID: 1901166-007

Matrix: AQUEOUS

Received Date: 1/5/2019 11:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
Hexachlorobutadiene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
2-Hexanone	ND	10		µg/L	1	1/8/2019 6:14:00 PM	R56851
Isopropylbenzene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
4-Isopropyltoluene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
4-Methyl-2-pentanone	ND	10		µg/L	1	1/8/2019 6:14:00 PM	R56851
Methylene Chloride	ND	3.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
n-Butylbenzene	ND	3.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
n-Propylbenzene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
sec-Butylbenzene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
Styrene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
tert-Butylbenzene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
trans-1,2-DCE	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
Trichlorofluoromethane	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
Vinyl chloride	ND	1.0		µg/L	1	1/8/2019 6:14:00 PM	R56851
Xylenes, Total	ND	1.5		µg/L	1	1/8/2019 6:14:00 PM	R56851
Surr: 1,2-Dichloroethane-d4	116	70-130		%Rec	1	1/8/2019 6:14:00 PM	R56851
Surr: 4-Bromofluorobenzene	96.5	70-130		%Rec	1	1/8/2019 6:14:00 PM	R56851
Surr: Dibromofluoromethane	119	70-130		%Rec	1	1/8/2019 6:14:00 PM	R56851
Surr: Toluene-d8	94.4	70-130		%Rec	1	1/8/2019 6:14:00 PM	R56851

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901166

09-Jan-19

Client: City of Las Cruces
Project: CLC Griggs Walnut

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R56851		RunNo: 56851							
Prep Date:	Analysis Date: 1/8/2019		SeqNo: 1902888		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	20	1.0	20.00	0	98.9	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	109	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	104	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.7		10.00		96.5	70	130			

Sample ID RB	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R56851		RunNo: 56851							
Prep Date:	Analysis Date: 1/8/2019		SeqNo: 1902903		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901166

09-Jan-19

Client: City of Las Cruces
Project: CLC Griggs Walnut

Sample ID	RB	SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID:	R56851		RunNo:	56851				
Prep Date:		Analysis Date:	1/8/2019		SeqNo:	1902903	Units:	µg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901166

09-Jan-19

Client: City of Las Cruces
Project: CLC Griggs Walnut

Sample ID	RB	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R56851		RunNo: 56851						
Prep Date:		Analysis Date: 1/8/2019		SeqNo: 1902903			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.8	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	9.7		10.00		96.5	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: TER-LC

Work Order Number: 1901166

RcptNo: 1

Received By: Anne Thorne 1/5/2019 11:50:00 AM

Anne Thorne

Completed By: Anne Thorne 1/7/2019 1:51:50 PM

Anne Thorne

Reviewed By: ENM 1/7/19
 Labeled by: DAD 1/7/19

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
5. Sample(s) in proper container(s)? Yes No
6. Sufficient sample volume for indicated test(s)? Yes No
7. Are samples (except VOA and ONG) properly preserved? Yes No
8. Was preservative added to bottles? Yes No NA
9. VOA vials have zero headspace? Yes No No VOA Vials
10. Were any sample containers received broken? Yes No
11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Is it clear what analyses were requested? Yes No
14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: DAD 1/7/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Terracon Las Cruces

Mailing Address: 4450 Bataan Memorial

Las Cruces, NM

Phone #: 575.507.1700

email or Fax#: larri.erstad

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation: Az Compliance

NELAC Other

EDD (Type) _____

Turn-Around Time:

Standard Rush

Project Name:

Est. CCL Griggs Walnut

Project #:

6818P18L6

Project Manager:

Suzasi Gandara

Sampler:

Larri Erstad

On Ice: Yes No

of Coolers: 1

Cooler Temp (including CP): 19.4 C F-67 F-10

Container Type and #

Preservative Type

HEAL No

3 HCL 201

3 202

3 203

3 204

3 205

3 HCL 206

2 HCL 207

Date: 11/19/10 Time: 1700

Relinquished by: [Signature]

Date: 11/19/10 Time: 1700

Relinquished by: [Signature]

Received by: [Signature]

Date: 11/19/10 Time: 1700

Via: [Signature]

Date: 11/19/10 Time: 1700

Remarks:

City of Las Cruces
EDD

Analysis Request

BTEX / MTBE / TMB's (8021)

TPH:8015D(GRO / DR0 / MRO)

8081 Pesticides/8082 PCB's

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

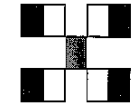
RCRA 8 Metals

Cl, F, Br, NO₃, NO₂, PO₄, SO₄

8260 (VOA) VCC

8270 (Semi-VOA)

Total Coliform (Present/Absent)

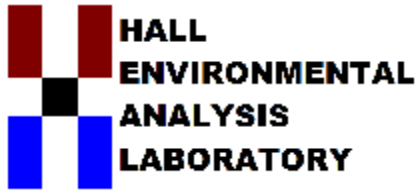


HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 11, 2019

Surasi Gandara
City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3604
FAX

RE: CLC Griggs Walnut

OrderNo.: 1901263

Dear Surasi Gandara:

Hall Environmental Analysis Laboratory received 10 sample(s) on 1/9/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901263

Date Reported: 1/11/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW10-01

Project: CLC Griggs Walnut

Collection Date: 1/7/2019 5:19:00 PM

Lab ID: 1901263-001

Matrix: AQUEOUS

Received Date: 1/9/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
Toluene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
Ethylbenzene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
Naphthalene	ND	2.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
1-Methylnaphthalene	ND	4.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
2-Methylnaphthalene	ND	4.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
Acetone	ND	10		µg/L	1	1/10/2019 3:43:30 PM	A56913
Bromobenzene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
Bromodichloromethane	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
Bromoform	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
Bromomethane	ND	3.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
2-Butanone	ND	10		µg/L	1	1/10/2019 3:43:30 PM	A56913
Carbon disulfide	ND	10		µg/L	1	1/10/2019 3:43:30 PM	A56913
Carbon Tetrachloride	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
Chlorobenzene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
Chloroethane	ND	2.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
Chloroform	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
Chloromethane	ND	3.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
2-Chlorotoluene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
4-Chlorotoluene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
cis-1,2-DCE	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
Dibromochloromethane	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
Dibromomethane	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
1,1-Dichloroethane	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
1,1-Dichloroethene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
1,2-Dichloropropane	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
1,3-Dichloropropane	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
2,2-Dichloropropane	ND	2.0		µg/L	1	1/10/2019 3:43:30 PM	A56913

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901263

Date Reported: 1/11/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW10-01

Project: CLC Griggs Walnut

Collection Date: 1/7/2019 5:19:00 PM

Lab ID: 1901263-001

Matrix: AQUEOUS

Received Date: 1/9/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
Hexachlorobutadiene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
2-Hexanone	ND	10		µg/L	1	1/10/2019 3:43:30 PM	A56913
Isopropylbenzene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
4-Isopropyltoluene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
4-Methyl-2-pentanone	ND	10		µg/L	1	1/10/2019 3:43:30 PM	A56913
Methylene Chloride	ND	3.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
n-Butylbenzene	ND	3.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
n-Propylbenzene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
sec-Butylbenzene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
Styrene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
tert-Butylbenzene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
Tetrachloroethene (PCE)	8.3	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
trans-1,2-DCE	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
Trichlorofluoromethane	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
Vinyl chloride	ND	1.0		µg/L	1	1/10/2019 3:43:30 PM	A56913
Xylenes, Total	ND	1.5		µg/L	1	1/10/2019 3:43:30 PM	A56913
Surr: 1,2-Dichloroethane-d4	96.5	70-130		%Rec	1	1/10/2019 3:43:30 PM	A56913
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	1/10/2019 3:43:30 PM	A56913
Surr: Dibromofluoromethane	103	70-130		%Rec	1	1/10/2019 3:43:30 PM	A56913
Surr: Toluene-d8	98.5	70-130		%Rec	1	1/10/2019 3:43:30 PM	A56913

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901263

Date Reported: 1/11/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW10-02

Project: CLC Griggs Walnut

Collection Date: 1/7/2019 3:41:00 PM

Lab ID: 1901263-002

Matrix: AQUEOUS

Received Date: 1/9/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
Toluene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
Ethylbenzene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
Naphthalene	ND	2.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
1-Methylnaphthalene	ND	4.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
2-Methylnaphthalene	ND	4.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
Acetone	ND	10		µg/L	1	1/10/2019 4:13:00 PM	A56913
Bromobenzene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
Bromodichloromethane	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
Bromoform	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
Bromomethane	ND	3.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
2-Butanone	ND	10		µg/L	1	1/10/2019 4:13:00 PM	A56913
Carbon disulfide	ND	10		µg/L	1	1/10/2019 4:13:00 PM	A56913
Carbon Tetrachloride	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
Chlorobenzene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
Chloroethane	ND	2.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
Chloroform	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
Chloromethane	ND	3.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
2-Chlorotoluene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
4-Chlorotoluene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
cis-1,2-DCE	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
Dibromochloromethane	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
Dibromomethane	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
1,1-Dichloroethane	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
1,1-Dichloroethene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
1,2-Dichloropropane	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
1,3-Dichloropropane	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
2,2-Dichloropropane	ND	2.0		µg/L	1	1/10/2019 4:13:00 PM	A56913

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901263

Date Reported: 1/11/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW10-02

Project: CLC Griggs Walnut

Collection Date: 1/7/2019 3:41:00 PM

Lab ID: 1901263-002

Matrix: AQUEOUS

Received Date: 1/9/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
Hexachlorobutadiene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
2-Hexanone	ND	10		µg/L	1	1/10/2019 4:13:00 PM	A56913
Isopropylbenzene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
4-Isopropyltoluene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
4-Methyl-2-pentanone	ND	10		µg/L	1	1/10/2019 4:13:00 PM	A56913
Methylene Chloride	ND	3.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
n-Butylbenzene	ND	3.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
n-Propylbenzene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
sec-Butylbenzene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
Styrene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
tert-Butylbenzene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
Tetrachloroethene (PCE)	12	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
trans-1,2-DCE	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
Trichlorofluoromethane	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
Vinyl chloride	ND	1.0		µg/L	1	1/10/2019 4:13:00 PM	A56913
Xylenes, Total	ND	1.5		µg/L	1	1/10/2019 4:13:00 PM	A56913
Surr: 1,2-Dichloroethane-d4	96.2	70-130		%Rec	1	1/10/2019 4:13:00 PM	A56913
Surr: 4-Bromofluorobenzene	98.5	70-130		%Rec	1	1/10/2019 4:13:00 PM	A56913
Surr: Dibromofluoromethane	102	70-130		%Rec	1	1/10/2019 4:13:00 PM	A56913
Surr: Toluene-d8	98.0	70-130		%Rec	1	1/10/2019 4:13:00 PM	A56913

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901263

Date Reported: 1/11/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW10-03

Project: CLC Griggs Walnut

Collection Date: 1/7/2019 3:59:00 PM

Lab ID: 1901263-003

Matrix: AQUEOUS

Received Date: 1/9/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
Toluene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
Ethylbenzene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
Naphthalene	ND	2.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
1-Methylnaphthalene	ND	4.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
2-Methylnaphthalene	ND	4.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
Acetone	ND	10		µg/L	1	1/10/2019 4:42:19 PM	A56913
Bromobenzene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
Bromodichloromethane	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
Bromoform	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
Bromomethane	ND	3.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
2-Butanone	ND	10		µg/L	1	1/10/2019 4:42:19 PM	A56913
Carbon disulfide	ND	10		µg/L	1	1/10/2019 4:42:19 PM	A56913
Carbon Tetrachloride	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
Chlorobenzene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
Chloroethane	ND	2.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
Chloroform	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
Chloromethane	ND	3.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
2-Chlorotoluene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
4-Chlorotoluene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
cis-1,2-DCE	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
Dibromochloromethane	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
Dibromomethane	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
1,1-Dichloroethane	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
1,1-Dichloroethene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
1,2-Dichloropropane	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
1,3-Dichloropropane	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
2,2-Dichloropropane	ND	2.0		µg/L	1	1/10/2019 4:42:19 PM	A56913

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901263

Date Reported: 1/11/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW10-03

Project: CLC Griggs Walnut

Collection Date: 1/7/2019 3:59:00 PM

Lab ID: 1901263-003

Matrix: AQUEOUS

Received Date: 1/9/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
Hexachlorobutadiene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
2-Hexanone	ND	10		µg/L	1	1/10/2019 4:42:19 PM	A56913
Isopropylbenzene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
4-Isopropyltoluene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
4-Methyl-2-pentanone	ND	10		µg/L	1	1/10/2019 4:42:19 PM	A56913
Methylene Chloride	ND	3.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
n-Butylbenzene	ND	3.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
n-Propylbenzene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
sec-Butylbenzene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
Styrene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
tert-Butylbenzene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
Tetrachloroethene (PCE)	11	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
trans-1,2-DCE	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
Trichlorofluoromethane	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
Vinyl chloride	ND	1.0		µg/L	1	1/10/2019 4:42:19 PM	A56913
Xylenes, Total	ND	1.5		µg/L	1	1/10/2019 4:42:19 PM	A56913
Surr: 1,2-Dichloroethane-d4	99.8	70-130		%Rec	1	1/10/2019 4:42:19 PM	A56913
Surr: 4-Bromofluorobenzene	96.4	70-130		%Rec	1	1/10/2019 4:42:19 PM	A56913
Surr: Dibromofluoromethane	113	70-130		%Rec	1	1/10/2019 4:42:19 PM	A56913
Surr: Toluene-d8	96.7	70-130		%Rec	1	1/10/2019 4:42:19 PM	A56913

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901263

Date Reported: 1/11/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW10-04

Project: CLC Griggs Walnut

Collection Date: 1/7/2019 4:15:00 PM

Lab ID: 1901263-004

Matrix: AQUEOUS

Received Date: 1/9/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
Toluene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
Ethylbenzene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
Naphthalene	ND	2.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
1-Methylnaphthalene	ND	4.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
2-Methylnaphthalene	ND	4.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
Acetone	ND	10		µg/L	1	1/10/2019 5:11:41 PM	A56913
Bromobenzene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
Bromodichloromethane	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
Bromoform	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
Bromomethane	ND	3.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
2-Butanone	ND	10		µg/L	1	1/10/2019 5:11:41 PM	A56913
Carbon disulfide	ND	10		µg/L	1	1/10/2019 5:11:41 PM	A56913
Carbon Tetrachloride	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
Chlorobenzene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
Chloroethane	ND	2.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
Chloroform	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
Chloromethane	ND	3.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
2-Chlorotoluene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
4-Chlorotoluene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
cis-1,2-DCE	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
Dibromochloromethane	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
Dibromomethane	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
1,1-Dichloroethane	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
1,1-Dichloroethene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
1,2-Dichloropropane	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
1,3-Dichloropropane	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
2,2-Dichloropropane	ND	2.0		µg/L	1	1/10/2019 5:11:41 PM	A56913

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901263

Date Reported: 1/11/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW10-04

Project: CLC Griggs Walnut

Collection Date: 1/7/2019 4:15:00 PM

Lab ID: 1901263-004

Matrix: AQUEOUS

Received Date: 1/9/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
Hexachlorobutadiene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
2-Hexanone	ND	10		µg/L	1	1/10/2019 5:11:41 PM	A56913
Isopropylbenzene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
4-Isopropyltoluene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
4-Methyl-2-pentanone	ND	10		µg/L	1	1/10/2019 5:11:41 PM	A56913
Methylene Chloride	ND	3.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
n-Butylbenzene	ND	3.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
n-Propylbenzene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
sec-Butylbenzene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
Styrene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
tert-Butylbenzene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
Tetrachloroethene (PCE)	11	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
trans-1,2-DCE	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
Trichlorofluoromethane	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
Vinyl chloride	ND	1.0		µg/L	1	1/10/2019 5:11:41 PM	A56913
Xylenes, Total	ND	1.5		µg/L	1	1/10/2019 5:11:41 PM	A56913
Surr: 1,2-Dichloroethane-d4	95.9	70-130		%Rec	1	1/10/2019 5:11:41 PM	A56913
Surr: 4-Bromofluorobenzene	96.6	70-130		%Rec	1	1/10/2019 5:11:41 PM	A56913
Surr: Dibromofluoromethane	103	70-130		%Rec	1	1/10/2019 5:11:41 PM	A56913
Surr: Toluene-d8	100	70-130		%Rec	1	1/10/2019 5:11:41 PM	A56913

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901263

Date Reported: 1/11/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW10-05

Project: CLC Griggs Walnut

Collection Date: 1/7/2019 4:30:00 PM

Lab ID: 1901263-005

Matrix: AQUEOUS

Received Date: 1/9/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
Toluene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
Ethylbenzene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
Naphthalene	ND	2.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
1-Methylnaphthalene	ND	4.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
2-Methylnaphthalene	ND	4.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
Acetone	ND	10		µg/L	1	1/10/2019 5:40:44 PM	A56913
Bromobenzene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
Bromodichloromethane	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
Bromoform	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
Bromomethane	ND	3.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
2-Butanone	ND	10		µg/L	1	1/10/2019 5:40:44 PM	A56913
Carbon disulfide	ND	10		µg/L	1	1/10/2019 5:40:44 PM	A56913
Carbon Tetrachloride	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
Chlorobenzene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
Chloroethane	ND	2.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
Chloroform	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
Chloromethane	ND	3.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
2-Chlorotoluene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
4-Chlorotoluene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
cis-1,2-DCE	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
Dibromochloromethane	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
Dibromomethane	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
1,1-Dichloroethane	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
1,1-Dichloroethene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
1,2-Dichloropropane	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
1,3-Dichloropropane	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
2,2-Dichloropropane	ND	2.0		µg/L	1	1/10/2019 5:40:44 PM	A56913

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901263

Date Reported: 1/11/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW10-05

Project: CLC Griggs Walnut

Collection Date: 1/7/2019 4:30:00 PM

Lab ID: 1901263-005

Matrix: AQUEOUS

Received Date: 1/9/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
Hexachlorobutadiene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
2-Hexanone	ND	10		µg/L	1	1/10/2019 5:40:44 PM	A56913
Isopropylbenzene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
4-Isopropyltoluene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
4-Methyl-2-pentanone	ND	10		µg/L	1	1/10/2019 5:40:44 PM	A56913
Methylene Chloride	ND	3.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
n-Butylbenzene	ND	3.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
n-Propylbenzene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
sec-Butylbenzene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
Styrene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
tert-Butylbenzene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
Tetrachloroethene (PCE)	10	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
trans-1,2-DCE	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
Trichlorofluoromethane	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
Vinyl chloride	ND	1.0		µg/L	1	1/10/2019 5:40:44 PM	A56913
Xylenes, Total	ND	1.5		µg/L	1	1/10/2019 5:40:44 PM	A56913
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	1/10/2019 5:40:44 PM	A56913
Surr: 4-Bromofluorobenzene	98.0	70-130		%Rec	1	1/10/2019 5:40:44 PM	A56913
Surr: Dibromofluoromethane	112	70-130		%Rec	1	1/10/2019 5:40:44 PM	A56913
Surr: Toluene-d8	101	70-130		%Rec	1	1/10/2019 5:40:44 PM	A56913

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901263

Date Reported: 1/11/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW10-06

Project: CLC Griggs Walnut

Collection Date: 1/7/2019 4:45:00 PM

Lab ID: 1901263-006

Matrix: AQUEOUS

Received Date: 1/9/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
Toluene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
Ethylbenzene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
Naphthalene	ND	2.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
1-Methylnaphthalene	ND	4.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
2-Methylnaphthalene	ND	4.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
Acetone	ND	10		µg/L	1	1/10/2019 6:10:01 PM	A56913
Bromobenzene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
Bromodichloromethane	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
Bromoform	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
Bromomethane	ND	3.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
2-Butanone	ND	10		µg/L	1	1/10/2019 6:10:01 PM	A56913
Carbon disulfide	ND	10		µg/L	1	1/10/2019 6:10:01 PM	A56913
Carbon Tetrachloride	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
Chlorobenzene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
Chloroethane	ND	2.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
Chloroform	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
Chloromethane	ND	3.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
2-Chlorotoluene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
4-Chlorotoluene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
cis-1,2-DCE	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
Dibromochloromethane	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
Dibromomethane	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
1,1-Dichloroethane	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
1,1-Dichloroethene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
1,2-Dichloropropane	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
1,3-Dichloropropane	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
2,2-Dichloropropane	ND	2.0		µg/L	1	1/10/2019 6:10:01 PM	A56913

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901263

Date Reported: 1/11/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW10-06

Project: CLC Griggs Walnut

Collection Date: 1/7/2019 4:45:00 PM

Lab ID: 1901263-006

Matrix: AQUEOUS

Received Date: 1/9/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
Hexachlorobutadiene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
2-Hexanone	ND	10		µg/L	1	1/10/2019 6:10:01 PM	A56913
Isopropylbenzene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
4-Isopropyltoluene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
4-Methyl-2-pentanone	ND	10		µg/L	1	1/10/2019 6:10:01 PM	A56913
Methylene Chloride	ND	3.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
n-Butylbenzene	ND	3.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
n-Propylbenzene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
sec-Butylbenzene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
Styrene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
tert-Butylbenzene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
Tetrachloroethene (PCE)	9.6	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
trans-1,2-DCE	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
Trichlorofluoromethane	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
Vinyl chloride	ND	1.0		µg/L	1	1/10/2019 6:10:01 PM	A56913
Xylenes, Total	ND	1.5		µg/L	1	1/10/2019 6:10:01 PM	A56913
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	1/10/2019 6:10:01 PM	A56913
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	1/10/2019 6:10:01 PM	A56913
Surr: Dibromofluoromethane	113	70-130		%Rec	1	1/10/2019 6:10:01 PM	A56913
Surr: Toluene-d8	97.4	70-130		%Rec	1	1/10/2019 6:10:01 PM	A56913

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901263

Date Reported: 1/11/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW10-07

Project: CLC Griggs Walnut

Collection Date: 1/7/2019 5:00:00 PM

Lab ID: 1901263-007

Matrix: AQUEOUS

Received Date: 1/9/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
Toluene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
Ethylbenzene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
Naphthalene	ND	2.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
1-Methylnaphthalene	ND	4.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
2-Methylnaphthalene	ND	4.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
Acetone	ND	10		µg/L	1	1/10/2019 6:39:19 PM	A56913
Bromobenzene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
Bromodichloromethane	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
Bromoform	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
Bromomethane	ND	3.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
2-Butanone	ND	10		µg/L	1	1/10/2019 6:39:19 PM	A56913
Carbon disulfide	ND	10		µg/L	1	1/10/2019 6:39:19 PM	A56913
Carbon Tetrachloride	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
Chlorobenzene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
Chloroethane	ND	2.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
Chloroform	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
Chloromethane	ND	3.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
2-Chlorotoluene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
4-Chlorotoluene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
cis-1,2-DCE	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
Dibromochloromethane	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
Dibromomethane	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
1,1-Dichloroethane	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
1,1-Dichloroethene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
1,2-Dichloropropane	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
1,3-Dichloropropane	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
2,2-Dichloropropane	ND	2.0		µg/L	1	1/10/2019 6:39:19 PM	A56913

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901263

Date Reported: 1/11/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW10-07

Project: CLC Griggs Walnut

Collection Date: 1/7/2019 5:00:00 PM

Lab ID: 1901263-007

Matrix: AQUEOUS

Received Date: 1/9/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
Hexachlorobutadiene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
2-Hexanone	ND	10		µg/L	1	1/10/2019 6:39:19 PM	A56913
Isopropylbenzene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
4-Isopropyltoluene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
4-Methyl-2-pentanone	ND	10		µg/L	1	1/10/2019 6:39:19 PM	A56913
Methylene Chloride	ND	3.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
n-Butylbenzene	ND	3.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
n-Propylbenzene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
sec-Butylbenzene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
Styrene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
tert-Butylbenzene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
Tetrachloroethene (PCE)	9.5	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
trans-1,2-DCE	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
Trichlorofluoromethane	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
Vinyl chloride	ND	1.0		µg/L	1	1/10/2019 6:39:19 PM	A56913
Xylenes, Total	ND	1.5		µg/L	1	1/10/2019 6:39:19 PM	A56913
Surr: 1,2-Dichloroethane-d4	92.4	70-130		%Rec	1	1/10/2019 6:39:19 PM	A56913
Surr: 4-Bromofluorobenzene	96.4	70-130		%Rec	1	1/10/2019 6:39:19 PM	A56913
Surr: Dibromofluoromethane	104	70-130		%Rec	1	1/10/2019 6:39:19 PM	A56913
Surr: Toluene-d8	97.0	70-130		%Rec	1	1/10/2019 6:39:19 PM	A56913

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901263

Date Reported: 1/11/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW10-02Dup

Project: CLC Griggs Walnut

Collection Date: 1/7/2019 3:44:00 PM

Lab ID: 1901263-008

Matrix: AQUEOUS

Received Date: 1/9/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
Toluene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
Ethylbenzene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
Naphthalene	ND	2.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
1-Methylnaphthalene	ND	4.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
2-Methylnaphthalene	ND	4.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
Acetone	ND	10		µg/L	1	1/10/2019 7:08:26 PM	A56913
Bromobenzene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
Bromodichloromethane	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
Bromoform	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
Bromomethane	ND	3.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
2-Butanone	ND	10		µg/L	1	1/10/2019 7:08:26 PM	A56913
Carbon disulfide	ND	10		µg/L	1	1/10/2019 7:08:26 PM	A56913
Carbon Tetrachloride	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
Chlorobenzene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
Chloroethane	ND	2.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
Chloroform	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
Chloromethane	ND	3.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
2-Chlorotoluene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
4-Chlorotoluene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
cis-1,2-DCE	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
Dibromochloromethane	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
Dibromomethane	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
1,1-Dichloroethane	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
1,1-Dichloroethene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
1,2-Dichloropropane	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
1,3-Dichloropropane	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
2,2-Dichloropropane	ND	2.0		µg/L	1	1/10/2019 7:08:26 PM	A56913

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901263

Date Reported: 1/11/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW10-02Dup

Project: CLC Griggs Walnut

Collection Date: 1/7/2019 3:44:00 PM

Lab ID: 1901263-008

Matrix: AQUEOUS

Received Date: 1/9/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
Hexachlorobutadiene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
2-Hexanone	ND	10		µg/L	1	1/10/2019 7:08:26 PM	A56913
Isopropylbenzene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
4-Isopropyltoluene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
4-Methyl-2-pentanone	ND	10		µg/L	1	1/10/2019 7:08:26 PM	A56913
Methylene Chloride	ND	3.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
n-Butylbenzene	ND	3.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
n-Propylbenzene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
sec-Butylbenzene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
Styrene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
tert-Butylbenzene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
Tetrachloroethene (PCE)	12	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
trans-1,2-DCE	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
Trichlorofluoromethane	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
Vinyl chloride	ND	1.0		µg/L	1	1/10/2019 7:08:26 PM	A56913
Xylenes, Total	ND	1.5		µg/L	1	1/10/2019 7:08:26 PM	A56913
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	1/10/2019 7:08:26 PM	A56913
Surr: 4-Bromofluorobenzene	97.8	70-130		%Rec	1	1/10/2019 7:08:26 PM	A56913
Surr: Dibromofluoromethane	111	70-130		%Rec	1	1/10/2019 7:08:26 PM	A56913
Surr: Toluene-d8	95.5	70-130		%Rec	1	1/10/2019 7:08:26 PM	A56913

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901263

Date Reported: 1/11/2019

CLIENT: City of Las Cruces

Client Sample ID: FB190701

Project: CLC Griggs Walnut

Collection Date: 1/7/2019 4:05:00 PM

Lab ID: 1901263-009

Matrix: AQUEOUS

Received Date: 1/9/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
Toluene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
Ethylbenzene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
Naphthalene	ND	2.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
1-Methylnaphthalene	ND	4.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
2-Methylnaphthalene	ND	4.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
Acetone	ND	10		µg/L	1	1/10/2019 7:37:40 PM	A56913
Bromobenzene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
Bromodichloromethane	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
Bromoform	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
Bromomethane	ND	3.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
2-Butanone	ND	10		µg/L	1	1/10/2019 7:37:40 PM	A56913
Carbon disulfide	ND	10		µg/L	1	1/10/2019 7:37:40 PM	A56913
Carbon Tetrachloride	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
Chlorobenzene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
Chloroethane	ND	2.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
Chloroform	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
Chloromethane	ND	3.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
2-Chlorotoluene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
4-Chlorotoluene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
cis-1,2-DCE	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
Dibromochloromethane	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
Dibromomethane	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
1,1-Dichloroethane	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
1,1-Dichloroethene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
1,2-Dichloropropane	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
1,3-Dichloropropane	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
2,2-Dichloropropane	ND	2.0		µg/L	1	1/10/2019 7:37:40 PM	A56913

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901263

Date Reported: 1/11/2019

CLIENT: City of Las Cruces

Client Sample ID: FB190701

Project: CLC Griggs Walnut

Collection Date: 1/7/2019 4:05:00 PM

Lab ID: 1901263-009

Matrix: AQUEOUS

Received Date: 1/9/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
Hexachlorobutadiene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
2-Hexanone	ND	10		µg/L	1	1/10/2019 7:37:40 PM	A56913
Isopropylbenzene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
4-Isopropyltoluene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
4-Methyl-2-pentanone	ND	10		µg/L	1	1/10/2019 7:37:40 PM	A56913
Methylene Chloride	ND	3.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
n-Butylbenzene	ND	3.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
n-Propylbenzene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
sec-Butylbenzene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
Styrene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
tert-Butylbenzene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
trans-1,2-DCE	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
Trichlorofluoromethane	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
Vinyl chloride	ND	1.0		µg/L	1	1/10/2019 7:37:40 PM	A56913
Xylenes, Total	ND	1.5		µg/L	1	1/10/2019 7:37:40 PM	A56913
Surr: 1,2-Dichloroethane-d4	98.5	70-130		%Rec	1	1/10/2019 7:37:40 PM	A56913
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	1/10/2019 7:37:40 PM	A56913
Surr: Dibromofluoromethane	104	70-130		%Rec	1	1/10/2019 7:37:40 PM	A56913
Surr: Toluene-d8	96.8	70-130		%Rec	1	1/10/2019 7:37:40 PM	A56913

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901263

Date Reported: 1/11/2019

CLIENT: City of Las Cruces

Client Sample ID: Trip Blank

Project: CLC Griggs Walnut

Collection Date:

Lab ID: 1901263-010

Matrix: TRIP BLANK

Received Date: 1/9/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
Toluene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
Ethylbenzene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
Naphthalene	ND	2.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
1-Methylnaphthalene	ND	4.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
2-Methylnaphthalene	ND	4.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
Acetone	ND	10		µg/L	1	1/10/2019 8:07:00 PM	A56913
Bromobenzene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
Bromodichloromethane	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
Bromoform	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
Bromomethane	ND	3.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
2-Butanone	ND	10		µg/L	1	1/10/2019 8:07:00 PM	A56913
Carbon disulfide	ND	10		µg/L	1	1/10/2019 8:07:00 PM	A56913
Carbon Tetrachloride	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
Chlorobenzene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
Chloroethane	ND	2.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
Chloroform	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
Chloromethane	ND	3.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
2-Chlorotoluene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
4-Chlorotoluene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
cis-1,2-DCE	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
Dibromochloromethane	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
Dibromomethane	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
1,1-Dichloroethane	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
1,1-Dichloroethene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
1,2-Dichloropropane	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
1,3-Dichloropropane	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
2,2-Dichloropropane	ND	2.0		µg/L	1	1/10/2019 8:07:00 PM	A56913

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901263

Date Reported: 1/11/2019

CLIENT: City of Las Cruces

Client Sample ID: Trip Blank

Project: CLC Griggs Walnut

Collection Date:

Lab ID: 1901263-010

Matrix: TRIP BLANK

Received Date: 1/9/2019 8:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: DJF
1,1-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
Hexachlorobutadiene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
2-Hexanone	ND	10		µg/L	1	1/10/2019 8:07:00 PM	A56913
Isopropylbenzene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
4-Isopropyltoluene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
4-Methyl-2-pentanone	ND	10		µg/L	1	1/10/2019 8:07:00 PM	A56913
Methylene Chloride	ND	3.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
n-Butylbenzene	ND	3.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
n-Propylbenzene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
sec-Butylbenzene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
Styrene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
tert-Butylbenzene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
trans-1,2-DCE	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
Trichlorofluoromethane	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
Vinyl chloride	ND	1.0		µg/L	1	1/10/2019 8:07:00 PM	A56913
Xylenes, Total	ND	1.5		µg/L	1	1/10/2019 8:07:00 PM	A56913
Surr: 1,2-Dichloroethane-d4	99.7	70-130		%Rec	1	1/10/2019 8:07:00 PM	A56913
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	1/10/2019 8:07:00 PM	A56913
Surr: Dibromofluoromethane	105	70-130		%Rec	1	1/10/2019 8:07:00 PM	A56913
Surr: Toluene-d8	95.7	70-130		%Rec	1	1/10/2019 8:07:00 PM	A56913

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901263

11-Jan-19

Client: City of Las Cruces
Project: CLC Griggs Walnut

Sample ID	rb	SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID:	A56913		RunNo:	56913				
Prep Date:		Analysis Date:	1/10/2019		SeqNo:	1904256	Units:	µg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901263

11-Jan-19

Client: City of Las Cruces
Project: CLC Griggs Walnut

Sample ID	rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: A56913			RunNo: 56913					
Prep Date:		Analysis Date: 1/10/2019			SeqNo: 1904256		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		99.6	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	9.8		10.00		97.8	70	130			

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: A56913			RunNo: 56913					
Prep Date:		Analysis Date: 1/10/2019			SeqNo: 1904257		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.1	70	130			
Toluene	19	1.0	20.00	0	97.4	70	130			
Chlorobenzene	20	1.0	20.00	0	97.9	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901263

11-Jan-19

Client: City of Las Cruces
Project: CLC Griggs Walnut

Sample ID: 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: A56913		RunNo: 56913							
Prep Date:	Analysis Date: 1/10/2019		SeqNo: 1904257		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21	1.0	20.00	0	104	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	96.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.4	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		93.8	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.7		10.00		97.0	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1901263

RcptNo: 1

Received By: Desiree Dominguez 1/9/2019 8:50:00 AM *DD*

Completed By: Desiree Dominguez 1/9/2019 11:49:17 AM *DD*

Reviewed By: *As of 1/10/19*
LB: EUM 1/10/19

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

EUM 1/10/19
 # of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.7	Good	Yes			

Chain-of-Custody Record

Client: Terracon - Las Cruces

Mailing Address: 4450 Bateman Memorial East

Las Cruces, NM 88011

Phone #: 575.527.1700

email or Fax#: larry_ersted@terracon.com

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation: Az Compliance

NELAC Other

EDD (Type)

Turn-Around Time:

Standard Rush

Project Name:

McC Griggs + Wadsworth

Project #:

6818P186

Project Manager:

Surasi Gundara

Sampler: Larry Ersted

On Ice: Yes No

of Coolers: 1

Cooler Temp (including CE): 27°C

Container Type and #

Preservative Type

HEAL No

1901263

3

HCL

-001

3

/

-002

3

/

-003

3

/

-004

3

/

-005

3

/

-006

3

/

-007

3

/

-008

3

+

-009

2

/

-010

Date:

1/19/19

Relinquished by:

Yancy Gundara

Received by:

FEDEX

Date:

1/19/19

Remarks:

Date:

1/19/1700

Relinquished by:

Yancy Gundara

Received by:

FEDEX

Date:

1/19/19

Time:

8:50

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
							X		
							X		
							X		
							X		
							X		
							X		
							X		
							X		
							X		
							X		
							X		
							X		
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							X		
							X		
							X		
							X		
							X		

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 14, 2019

Surasi Gandara
City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3604
FAX

RE: CLC Griggs and Walnut

OrderNo.: 1901395

Dear Surasi Gandara:

Hall Environmental Analysis Laboratory received 5 sample(s) on 1/10/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces

Client Sample ID: FB190801

Project: CLC Griggs and Walnut

Collection Date: 1/8/2019 2:27:00 PM

Lab ID: 1901395-001

Matrix: AQUEOUS

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	0.17	1.0		µg/L	1	1/12/2019 4:02:06 AM
Toluene	ND	0.17	1.0		µg/L	1	1/12/2019 4:02:06 AM
Ethylbenzene	ND	0.22	1.0		µg/L	1	1/12/2019 4:02:06 AM
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	1/12/2019 4:02:06 AM
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	1/12/2019 4:02:06 AM
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	1/12/2019 4:02:06 AM
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	1/12/2019 4:02:06 AM
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	1/12/2019 4:02:06 AM
Naphthalene	ND	0.29	2.0		µg/L	1	1/12/2019 4:02:06 AM
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	1/12/2019 4:02:06 AM
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	1/12/2019 4:02:06 AM
Acetone	3.3	0.76	10	J	µg/L	1	1/12/2019 4:02:06 AM
Bromobenzene	ND	0.32	1.0		µg/L	1	1/12/2019 4:02:06 AM
Bromodichloromethane	0.88	0.28	1.0	J	µg/L	1	1/12/2019 4:02:06 AM
Bromoform	ND	0.32	1.0		µg/L	1	1/12/2019 4:02:06 AM
Bromomethane	ND	0.27	3.0		µg/L	1	1/12/2019 4:02:06 AM
2-Butanone	ND	1.4	10		µg/L	1	1/12/2019 4:02:06 AM
Carbon disulfide	ND	0.39	10		µg/L	1	1/12/2019 4:02:06 AM
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	1/12/2019 4:02:06 AM
Chlorobenzene	ND	0.29	1.0		µg/L	1	1/12/2019 4:02:06 AM
Chloroethane	ND	0.16	2.0		µg/L	1	1/12/2019 4:02:06 AM
Chloroform	0.91	0.24	1.0	J	µg/L	1	1/12/2019 4:02:06 AM
Chloromethane	ND	0.32	3.0		µg/L	1	1/12/2019 4:02:06 AM
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	1/12/2019 4:02:06 AM
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	1/12/2019 4:02:06 AM
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	1/12/2019 4:02:06 AM
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	1/12/2019 4:02:06 AM
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	1/12/2019 4:02:06 AM
Dibromochloromethane	0.35	0.24	1.0	J	µg/L	1	1/12/2019 4:02:06 AM
Dibromomethane	ND	0.32	1.0		µg/L	1	1/12/2019 4:02:06 AM
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	1/12/2019 4:02:06 AM
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	1/12/2019 4:02:06 AM
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	1/12/2019 4:02:06 AM
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	1/12/2019 4:02:06 AM
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	1/12/2019 4:02:06 AM
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	1/12/2019 4:02:06 AM
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	1/12/2019 4:02:06 AM
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	1/12/2019 4:02:06 AM
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	1/12/2019 4:02:06 AM
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	1/12/2019 4:02:06 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** FB190801**Project:** CLC Griggs and Walnut**Collection Date:** 1/8/2019 2:27:00 PM**Lab ID:** 1901395-001**Matrix:** AQUEOUS**Received Date:** 1/10/2019 8:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	1/12/2019 4:02:06 AM
2-Hexanone	ND	0.91	10		µg/L	1	1/12/2019 4:02:06 AM
Isopropylbenzene	ND	0.22	1.0		µg/L	1	1/12/2019 4:02:06 AM
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	1/12/2019 4:02:06 AM
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	1/12/2019 4:02:06 AM
Methylene Chloride	ND	0.21	3.0		µg/L	1	1/12/2019 4:02:06 AM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	1/12/2019 4:02:06 AM
n-Propylbenzene	ND	0.24	1.0		µg/L	1	1/12/2019 4:02:06 AM
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	1/12/2019 4:02:06 AM
Styrene	ND	0.25	1.0		µg/L	1	1/12/2019 4:02:06 AM
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	1/12/2019 4:02:06 AM
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	1/12/2019 4:02:06 AM
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	1/12/2019 4:02:06 AM
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	1/12/2019 4:02:06 AM
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	1/12/2019 4:02:06 AM
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	1/12/2019 4:02:06 AM
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	1/12/2019 4:02:06 AM
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	1/12/2019 4:02:06 AM
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	1/12/2019 4:02:06 AM
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	1/12/2019 4:02:06 AM
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	1/12/2019 4:02:06 AM
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	1/12/2019 4:02:06 AM
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	1/12/2019 4:02:06 AM
Vinyl chloride	ND	0.12	1.0		µg/L	1	1/12/2019 4:02:06 AM
Xylenes, Total	ND	0.64	1.5		µg/L	1	1/12/2019 4:02:06 AM
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	1/12/2019 4:02:06 AM
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	1/12/2019 4:02:06 AM
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	1/12/2019 4:02:06 AM
Surr: Toluene-d8	100	0	70-130		%Rec	1	1/12/2019 4:02:06 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces

Client Sample ID: GWMW03-01

Project: CLC Griggs and Walnut

Collection Date: 1/8/2019 5:55:00 PM

Lab ID: 1901395-002

Matrix: AQUEOUS

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	0.41	0.17	1.0	J	µg/L	1	1/12/2019 4:30:25 AM
Toluene	5.1	0.17	1.0		µg/L	1	1/12/2019 4:30:25 AM
Ethylbenzene	ND	0.22	1.0		µg/L	1	1/12/2019 4:30:25 AM
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	1/12/2019 4:30:25 AM
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	1/12/2019 4:30:25 AM
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	1/12/2019 4:30:25 AM
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	1/12/2019 4:30:25 AM
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	1/12/2019 4:30:25 AM
Naphthalene	ND	0.29	2.0		µg/L	1	1/12/2019 4:30:25 AM
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	1/12/2019 4:30:25 AM
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	1/12/2019 4:30:25 AM
Acetone	5.2	0.76	10	J	µg/L	1	1/12/2019 4:30:25 AM
Bromobenzene	ND	0.32	1.0		µg/L	1	1/12/2019 4:30:25 AM
Bromodichloromethane	ND	0.28	1.0		µg/L	1	1/12/2019 4:30:25 AM
Bromoform	ND	0.32	1.0		µg/L	1	1/12/2019 4:30:25 AM
Bromomethane	ND	0.27	3.0		µg/L	1	1/12/2019 4:30:25 AM
2-Butanone	4.5	1.4	10	J	µg/L	1	1/12/2019 4:30:25 AM
Carbon disulfide	ND	0.39	10		µg/L	1	1/12/2019 4:30:25 AM
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	1/12/2019 4:30:25 AM
Chlorobenzene	ND	0.29	1.0		µg/L	1	1/12/2019 4:30:25 AM
Chloroethane	ND	0.16	2.0		µg/L	1	1/12/2019 4:30:25 AM
Chloroform	ND	0.24	1.0		µg/L	1	1/12/2019 4:30:25 AM
Chloromethane	ND	0.32	3.0		µg/L	1	1/12/2019 4:30:25 AM
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	1/12/2019 4:30:25 AM
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	1/12/2019 4:30:25 AM
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	1/12/2019 4:30:25 AM
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	1/12/2019 4:30:25 AM
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	1/12/2019 4:30:25 AM
Dibromochloromethane	ND	0.24	1.0		µg/L	1	1/12/2019 4:30:25 AM
Dibromomethane	ND	0.32	1.0		µg/L	1	1/12/2019 4:30:25 AM
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	1/12/2019 4:30:25 AM
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	1/12/2019 4:30:25 AM
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	1/12/2019 4:30:25 AM
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	1/12/2019 4:30:25 AM
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	1/12/2019 4:30:25 AM
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	1/12/2019 4:30:25 AM
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	1/12/2019 4:30:25 AM
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	1/12/2019 4:30:25 AM
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	1/12/2019 4:30:25 AM
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	1/12/2019 4:30:25 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces

Client Sample ID: GWMW03-01

Project: CLC Griggs and Walnut

Collection Date: 1/8/2019 5:55:00 PM

Lab ID: 1901395-002

Matrix: AQUEOUS

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	1/12/2019 4:30:25 AM
2-Hexanone	ND	0.91	10		µg/L	1	1/12/2019 4:30:25 AM
Isopropylbenzene	ND	0.22	1.0		µg/L	1	1/12/2019 4:30:25 AM
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	1/12/2019 4:30:25 AM
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	1/12/2019 4:30:25 AM
Methylene Chloride	ND	0.21	3.0		µg/L	1	1/12/2019 4:30:25 AM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	1/12/2019 4:30:25 AM
n-Propylbenzene	ND	0.24	1.0		µg/L	1	1/12/2019 4:30:25 AM
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	1/12/2019 4:30:25 AM
Styrene	ND	0.25	1.0		µg/L	1	1/12/2019 4:30:25 AM
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	1/12/2019 4:30:25 AM
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	1/12/2019 4:30:25 AM
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	1/12/2019 4:30:25 AM
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	1/12/2019 4:30:25 AM
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	1/12/2019 4:30:25 AM
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	1/12/2019 4:30:25 AM
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	1/12/2019 4:30:25 AM
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	1/12/2019 4:30:25 AM
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	1/12/2019 4:30:25 AM
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	1/12/2019 4:30:25 AM
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	1/12/2019 4:30:25 AM
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	1/12/2019 4:30:25 AM
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	1/12/2019 4:30:25 AM
Vinyl chloride	ND	0.12	1.0		µg/L	1	1/12/2019 4:30:25 AM
Xylenes, Total	ND	0.64	1.5		µg/L	1	1/12/2019 4:30:25 AM
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	1/12/2019 4:30:25 AM
Surr: 4-Bromofluorobenzene	97.4	0	70-130		%Rec	1	1/12/2019 4:30:25 AM
Surr: Dibromofluoromethane	100	0	70-130		%Rec	1	1/12/2019 4:30:25 AM
Surr: Toluene-d8	102	0	70-130		%Rec	1	1/12/2019 4:30:25 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** GWMW03-02**Project:** CLC Griggs and Walnut**Collection Date:** 1/8/2019 6:10:00 PM**Lab ID:** 1901395-003**Matrix:** AQUEOUS**Received Date:** 1/10/2019 8:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	1.1	0.17	1.0		µg/L	1	1/12/2019 4:58:42 AM
Toluene	13	0.17	1.0		µg/L	1	1/12/2019 4:58:42 AM
Ethylbenzene	ND	0.22	1.0		µg/L	1	1/12/2019 4:58:42 AM
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	1/12/2019 4:58:42 AM
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	1/12/2019 4:58:42 AM
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	1/12/2019 4:58:42 AM
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	1/12/2019 4:58:42 AM
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	1/12/2019 4:58:42 AM
Naphthalene	ND	0.29	2.0		µg/L	1	1/12/2019 4:58:42 AM
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	1/12/2019 4:58:42 AM
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	1/12/2019 4:58:42 AM
Acetone	15	0.76	10		µg/L	1	1/12/2019 4:58:42 AM
Bromobenzene	ND	0.32	1.0		µg/L	1	1/12/2019 4:58:42 AM
Bromodichloromethane	ND	0.28	1.0		µg/L	1	1/12/2019 4:58:42 AM
Bromoform	ND	0.32	1.0		µg/L	1	1/12/2019 4:58:42 AM
Bromomethane	ND	0.27	3.0		µg/L	1	1/12/2019 4:58:42 AM
2-Butanone	13	1.4	10		µg/L	1	1/12/2019 4:58:42 AM
Carbon disulfide	ND	0.39	10		µg/L	1	1/12/2019 4:58:42 AM
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	1/12/2019 4:58:42 AM
Chlorobenzene	ND	0.29	1.0		µg/L	1	1/12/2019 4:58:42 AM
Chloroethane	ND	0.16	2.0		µg/L	1	1/12/2019 4:58:42 AM
Chloroform	ND	0.24	1.0		µg/L	1	1/12/2019 4:58:42 AM
Chloromethane	ND	0.32	3.0		µg/L	1	1/12/2019 4:58:42 AM
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	1/12/2019 4:58:42 AM
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	1/12/2019 4:58:42 AM
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	1/12/2019 4:58:42 AM
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	1/12/2019 4:58:42 AM
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	1/12/2019 4:58:42 AM
Dibromochloromethane	ND	0.24	1.0		µg/L	1	1/12/2019 4:58:42 AM
Dibromomethane	ND	0.32	1.0		µg/L	1	1/12/2019 4:58:42 AM
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	1/12/2019 4:58:42 AM
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	1/12/2019 4:58:42 AM
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	1/12/2019 4:58:42 AM
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	1/12/2019 4:58:42 AM
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	1/12/2019 4:58:42 AM
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	1/12/2019 4:58:42 AM
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	1/12/2019 4:58:42 AM
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	1/12/2019 4:58:42 AM
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	1/12/2019 4:58:42 AM
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	1/12/2019 4:58:42 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces

Client Sample ID: GWMW03-02

Project: CLC Griggs and Walnut

Collection Date: 1/8/2019 6:10:00 PM

Lab ID: 1901395-003

Matrix: AQUEOUS

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	1/12/2019 4:58:42 AM
2-Hexanone	ND	0.91	10		µg/L	1	1/12/2019 4:58:42 AM
Isopropylbenzene	ND	0.22	1.0		µg/L	1	1/12/2019 4:58:42 AM
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	1/12/2019 4:58:42 AM
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	1/12/2019 4:58:42 AM
Methylene Chloride	ND	0.21	3.0		µg/L	1	1/12/2019 4:58:42 AM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	1/12/2019 4:58:42 AM
n-Propylbenzene	ND	0.24	1.0		µg/L	1	1/12/2019 4:58:42 AM
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	1/12/2019 4:58:42 AM
Styrene	ND	0.25	1.0		µg/L	1	1/12/2019 4:58:42 AM
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	1/12/2019 4:58:42 AM
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	1/12/2019 4:58:42 AM
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	1/12/2019 4:58:42 AM
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	1/12/2019 4:58:42 AM
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	1/12/2019 4:58:42 AM
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	1/12/2019 4:58:42 AM
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	1/12/2019 4:58:42 AM
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	1/12/2019 4:58:42 AM
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	1/12/2019 4:58:42 AM
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	1/12/2019 4:58:42 AM
Trichloroethene (TCE)	0.37	0.26	1.0	J	µg/L	1	1/12/2019 4:58:42 AM
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	1/12/2019 4:58:42 AM
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	1/12/2019 4:58:42 AM
Vinyl chloride	ND	0.12	1.0		µg/L	1	1/12/2019 4:58:42 AM
Xylenes, Total	ND	0.64	1.5		µg/L	1	1/12/2019 4:58:42 AM
Surr: 1,2-Dichloroethane-d4	106	0	70-130		%Rec	1	1/12/2019 4:58:42 AM
Surr: 4-Bromofluorobenzene	93.1	0	70-130		%Rec	1	1/12/2019 4:58:42 AM
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	1/12/2019 4:58:42 AM
Surr: Toluene-d8	101	0	70-130		%Rec	1	1/12/2019 4:58:42 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces

Client Sample ID: GWMW03-03

Project: CLC Griggs and Walnut

Collection Date: 1/8/2019 6:28:00 PM

Lab ID: 1901395-004

Matrix: AQUEOUS

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	0.56	0.17	1.0	J	µg/L	1	1/12/2019 5:26:59 AM
Toluene	7.6	0.17	1.0		µg/L	1	1/12/2019 5:26:59 AM
Ethylbenzene	ND	0.22	1.0		µg/L	1	1/12/2019 5:26:59 AM
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	1/12/2019 5:26:59 AM
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	1/12/2019 5:26:59 AM
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	1/12/2019 5:26:59 AM
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	1/12/2019 5:26:59 AM
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	1/12/2019 5:26:59 AM
Naphthalene	ND	0.29	2.0		µg/L	1	1/12/2019 5:26:59 AM
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	1/12/2019 5:26:59 AM
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	1/12/2019 5:26:59 AM
Acetone	5.2	0.76	10	J	µg/L	1	1/12/2019 5:26:59 AM
Bromobenzene	ND	0.32	1.0		µg/L	1	1/12/2019 5:26:59 AM
Bromodichloromethane	ND	0.28	1.0		µg/L	1	1/12/2019 5:26:59 AM
Bromoform	ND	0.32	1.0		µg/L	1	1/12/2019 5:26:59 AM
Bromomethane	ND	0.27	3.0		µg/L	1	1/12/2019 5:26:59 AM
2-Butanone	5.3	1.4	10	J	µg/L	1	1/12/2019 5:26:59 AM
Carbon disulfide	ND	0.39	10		µg/L	1	1/12/2019 5:26:59 AM
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	1/12/2019 5:26:59 AM
Chlorobenzene	ND	0.29	1.0		µg/L	1	1/12/2019 5:26:59 AM
Chloroethane	ND	0.16	2.0		µg/L	1	1/12/2019 5:26:59 AM
Chloroform	ND	0.24	1.0		µg/L	1	1/12/2019 5:26:59 AM
Chloromethane	ND	0.32	3.0		µg/L	1	1/12/2019 5:26:59 AM
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	1/12/2019 5:26:59 AM
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	1/12/2019 5:26:59 AM
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	1/12/2019 5:26:59 AM
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	1/12/2019 5:26:59 AM
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	1/12/2019 5:26:59 AM
Dibromochloromethane	ND	0.24	1.0		µg/L	1	1/12/2019 5:26:59 AM
Dibromomethane	ND	0.32	1.0		µg/L	1	1/12/2019 5:26:59 AM
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	1/12/2019 5:26:59 AM
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	1/12/2019 5:26:59 AM
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	1/12/2019 5:26:59 AM
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	1/12/2019 5:26:59 AM
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	1/12/2019 5:26:59 AM
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	1/12/2019 5:26:59 AM
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	1/12/2019 5:26:59 AM
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	1/12/2019 5:26:59 AM
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	1/12/2019 5:26:59 AM
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	1/12/2019 5:26:59 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** GWMW03-03**Project:** CLC Griggs and Walnut**Collection Date:** 1/8/2019 6:28:00 PM**Lab ID:** 1901395-004**Matrix:** AQUEOUS**Received Date:** 1/10/2019 8:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	1/12/2019 5:26:59 AM
2-Hexanone	ND	0.91	10		µg/L	1	1/12/2019 5:26:59 AM
Isopropylbenzene	ND	0.22	1.0		µg/L	1	1/12/2019 5:26:59 AM
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	1/12/2019 5:26:59 AM
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	1/12/2019 5:26:59 AM
Methylene Chloride	ND	0.21	3.0		µg/L	1	1/12/2019 5:26:59 AM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	1/12/2019 5:26:59 AM
n-Propylbenzene	ND	0.24	1.0		µg/L	1	1/12/2019 5:26:59 AM
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	1/12/2019 5:26:59 AM
Styrene	ND	0.25	1.0		µg/L	1	1/12/2019 5:26:59 AM
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	1/12/2019 5:26:59 AM
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	1/12/2019 5:26:59 AM
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	1/12/2019 5:26:59 AM
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	1/12/2019 5:26:59 AM
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	1/12/2019 5:26:59 AM
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	1/12/2019 5:26:59 AM
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	1/12/2019 5:26:59 AM
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	1/12/2019 5:26:59 AM
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	1/12/2019 5:26:59 AM
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	1/12/2019 5:26:59 AM
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	1/12/2019 5:26:59 AM
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	1/12/2019 5:26:59 AM
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	1/12/2019 5:26:59 AM
Vinyl chloride	ND	0.12	1.0		µg/L	1	1/12/2019 5:26:59 AM
Xylenes, Total	ND	0.64	1.5		µg/L	1	1/12/2019 5:26:59 AM
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	1/12/2019 5:26:59 AM
Surr: 4-Bromofluorobenzene	92.7	0	70-130		%Rec	1	1/12/2019 5:26:59 AM
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	1/12/2019 5:26:59 AM
Surr: Toluene-d8	99.5	0	70-130		%Rec	1	1/12/2019 5:26:59 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** Trip Blank**Project:** CLC Griggs and Walnut**Collection Date:****Lab ID:** 1901395-005**Matrix:** TRIP BLANK**Received Date:** 1/10/2019 8:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	0.17	1.0		µg/L	1	1/12/2019 5:55:16 AM
Toluene	ND	0.17	1.0		µg/L	1	1/12/2019 5:55:16 AM
Ethylbenzene	ND	0.22	1.0		µg/L	1	1/12/2019 5:55:16 AM
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	1/12/2019 5:55:16 AM
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	1/12/2019 5:55:16 AM
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	1/12/2019 5:55:16 AM
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	1/12/2019 5:55:16 AM
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	1/12/2019 5:55:16 AM
Naphthalene	ND	0.29	2.0		µg/L	1	1/12/2019 5:55:16 AM
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	1/12/2019 5:55:16 AM
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	1/12/2019 5:55:16 AM
Acetone	ND	0.76	10		µg/L	1	1/12/2019 5:55:16 AM
Bromobenzene	ND	0.32	1.0		µg/L	1	1/12/2019 5:55:16 AM
Bromodichloromethane	ND	0.28	1.0		µg/L	1	1/12/2019 5:55:16 AM
Bromoform	ND	0.32	1.0		µg/L	1	1/12/2019 5:55:16 AM
Bromomethane	ND	0.27	3.0		µg/L	1	1/12/2019 5:55:16 AM
2-Butanone	ND	1.4	10		µg/L	1	1/12/2019 5:55:16 AM
Carbon disulfide	ND	0.39	10		µg/L	1	1/12/2019 5:55:16 AM
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	1/12/2019 5:55:16 AM
Chlorobenzene	ND	0.29	1.0		µg/L	1	1/12/2019 5:55:16 AM
Chloroethane	ND	0.16	2.0		µg/L	1	1/12/2019 5:55:16 AM
Chloroform	ND	0.24	1.0		µg/L	1	1/12/2019 5:55:16 AM
Chloromethane	ND	0.32	3.0		µg/L	1	1/12/2019 5:55:16 AM
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	1/12/2019 5:55:16 AM
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	1/12/2019 5:55:16 AM
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	1/12/2019 5:55:16 AM
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	1/12/2019 5:55:16 AM
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	1/12/2019 5:55:16 AM
Dibromochloromethane	ND	0.24	1.0		µg/L	1	1/12/2019 5:55:16 AM
Dibromomethane	ND	0.32	1.0		µg/L	1	1/12/2019 5:55:16 AM
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	1/12/2019 5:55:16 AM
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	1/12/2019 5:55:16 AM
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	1/12/2019 5:55:16 AM
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	1/12/2019 5:55:16 AM
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	1/12/2019 5:55:16 AM
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	1/12/2019 5:55:16 AM
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	1/12/2019 5:55:16 AM
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	1/12/2019 5:55:16 AM
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	1/12/2019 5:55:16 AM
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	1/12/2019 5:55:16 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** Trip Blank**Project:** CLC Griggs and Walnut**Collection Date:****Lab ID:** 1901395-005**Matrix:** TRIP BLANK**Received Date:** 1/10/2019 8:30:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: AG
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	1/12/2019 5:55:16 AM
2-Hexanone	ND	0.91	10		µg/L	1	1/12/2019 5:55:16 AM
Isopropylbenzene	ND	0.22	1.0		µg/L	1	1/12/2019 5:55:16 AM
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	1/12/2019 5:55:16 AM
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	1/12/2019 5:55:16 AM
Methylene Chloride	ND	0.21	3.0		µg/L	1	1/12/2019 5:55:16 AM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	1/12/2019 5:55:16 AM
n-Propylbenzene	ND	0.24	1.0		µg/L	1	1/12/2019 5:55:16 AM
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	1/12/2019 5:55:16 AM
Styrene	ND	0.25	1.0		µg/L	1	1/12/2019 5:55:16 AM
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	1/12/2019 5:55:16 AM
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	1/12/2019 5:55:16 AM
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	1/12/2019 5:55:16 AM
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	1/12/2019 5:55:16 AM
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	1/12/2019 5:55:16 AM
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	1/12/2019 5:55:16 AM
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	1/12/2019 5:55:16 AM
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	1/12/2019 5:55:16 AM
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	1/12/2019 5:55:16 AM
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	1/12/2019 5:55:16 AM
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	1/12/2019 5:55:16 AM
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	1/12/2019 5:55:16 AM
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	1/12/2019 5:55:16 AM
Vinyl chloride	ND	0.12	1.0		µg/L	1	1/12/2019 5:55:16 AM
Xylenes, Total	ND	0.64	1.5		µg/L	1	1/12/2019 5:55:16 AM
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	1/12/2019 5:55:16 AM
Surr: 4-Bromofluorobenzene	104	0	70-130		%Rec	1	1/12/2019 5:55:16 AM
Surr: Dibromofluoromethane	101	0	70-130		%Rec	1	1/12/2019 5:55:16 AM
Surr: Toluene-d8	101	0	70-130		%Rec	1	1/12/2019 5:55:16 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901395

14-Jan-19

Client: City of Las Cruces
Project: CLC Griggs and Walnut

Sample ID 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: B56955		RunNo: 56955							
Prep Date:	Analysis Date: 1/11/2019		SeqNo: 1905358		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	97.8	70	130			
Toluene	19	1.0	20.00	0	92.6	70	130			
Chlorobenzene	19	1.0	20.00	0	95.1	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	93.4	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	87.8	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.9		10.00		99.0	70	130			

Sample ID rb2	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: B56955		RunNo: 56955							
Prep Date:	Analysis Date: 1/11/2019		SeqNo: 1905369		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901395

14-Jan-19

Client: City of Las Cruces
Project: CLC Griggs and Walnut

Sample ID: rb2	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: B56955	RunNo: 56955
Prep Date:	Analysis Date: 1/11/2019	SeqNo: 1905369 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901395

14-Jan-19

Client: City of Las Cruces
Project: CLC Griggs and Walnut

Sample ID: rb2	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: B56955		RunNo: 56955							
Prep Date:	Analysis Date: 1/11/2019		SeqNo: 1905369		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: **City of Las Cruces**

Work Order Number: **1901395**

RcptNo: **1**

Received By: **Erin Melendrez** 1/10/2019 8:30:00 AM *EM*

Completed By: **Erin Melendrez** 1/10/2019 5:47:47 PM *EM*

Reviewed By: **ENM** 1/11/19

LB: VVZ V/11/19

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No *V/11/19*
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

16. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.1	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces

Mailing Address:

Phone #: 575.527.1700

email or Fax#: karni.ersted@terracon.com

QA/QC Package:
 Standard Level 4 (Full Validation)

Accreditation: Az Compliance
 NELAC Other

EDD (Type)

Turn-Around Time:

Standard Rush

Project Name:

G.C. Griggs Walnut

Project #:

6818 P186 TaskA

Project Manager:

Saresi Gandara

Sampler: Larni Ersted

On Ice: Yes No

of Coolers: 1

Cooler Temp (including CP): 0.1°C

Container Type and #

Preservative Type

HEAL No.

3	HCL	-001
3		-002
3		-003
3		-004
3	HCL	-005

Date	Time	Matrix	Sample Name
11/8/19	1447	water	FB190801
1	1755		GUMW03-01
1	1810		GUMW03-02
11/8/19	1838		GUMW03-03
—	—	water	Test Blank

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260(VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
							X		
							X		
							X		
							X		
							X		

Received by: Wife Date: 11/01/19 Time: 0830
 Via: Fedex

Received by: _____ Date: _____ Time: _____
 Via: _____

Remarks: Invoice (Bill): Terracon Las Cruces
 4450 Bataan Memorial East
 Las Cruces, NM 88011
 karni.ersted@terracon.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 15, 2019

Surasi Gandara
City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3604
FAX

RE: CLC Griggs and Walnut

OrderNo.: 1901396

Dear Surasi Gandara:

Hall Environmental Analysis Laboratory received 10 sample(s) on 1/10/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written in a cursive style.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901396

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW09-01

Project: CLC Griggs and Walnut

Collection Date: 1/9/2019 2:09:00 PM

Lab ID: 1901396-001

Matrix: AQUEOUS

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
Toluene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
Ethylbenzene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
Naphthalene	ND	2.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
1-Methylnaphthalene	ND	4.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
2-Methylnaphthalene	ND	4.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
Acetone	ND	10		µg/L	1	1/12/2019 6:23:34 AM	B56955
Bromobenzene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
Bromodichloromethane	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
Bromoform	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
Bromomethane	ND	3.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
2-Butanone	ND	10		µg/L	1	1/12/2019 6:23:34 AM	B56955
Carbon disulfide	ND	10		µg/L	1	1/12/2019 6:23:34 AM	B56955
Carbon Tetrachloride	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
Chlorobenzene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
Chloroethane	ND	2.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
Chloroform	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
Chloromethane	ND	3.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
2-Chlorotoluene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
4-Chlorotoluene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
cis-1,2-DCE	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
Dibromochloromethane	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
Dibromomethane	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
1,1-Dichloroethane	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
1,1-Dichloroethene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
1,2-Dichloropropane	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
1,3-Dichloropropane	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
2,2-Dichloropropane	ND	2.0		µg/L	1	1/12/2019 6:23:34 AM	B56955

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901396

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW09-01

Project: CLC Griggs and Walnut

Collection Date: 1/9/2019 2:09:00 PM

Lab ID: 1901396-001

Matrix: AQUEOUS

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
Hexachlorobutadiene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
2-Hexanone	ND	10		µg/L	1	1/12/2019 6:23:34 AM	B56955
Isopropylbenzene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
4-Isopropyltoluene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
4-Methyl-2-pentanone	ND	10		µg/L	1	1/12/2019 6:23:34 AM	B56955
Methylene Chloride	ND	3.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
n-Butylbenzene	ND	3.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
n-Propylbenzene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
sec-Butylbenzene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
Styrene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
tert-Butylbenzene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
trans-1,2-DCE	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
Trichlorofluoromethane	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
Vinyl chloride	ND	1.0		µg/L	1	1/12/2019 6:23:34 AM	B56955
Xylenes, Total	ND	1.5		µg/L	1	1/12/2019 6:23:34 AM	B56955
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	1/12/2019 6:23:34 AM	B56955
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	1/12/2019 6:23:34 AM	B56955
Surr: Dibromofluoromethane	100	70-130		%Rec	1	1/12/2019 6:23:34 AM	B56955
Surr: Toluene-d8	100	70-130		%Rec	1	1/12/2019 6:23:34 AM	B56955

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Qualifiers:			
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D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901396

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW09-02

Project: CLC Griggs and Walnut

Collection Date: 1/9/2019 2:28:00 PM

Lab ID: 1901396-002

Matrix: AQUEOUS

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	2.2	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
Toluene	16	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
Ethylbenzene	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
Naphthalene	ND	2.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
1-Methylnaphthalene	ND	4.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
2-Methylnaphthalene	ND	4.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
Acetone	ND	10		µg/L	1	1/12/2019 6:51:51 AM	B56955
Bromobenzene	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
Bromodichloromethane	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
Bromoform	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
Bromomethane	ND	3.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
2-Butanone	ND	10		µg/L	1	1/12/2019 6:51:51 AM	B56955
Carbon disulfide	ND	10		µg/L	1	1/12/2019 6:51:51 AM	B56955
Carbon Tetrachloride	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
Chlorobenzene	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
Chloroethane	ND	2.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
Chloroform	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
Chloromethane	ND	3.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
2-Chlorotoluene	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
4-Chlorotoluene	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
cis-1,2-DCE	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
Dibromochloromethane	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
Dibromomethane	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
1,1-Dichloroethane	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
1,1-Dichloroethene	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
1,2-Dichloropropane	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
1,3-Dichloropropane	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
2,2-Dichloropropane	ND	2.0		µg/L	1	1/12/2019 6:51:51 AM	B56955

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Lab Order 1901396

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Project: CLC Griggs and Walnut

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Lab ID: 1901396-002

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Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
Hexachlorobutadiene	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
2-Hexanone	ND	10		µg/L	1	1/12/2019 6:51:51 AM	B56955
Isopropylbenzene	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
4-Isopropyltoluene	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
4-Methyl-2-pentanone	ND	10		µg/L	1	1/12/2019 6:51:51 AM	B56955
Methylene Chloride	ND	3.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
n-Butylbenzene	ND	3.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
n-Propylbenzene	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
sec-Butylbenzene	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
Styrene	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
tert-Butylbenzene	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
trans-1,2-DCE	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
Trichlorofluoromethane	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
Vinyl chloride	ND	1.0		µg/L	1	1/12/2019 6:51:51 AM	B56955
Xylenes, Total	ND	1.5		µg/L	1	1/12/2019 6:51:51 AM	B56955
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	1/12/2019 6:51:51 AM	B56955
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	1/12/2019 6:51:51 AM	B56955
Surr: Dibromofluoromethane	99.7	70-130		%Rec	1	1/12/2019 6:51:51 AM	B56955
Surr: Toluene-d8	102	70-130		%Rec	1	1/12/2019 6:51:51 AM	B56955

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901396

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW09-02 DUP

Project: CLC Griggs and Walnut

Collection Date: 1/9/2019 2:31:00 PM

Lab ID: 1901396-003

Matrix: AQUEOUS

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	2.1	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
Toluene	16	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
Ethylbenzene	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
Naphthalene	ND	2.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
1-Methylnaphthalene	ND	4.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
2-Methylnaphthalene	ND	4.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
Acetone	ND	10		µg/L	1	1/12/2019 8:16:37 AM	B56955
Bromobenzene	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
Bromodichloromethane	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
Bromoform	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
Bromomethane	ND	3.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
2-Butanone	ND	10		µg/L	1	1/12/2019 8:16:37 AM	B56955
Carbon disulfide	ND	10		µg/L	1	1/12/2019 8:16:37 AM	B56955
Carbon Tetrachloride	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
Chlorobenzene	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
Chloroethane	ND	2.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
Chloroform	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
Chloromethane	ND	3.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
2-Chlorotoluene	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
4-Chlorotoluene	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
cis-1,2-DCE	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
Dibromochloromethane	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
Dibromomethane	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
1,1-Dichloroethane	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
1,1-Dichloroethene	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
1,2-Dichloropropane	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
1,3-Dichloropropane	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
2,2-Dichloropropane	ND	2.0		µg/L	1	1/12/2019 8:16:37 AM	B56955

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901396

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW09-02 DUP

Project: CLC Griggs and Walnut

Collection Date: 1/9/2019 2:31:00 PM

Lab ID: 1901396-003

Matrix: AQUEOUS

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
Hexachlorobutadiene	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
2-Hexanone	ND	10		µg/L	1	1/12/2019 8:16:37 AM	B56955
Isopropylbenzene	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
4-Isopropyltoluene	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
4-Methyl-2-pentanone	ND	10		µg/L	1	1/12/2019 8:16:37 AM	B56955
Methylene Chloride	ND	3.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
n-Butylbenzene	ND	3.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
n-Propylbenzene	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
sec-Butylbenzene	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
Styrene	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
tert-Butylbenzene	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
trans-1,2-DCE	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
Trichlorofluoromethane	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
Vinyl chloride	ND	1.0		µg/L	1	1/12/2019 8:16:37 AM	B56955
Xylenes, Total	ND	1.5		µg/L	1	1/12/2019 8:16:37 AM	B56955
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	1/12/2019 8:16:37 AM	B56955
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	1/12/2019 8:16:37 AM	B56955
Surr: Dibromofluoromethane	95.9	70-130		%Rec	1	1/12/2019 8:16:37 AM	B56955
Surr: Toluene-d8	102	70-130		%Rec	1	1/12/2019 8:16:37 AM	B56955

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901396

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW09-03

Project: CLC Griggs and Walnut

Collection Date: 1/9/2019 2:51:00 PM

Lab ID: 1901396-004

Matrix: AQUEOUS

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	3.2	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
Toluene	40	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
Ethylbenzene	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
Naphthalene	ND	2.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
1-Methylnaphthalene	ND	4.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
2-Methylnaphthalene	ND	4.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
Acetone	ND	10		µg/L	1	1/12/2019 8:44:54 AM	B56955
Bromobenzene	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
Bromodichloromethane	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
Bromoform	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
Bromomethane	ND	3.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
2-Butanone	ND	10		µg/L	1	1/12/2019 8:44:54 AM	B56955
Carbon disulfide	ND	10		µg/L	1	1/12/2019 8:44:54 AM	B56955
Carbon Tetrachloride	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
Chlorobenzene	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
Chloroethane	ND	2.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
Chloroform	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
Chloromethane	ND	3.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
2-Chlorotoluene	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
4-Chlorotoluene	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
cis-1,2-DCE	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
Dibromochloromethane	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
Dibromomethane	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
1,1-Dichloroethane	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
1,1-Dichloroethene	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
1,2-Dichloropropane	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
1,3-Dichloropropane	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
2,2-Dichloropropane	ND	2.0		µg/L	1	1/12/2019 8:44:54 AM	B56955

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901396

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW09-03

Project: CLC Griggs and Walnut

Collection Date: 1/9/2019 2:51:00 PM

Lab ID: 1901396-004

Matrix: AQUEOUS

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
Hexachlorobutadiene	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
2-Hexanone	ND	10		µg/L	1	1/12/2019 8:44:54 AM	B56955
Isopropylbenzene	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
4-Isopropyltoluene	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
4-Methyl-2-pentanone	ND	10		µg/L	1	1/12/2019 8:44:54 AM	B56955
Methylene Chloride	ND	3.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
n-Butylbenzene	ND	3.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
n-Propylbenzene	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
sec-Butylbenzene	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
Styrene	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
tert-Butylbenzene	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
trans-1,2-DCE	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
Trichlorofluoromethane	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
Vinyl chloride	ND	1.0		µg/L	1	1/12/2019 8:44:54 AM	B56955
Xylenes, Total	ND	1.5		µg/L	1	1/12/2019 8:44:54 AM	B56955
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	1/12/2019 8:44:54 AM	B56955
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	1/12/2019 8:44:54 AM	B56955
Surr: Dibromofluoromethane	103	70-130		%Rec	1	1/12/2019 8:44:54 AM	B56955
Surr: Toluene-d8	102	70-130		%Rec	1	1/12/2019 8:44:54 AM	B56955

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901396

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW09-04

Project: CLC Griggs and Walnut

Collection Date: 1/9/2019 3:20:00 PM

Lab ID: 1901396-005

Matrix: AQUEOUS

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	4.0	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
Toluene	66	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
Ethylbenzene	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
Naphthalene	ND	2.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
1-Methylnaphthalene	ND	4.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
2-Methylnaphthalene	ND	4.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
Acetone	ND	10		µg/L	1	1/12/2019 9:13:11 AM	B56955
Bromobenzene	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
Bromodichloromethane	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
Bromoform	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
Bromomethane	ND	3.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
2-Butanone	ND	10		µg/L	1	1/12/2019 9:13:11 AM	B56955
Carbon disulfide	ND	10		µg/L	1	1/12/2019 9:13:11 AM	B56955
Carbon Tetrachloride	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
Chlorobenzene	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
Chloroethane	ND	2.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
Chloroform	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
Chloromethane	ND	3.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
2-Chlorotoluene	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
4-Chlorotoluene	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
cis-1,2-DCE	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
Dibromochloromethane	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
Dibromomethane	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
1,1-Dichloroethane	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
1,1-Dichloroethene	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
1,2-Dichloropropane	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
1,3-Dichloropropane	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
2,2-Dichloropropane	ND	2.0		µg/L	1	1/12/2019 9:13:11 AM	B56955

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901396

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW09-04

Project: CLC Griggs and Walnut

Collection Date: 1/9/2019 3:20:00 PM

Lab ID: 1901396-005

Matrix: AQUEOUS

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
Hexachlorobutadiene	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
2-Hexanone	ND	10		µg/L	1	1/12/2019 9:13:11 AM	B56955
Isopropylbenzene	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
4-Isopropyltoluene	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
4-Methyl-2-pentanone	ND	10		µg/L	1	1/12/2019 9:13:11 AM	B56955
Methylene Chloride	ND	3.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
n-Butylbenzene	ND	3.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
n-Propylbenzene	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
sec-Butylbenzene	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
Styrene	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
tert-Butylbenzene	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
trans-1,2-DCE	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
Trichlorofluoromethane	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
Vinyl chloride	ND	1.0		µg/L	1	1/12/2019 9:13:11 AM	B56955
Xylenes, Total	ND	1.5		µg/L	1	1/12/2019 9:13:11 AM	B56955
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	1/12/2019 9:13:11 AM	B56955
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	1/12/2019 9:13:11 AM	B56955
Surr: Dibromofluoromethane	99.5	70-130		%Rec	1	1/12/2019 9:13:11 AM	B56955
Surr: Toluene-d8	101	70-130		%Rec	1	1/12/2019 9:13:11 AM	B56955

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901396

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW09-05

Project: CLC Griggs and Walnut

Collection Date: 1/9/2019 3:41:00 PM

Lab ID: 1901396-006

Matrix: AQUEOUS

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	3.8	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
Toluene	67	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
Ethylbenzene	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
Naphthalene	ND	2.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
1-Methylnaphthalene	ND	4.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
2-Methylnaphthalene	ND	4.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
Acetone	14	10		µg/L	1	1/12/2019 9:41:28 AM	B56955
Bromobenzene	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
Bromodichloromethane	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
Bromoform	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
Bromomethane	ND	3.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
2-Butanone	ND	10		µg/L	1	1/12/2019 9:41:28 AM	B56955
Carbon disulfide	ND	10		µg/L	1	1/12/2019 9:41:28 AM	B56955
Carbon Tetrachloride	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
Chlorobenzene	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
Chloroethane	ND	2.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
Chloroform	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
Chloromethane	ND	3.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
2-Chlorotoluene	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
4-Chlorotoluene	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
cis-1,2-DCE	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
Dibromochloromethane	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
Dibromomethane	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
1,1-Dichloroethane	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
1,1-Dichloroethene	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
1,2-Dichloropropane	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
1,3-Dichloropropane	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
2,2-Dichloropropane	ND	2.0		µg/L	1	1/12/2019 9:41:28 AM	B56955

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901396

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW09-05

Project: CLC Griggs and Walnut

Collection Date: 1/9/2019 3:41:00 PM

Lab ID: 1901396-006

Matrix: AQUEOUS

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
Hexachlorobutadiene	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
2-Hexanone	ND	10		µg/L	1	1/12/2019 9:41:28 AM	B56955
Isopropylbenzene	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
4-Isopropyltoluene	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
4-Methyl-2-pentanone	ND	10		µg/L	1	1/12/2019 9:41:28 AM	B56955
Methylene Chloride	ND	3.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
n-Butylbenzene	ND	3.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
n-Propylbenzene	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
sec-Butylbenzene	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
Styrene	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
tert-Butylbenzene	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
Tetrachloroethene (PCE)	1.6	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
trans-1,2-DCE	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
Trichlorofluoromethane	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
Vinyl chloride	ND	1.0		µg/L	1	1/12/2019 9:41:28 AM	B56955
Xylenes, Total	ND	1.5		µg/L	1	1/12/2019 9:41:28 AM	B56955
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	1/12/2019 9:41:28 AM	B56955
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	1/12/2019 9:41:28 AM	B56955
Surr: Dibromofluoromethane	101	70-130		%Rec	1	1/12/2019 9:41:28 AM	B56955
Surr: Toluene-d8	99.9	70-130		%Rec	1	1/12/2019 9:41:28 AM	B56955

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901396

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW09-06

Project: CLC Griggs and Walnut

Collection Date: 1/9/2019 4:06:00 PM

Lab ID: 1901396-007

Matrix: AQUEOUS

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	2.9	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
Toluene	57	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
Ethylbenzene	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
Naphthalene	ND	2.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
1-Methylnaphthalene	ND	4.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
2-Methylnaphthalene	ND	4.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
Acetone	19	10		µg/L	1	1/12/2019 10:09:44 AM	B56955
Bromobenzene	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
Bromodichloromethane	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
Bromoform	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
Bromomethane	ND	3.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
2-Butanone	ND	10		µg/L	1	1/12/2019 10:09:44 AM	B56955
Carbon disulfide	ND	10		µg/L	1	1/12/2019 10:09:44 AM	B56955
Carbon Tetrachloride	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
Chlorobenzene	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
Chloroethane	ND	2.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
Chloroform	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
Chloromethane	ND	3.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
2-Chlorotoluene	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
4-Chlorotoluene	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
cis-1,2-DCE	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
Dibromochloromethane	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
Dibromomethane	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
1,1-Dichloroethane	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
1,1-Dichloroethene	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
1,2-Dichloropropane	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
1,3-Dichloropropane	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
2,2-Dichloropropane	ND	2.0		µg/L	1	1/12/2019 10:09:44 AM	B56955

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901396

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW09-06

Project: CLC Griggs and Walnut

Collection Date: 1/9/2019 4:06:00 PM

Lab ID: 1901396-007

Matrix: AQUEOUS

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
Hexachlorobutadiene	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
2-Hexanone	ND	10		µg/L	1	1/12/2019 10:09:44 AM	B56955
Isopropylbenzene	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
4-Isopropyltoluene	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
4-Methyl-2-pentanone	ND	10		µg/L	1	1/12/2019 10:09:44 AM	B56955
Methylene Chloride	ND	3.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
n-Butylbenzene	ND	3.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
n-Propylbenzene	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
sec-Butylbenzene	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
Styrene	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
tert-Butylbenzene	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
Tetrachloroethene (PCE)	2.0	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
trans-1,2-DCE	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
Trichlorofluoromethane	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
Vinyl chloride	ND	1.0		µg/L	1	1/12/2019 10:09:44 AM	B56955
Xylenes, Total	ND	1.5		µg/L	1	1/12/2019 10:09:44 AM	B56955
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	1/12/2019 10:09:44 AM	B56955
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	1/12/2019 10:09:44 AM	B56955
Surr: Dibromofluoromethane	101	70-130		%Rec	1	1/12/2019 10:09:44 AM	B56955
Surr: Toluene-d8	99.8	70-130		%Rec	1	1/12/2019 10:09:44 AM	B56955

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901396

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW09-07

Project: CLC Griggs and Walnut

Collection Date: 1/9/2019 4:25:00 PM

Lab ID: 1901396-008

Matrix: AQUEOUS

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	1.8	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
Toluene	42	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
Ethylbenzene	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
Naphthalene	ND	2.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
1-Methylnaphthalene	ND	4.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
2-Methylnaphthalene	ND	4.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
Acetone	11	10		µg/L	1	1/12/2019 10:38:02 AM	B56955
Bromobenzene	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
Bromodichloromethane	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
Bromoform	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
Bromomethane	ND	3.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
2-Butanone	ND	10		µg/L	1	1/12/2019 10:38:02 AM	B56955
Carbon disulfide	ND	10		µg/L	1	1/12/2019 10:38:02 AM	B56955
Carbon Tetrachloride	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
Chlorobenzene	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
Chloroethane	ND	2.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
Chloroform	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
Chloromethane	ND	3.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
2-Chlorotoluene	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
4-Chlorotoluene	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
cis-1,2-DCE	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
Dibromochloromethane	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
Dibromomethane	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
1,1-Dichloroethane	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
1,1-Dichloroethene	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
1,2-Dichloropropane	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
1,3-Dichloropropane	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
2,2-Dichloropropane	ND	2.0		µg/L	1	1/12/2019 10:38:02 AM	B56955

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901396

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW09-07

Project: CLC Griggs and Walnut

Collection Date: 1/9/2019 4:25:00 PM

Lab ID: 1901396-008

Matrix: AQUEOUS

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
Hexachlorobutadiene	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
2-Hexanone	ND	10		µg/L	1	1/12/2019 10:38:02 AM	B56955
Isopropylbenzene	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
4-Isopropyltoluene	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
4-Methyl-2-pentanone	ND	10		µg/L	1	1/12/2019 10:38:02 AM	B56955
Methylene Chloride	ND	3.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
n-Butylbenzene	ND	3.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
n-Propylbenzene	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
sec-Butylbenzene	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
Styrene	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
tert-Butylbenzene	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
trans-1,2-DCE	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
Trichlorofluoromethane	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
Vinyl chloride	ND	1.0		µg/L	1	1/12/2019 10:38:02 AM	B56955
Xylenes, Total	ND	1.5		µg/L	1	1/12/2019 10:38:02 AM	B56955
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	1/12/2019 10:38:02 AM	B56955
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	1/12/2019 10:38:02 AM	B56955
Surr: Dibromofluoromethane	99.9	70-130		%Rec	1	1/12/2019 10:38:02 AM	B56955
Surr: Toluene-d8	102	70-130		%Rec	1	1/12/2019 10:38:02 AM	B56955

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901396

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: FB190901

Project: CLC Griggs and Walnut

Collection Date: 1/9/2019 10:50:00 AM

Lab ID: 1901396-009

Matrix: AQUEOUS

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
Toluene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
Ethylbenzene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
Naphthalene	ND	2.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
1-Methylnaphthalene	ND	4.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
2-Methylnaphthalene	ND	4.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
Acetone	ND	10		µg/L	1	1/14/2019 11:14:46 AM	R56989
Bromobenzene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
Bromodichloromethane	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
Bromoform	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
Bromomethane	ND	3.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
2-Butanone	ND	10		µg/L	1	1/14/2019 11:14:46 AM	R56989
Carbon disulfide	ND	10		µg/L	1	1/14/2019 11:14:46 AM	R56989
Carbon Tetrachloride	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
Chlorobenzene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
Chloroethane	ND	2.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
Chloroform	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
Chloromethane	ND	3.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
2-Chlorotoluene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
4-Chlorotoluene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
cis-1,2-DCE	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
Dibromochloromethane	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
Dibromomethane	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
1,1-Dichloroethane	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
1,1-Dichloroethene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
1,2-Dichloropropane	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
1,3-Dichloropropane	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
2,2-Dichloropropane	ND	2.0		µg/L	1	1/14/2019 11:14:46 AM	R56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901396

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: FB190901

Project: CLC Griggs and Walnut

Collection Date: 1/9/2019 10:50:00 AM

Lab ID: 1901396-009

Matrix: AQUEOUS

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
Hexachlorobutadiene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
2-Hexanone	ND	10		µg/L	1	1/14/2019 11:14:46 AM	R56989
Isopropylbenzene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
4-Isopropyltoluene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
4-Methyl-2-pentanone	ND	10		µg/L	1	1/14/2019 11:14:46 AM	R56989
Methylene Chloride	ND	3.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
n-Butylbenzene	ND	3.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
n-Propylbenzene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
sec-Butylbenzene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
Styrene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
tert-Butylbenzene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
trans-1,2-DCE	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
Trichlorofluoromethane	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
Vinyl chloride	ND	1.0		µg/L	1	1/14/2019 11:14:46 AM	R56989
Xylenes, Total	ND	1.5		µg/L	1	1/14/2019 11:14:46 AM	R56989
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	1	1/14/2019 11:14:46 AM	R56989
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	1/14/2019 11:14:46 AM	R56989
Surr: Dibromofluoromethane	113	70-130		%Rec	1	1/14/2019 11:14:46 AM	R56989
Surr: Toluene-d8	103	70-130		%Rec	1	1/14/2019 11:14:46 AM	R56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901396

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: Trip Blank

Project: CLC Griggs and Walnut

Collection Date:

Lab ID: 1901396-010

Matrix: TRIP BLANK

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
Toluene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
Ethylbenzene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
Naphthalene	ND	2.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
1-Methylnaphthalene	ND	4.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
2-Methylnaphthalene	ND	4.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
Acetone	ND	10		µg/L	1	1/14/2019 12:40:37 PM	R56989
Bromobenzene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
Bromodichloromethane	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
Bromoform	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
Bromomethane	ND	3.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
2-Butanone	ND	10		µg/L	1	1/14/2019 12:40:37 PM	R56989
Carbon disulfide	ND	10		µg/L	1	1/14/2019 12:40:37 PM	R56989
Carbon Tetrachloride	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
Chlorobenzene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
Chloroethane	ND	2.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
Chloroform	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
Chloromethane	ND	3.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
2-Chlorotoluene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
4-Chlorotoluene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
cis-1,2-DCE	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
Dibromochloromethane	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
Dibromomethane	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
1,1-Dichloroethane	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
1,1-Dichloroethene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
1,2-Dichloropropane	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
1,3-Dichloropropane	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
2,2-Dichloropropane	ND	2.0		µg/L	1	1/14/2019 12:40:37 PM	R56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901396

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: Trip Blank

Project: CLC Griggs and Walnut

Collection Date:

Lab ID: 1901396-010

Matrix: TRIP BLANK

Received Date: 1/10/2019 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
Hexachlorobutadiene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
2-Hexanone	ND	10		µg/L	1	1/14/2019 12:40:37 PM	R56989
Isopropylbenzene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
4-Isopropyltoluene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
4-Methyl-2-pentanone	ND	10		µg/L	1	1/14/2019 12:40:37 PM	R56989
Methylene Chloride	ND	3.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
n-Butylbenzene	ND	3.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
n-Propylbenzene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
sec-Butylbenzene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
Styrene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
tert-Butylbenzene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
trans-1,2-DCE	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
Trichlorofluoromethane	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
Vinyl chloride	ND	1.0		µg/L	1	1/14/2019 12:40:37 PM	R56989
Xylenes, Total	ND	1.5		µg/L	1	1/14/2019 12:40:37 PM	R56989
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	1/14/2019 12:40:37 PM	R56989
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	1/14/2019 12:40:37 PM	R56989
Surr: Dibromofluoromethane	112	70-130		%Rec	1	1/14/2019 12:40:37 PM	R56989
Surr: Toluene-d8	106	70-130		%Rec	1	1/14/2019 12:40:37 PM	R56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901396

15-Jan-19

Client: City of Las Cruces
Project: CLC Griggs and Walnut

Sample ID	100ng lcs2	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	B56955	RunNo:	56955					
Prep Date:		Analysis Date:	1/11/2019	SeqNo:	1905358					
				Units:	µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	97.8	70	130			
Toluene	19	1.0	20.00	0	92.6	70	130			
Chlorobenzene	19	1.0	20.00	0	95.1	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	93.4	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	87.8	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.9		10.00		99.0	70	130			

Sample ID	1901396-002ams	SampType:	MS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	GMMW09-02	Batch ID:	B56955	RunNo:	56955					
Prep Date:		Analysis Date:	1/12/2019	SeqNo:	1905361					
				Units:	µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	2.184	97.5	70	130			
Toluene	35	1.0	20.00	15.87	97.7	70	130			
Chlorobenzene	20	1.0	20.00	0	98.3	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	96.2	67.6	130			
Trichloroethene (TCE)	18	1.0	20.00	0	87.8	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID	1901396-002amsd	SampType:	MSD	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	GMMW09-02	Batch ID:	B56955	RunNo:	56955					
Prep Date:		Analysis Date:	1/12/2019	SeqNo:	1905362					
				Units:	µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	2.184	92.6	70	130	4.58	20	
Toluene	33	1.0	20.00	15.87	86.8	70	130	6.34	20	
Chlorobenzene	18	1.0	20.00	0	91.4	70	130	7.36	20	
1,1-Dichloroethene	18	1.0	20.00	0	89.3	67.6	130	7.45	20	
Trichloroethene (TCE)	17	1.0	20.00	0	83.6	70	130	4.88	20	
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130	0	0	
Surr: Dibromofluoromethane	10		10.00		102	70	130	0	0	
Surr: Toluene-d8	10		10.00		99.9	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901396

15-Jan-19

Client: City of Las Cruces
Project: CLC Griggs and Walnut

Sample ID: rb2	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: B56955	RunNo: 56955
Prep Date:	Analysis Date: 1/11/2019	SeqNo: 1905369 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901396

15-Jan-19

Client: City of Las Cruces
Project: CLC Griggs and Walnut

Sample ID rb2	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: B56955	RunNo: 56955
Prep Date:	Analysis Date: 1/11/2019	SeqNo: 1905369 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: R56989	RunNo: 56989
Prep Date:	Analysis Date: 1/14/2019	SeqNo: 1906355 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.7	70	130			
Toluene	18	1.0	20.00	0	91.6	70	130			
Chlorobenzene	20	1.0	20.00	0	98.6	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901396

15-Jan-19

Client: City of Las Cruces
Project: CLC Griggs and Walnut

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R56989		RunNo: 56989							
Prep Date:	Analysis Date: 1/14/2019		SeqNo: 1906355		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	18	1.0	20.00	0	91.7	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	87.9	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: A56989		RunNo: 56989							
Prep Date:	Analysis Date: 1/14/2019		SeqNo: 1906356		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID 1901396-009ams	SampType: MS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: FB190901	Batch ID: R56989		RunNo: 56989							
Prep Date:	Analysis Date: 1/14/2019		SeqNo: 1906358		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	19	1.0	20.00	0	94.8	70	130			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	98.9	67.6	130			
Trichloroethene (TCE)	18	1.0	20.00	0	91.8	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		110	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID 1901396-009amsd	SampType: MSD		TestCode: EPA Method 8260B: VOLATILES							
Client ID: FB190901	Batch ID: R56989		RunNo: 56989							
Prep Date:	Analysis Date: 1/14/2019		SeqNo: 1906359		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.6	70	130	1.96	20	
Toluene	18	1.0	20.00	0	91.8	70	130	3.17	20	
Chlorobenzene	20	1.0	20.00	0	98.8	70	130	1.80	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901396

15-Jan-19

Client: City of Las Cruces
Project: CLC Griggs and Walnut

Sample ID	1901396-009amsd	SampType:	MSD	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	FB190901	Batch ID:	R56989	RunNo:	56989					
Prep Date:		Analysis Date:	1/14/2019	SeqNo:	1906359	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19	1.0	20.00	0	94.6	67.6	130	4.44	20	
Trichloroethene (TCE)	18	1.0	20.00	0	90.6	70	130	1.31	20	
Surr: 1,2-Dichloroethane-d4	11		10.00		110	70	130	0	0	
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		113	70	130	0	0	
Surr: Toluene-d8	10		10.00		102	70	130	0	0	

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R56989	RunNo:	56989					
Prep Date:		Analysis Date:	1/14/2019	SeqNo:	1906393	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901396

15-Jan-19

Client: City of Las Cruces
Project: CLC Griggs and Walnut

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R56989	RunNo:	56989					
Prep Date:		Analysis Date:	1/14/2019	SeqNo:	1906393	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901396

15-Jan-19

Client: City of Las Cruces
Project: CLC Griggs and Walnut

Sample ID	rb	SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID:	R56989		RunNo:	56989				
Prep Date:		Analysis Date:	1/14/2019		SeqNo:	1906393	Units:	µg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	11		10.00		106	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

Sample Log-In Check List

Client Name: **City of Las Cruces**

Work Order Number: **1901396**

RcptNo: 1

Received By: **Erin Melendrez** 1/10/2019 8:30:00 AM *EM*

Completed By: **Erin Melendrez** 1/10/2019 5:57:37 PM *EM*

Reviewed By: **ENM** 1/11/19
LB: VVZ YVY19

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No *VVZ YVY19*
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.1	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces

Mailing Address:

Phone #: 575.527.1700

email or Fax#: larn.ersted@terracon.com

QA/QC Package: Standard Level 4 (Full Validation)

Accreditation: AZ Compliance NELAC Other

EDD (Type)

Turn-Around Time: Standard Rush

Project Name: 6818P186 Task 2

Project #: CLC Grigg's and Walnut

Project Manager: Sarasí Gandara

Sampler: Larn Ersted

On Ice: Yes No

of Coolers: 1

Cooler Temp (including CP): 0.7°C

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No
11/9/19	1409	water	GW01W09-01	3	HCL	1901396
11/9/19	1408		GW01W09-02	3		-001
	1431		GW01W09-02A D10	3		-002
	1436		GW01W09-02A msb	3		-003
	1451		GW01W09-03	3		-0042
	1520		GW01W09-04	3		-0054
	1541		GW01W09-05	3		-0065
	1606		GW01W09-06	3		-0076
	1625		GW01W09-07	3		-0087
11/9/19	1050		FB190901	3		-0098
		water	Trip Blank	2	HCL	-0109

Date: 11/9/19 Time: 1730

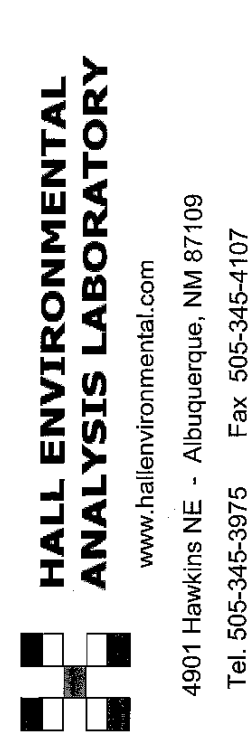
Date: 11/9/19 Time: 0830

Relinquished by: [Signature]

Relinquished by: [Signature]

Received by: [Signature] Via: Fedex

Received by: [Signature] Via:

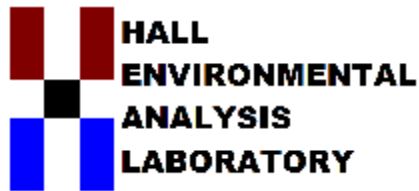


Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCA 8 Metals	Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260(VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
							X		
							X		
							X		
							X		
							X		
							X		
							X		
							X		
							X		

Remarks: Invoice (bill) To: Terracon Las Cruces
4450 Bataan Memorial East
Las Cruces, NM 88011
Larn, Ersted@terracon.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 15, 2019

Surasi Gandara
City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3635
FAX (575) 528-3513

RE: CLC Griggs & Walnut

OrderNo.: 1901481

Dear Surasi Gandara:

Hall Environmental Analysis Laboratory received 10 sample(s) on 1/12/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901481

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW01-01

Project: CLC Griggs & Walnut

Collection Date: 1/11/2019 12:12:00 PM

Lab ID: 1901481-001

Matrix: AQUEOUS

Received Date: 1/12/2019 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
Toluene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
Ethylbenzene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
Naphthalene	ND	2.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
1-Methylnaphthalene	ND	4.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
2-Methylnaphthalene	ND	4.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
Acetone	ND	10		µg/L	1	1/15/2019 1:58:38 AM	A56989
Bromobenzene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
Bromodichloromethane	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
Bromoform	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
Bromomethane	ND	3.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
2-Butanone	ND	10		µg/L	1	1/15/2019 1:58:38 AM	A56989
Carbon disulfide	ND	10		µg/L	1	1/15/2019 1:58:38 AM	A56989
Carbon Tetrachloride	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
Chlorobenzene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
Chloroethane	ND	2.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
Chloroform	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
Chloromethane	ND	3.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
2-Chlorotoluene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
4-Chlorotoluene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
cis-1,2-DCE	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
Dibromochloromethane	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
Dibromomethane	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
1,1-Dichloroethane	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
1,1-Dichloroethene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
1,2-Dichloropropane	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
1,3-Dichloropropane	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
2,2-Dichloropropane	ND	2.0		µg/L	1	1/15/2019 1:58:38 AM	A56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901481

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW01-01

Project: CLC Griggs & Walnut

Collection Date: 1/11/2019 12:12:00 PM

Lab ID: 1901481-001

Matrix: AQUEOUS

Received Date: 1/12/2019 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
Hexachlorobutadiene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
2-Hexanone	ND	10		µg/L	1	1/15/2019 1:58:38 AM	A56989
Isopropylbenzene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
4-Isopropyltoluene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
4-Methyl-2-pentanone	ND	10		µg/L	1	1/15/2019 1:58:38 AM	A56989
Methylene Chloride	ND	3.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
n-Butylbenzene	ND	3.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
n-Propylbenzene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
sec-Butylbenzene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
Styrene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
tert-Butylbenzene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
Tetrachloroethene (PCE)	5.0	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
trans-1,2-DCE	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
Trichlorofluoromethane	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
Vinyl chloride	ND	1.0		µg/L	1	1/15/2019 1:58:38 AM	A56989
Xylenes, Total	ND	1.5		µg/L	1	1/15/2019 1:58:38 AM	A56989
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	1/15/2019 1:58:38 AM	A56989
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	1/15/2019 1:58:38 AM	A56989
Surr: Dibromofluoromethane	104	70-130		%Rec	1	1/15/2019 1:58:38 AM	A56989
Surr: Toluene-d8	104	70-130		%Rec	1	1/15/2019 1:58:38 AM	A56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901481

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW01-02

Project: CLC Griggs & Walnut

Collection Date: 1/11/2019 12:16:00 PM

Lab ID: 1901481-002

Matrix: AQUEOUS

Received Date: 1/12/2019 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
Toluene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
Ethylbenzene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
Naphthalene	ND	2.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
1-Methylnaphthalene	ND	4.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
2-Methylnaphthalene	ND	4.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
Acetone	ND	10		µg/L	1	1/15/2019 2:26:53 AM	A56989
Bromobenzene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
Bromodichloromethane	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
Bromoform	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
Bromomethane	ND	3.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
2-Butanone	ND	10		µg/L	1	1/15/2019 2:26:53 AM	A56989
Carbon disulfide	ND	10		µg/L	1	1/15/2019 2:26:53 AM	A56989
Carbon Tetrachloride	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
Chlorobenzene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
Chloroethane	ND	2.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
Chloroform	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
Chloromethane	ND	3.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
2-Chlorotoluene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
4-Chlorotoluene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
cis-1,2-DCE	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
Dibromochloromethane	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
Dibromomethane	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
1,1-Dichloroethane	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
1,1-Dichloroethene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
1,2-Dichloropropane	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
1,3-Dichloropropane	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
2,2-Dichloropropane	ND	2.0		µg/L	1	1/15/2019 2:26:53 AM	A56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901481

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW01-02

Project: CLC Griggs & Walnut

Collection Date: 1/11/2019 12:16:00 PM

Lab ID: 1901481-002

Matrix: AQUEOUS

Received Date: 1/12/2019 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
Hexachlorobutadiene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
2-Hexanone	ND	10		µg/L	1	1/15/2019 2:26:53 AM	A56989
Isopropylbenzene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
4-Isopropyltoluene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
4-Methyl-2-pentanone	ND	10		µg/L	1	1/15/2019 2:26:53 AM	A56989
Methylene Chloride	ND	3.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
n-Butylbenzene	ND	3.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
n-Propylbenzene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
sec-Butylbenzene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
Styrene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
tert-Butylbenzene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
Tetrachloroethene (PCE)	5.3	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
trans-1,2-DCE	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
Trichlorofluoromethane	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
Vinyl chloride	ND	1.0		µg/L	1	1/15/2019 2:26:53 AM	A56989
Xylenes, Total	ND	1.5		µg/L	1	1/15/2019 2:26:53 AM	A56989
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	1/15/2019 2:26:53 AM	A56989
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	1/15/2019 2:26:53 AM	A56989
Surr: Dibromofluoromethane	104	70-130		%Rec	1	1/15/2019 2:26:53 AM	A56989
Surr: Toluene-d8	104	70-130		%Rec	1	1/15/2019 2:26:53 AM	A56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901481

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW01-03

Project: CLC Griggs & Walnut

Collection Date: 1/11/2019 12:19:00 PM

Lab ID: 1901481-003

Matrix: AQUEOUS

Received Date: 1/12/2019 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
Toluene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
Ethylbenzene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
Naphthalene	ND	2.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
1-Methylnaphthalene	ND	4.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
2-Methylnaphthalene	ND	4.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
Acetone	ND	10		µg/L	1	1/15/2019 2:55:08 AM	A56989
Bromobenzene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
Bromodichloromethane	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
Bromoform	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
Bromomethane	ND	3.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
2-Butanone	ND	10		µg/L	1	1/15/2019 2:55:08 AM	A56989
Carbon disulfide	ND	10		µg/L	1	1/15/2019 2:55:08 AM	A56989
Carbon Tetrachloride	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
Chlorobenzene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
Chloroethane	ND	2.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
Chloroform	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
Chloromethane	ND	3.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
2-Chlorotoluene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
4-Chlorotoluene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
cis-1,2-DCE	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
Dibromochloromethane	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
Dibromomethane	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
1,1-Dichloroethane	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
1,1-Dichloroethene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
1,2-Dichloropropane	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
1,3-Dichloropropane	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
2,2-Dichloropropane	ND	2.0		µg/L	1	1/15/2019 2:55:08 AM	A56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901481

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW01-03

Project: CLC Griggs & Walnut

Collection Date: 1/11/2019 12:19:00 PM

Lab ID: 1901481-003

Matrix: AQUEOUS

Received Date: 1/12/2019 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
Hexachlorobutadiene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
2-Hexanone	ND	10		µg/L	1	1/15/2019 2:55:08 AM	A56989
Isopropylbenzene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
4-Isopropyltoluene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
4-Methyl-2-pentanone	ND	10		µg/L	1	1/15/2019 2:55:08 AM	A56989
Methylene Chloride	ND	3.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
n-Butylbenzene	ND	3.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
n-Propylbenzene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
sec-Butylbenzene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
Styrene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
tert-Butylbenzene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
Tetrachloroethene (PCE)	4.3	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
trans-1,2-DCE	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
Trichlorofluoromethane	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
Vinyl chloride	ND	1.0		µg/L	1	1/15/2019 2:55:08 AM	A56989
Xylenes, Total	ND	1.5		µg/L	1	1/15/2019 2:55:08 AM	A56989
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	1/15/2019 2:55:08 AM	A56989
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	1/15/2019 2:55:08 AM	A56989
Surr: Dibromofluoromethane	103	70-130		%Rec	1	1/15/2019 2:55:08 AM	A56989
Surr: Toluene-d8	106	70-130		%Rec	1	1/15/2019 2:55:08 AM	A56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901481

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW01-04

Project: CLC Griggs & Walnut

Collection Date: 1/11/2019 12:22:00 PM

Lab ID: 1901481-004

Matrix: AQUEOUS

Received Date: 1/12/2019 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
Toluene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
Ethylbenzene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
Naphthalene	ND	2.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
1-Methylnaphthalene	ND	4.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
2-Methylnaphthalene	ND	4.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
Acetone	ND	10		µg/L	1	1/15/2019 3:23:22 AM	A56989
Bromobenzene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
Bromodichloromethane	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
Bromoform	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
Bromomethane	ND	3.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
2-Butanone	ND	10		µg/L	1	1/15/2019 3:23:22 AM	A56989
Carbon disulfide	ND	10		µg/L	1	1/15/2019 3:23:22 AM	A56989
Carbon Tetrachloride	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
Chlorobenzene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
Chloroethane	ND	2.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
Chloroform	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
Chloromethane	ND	3.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
2-Chlorotoluene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
4-Chlorotoluene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
cis-1,2-DCE	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
Dibromochloromethane	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
Dibromomethane	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
1,1-Dichloroethane	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
1,1-Dichloroethene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
1,2-Dichloropropane	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
1,3-Dichloropropane	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
2,2-Dichloropropane	ND	2.0		µg/L	1	1/15/2019 3:23:22 AM	A56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901481

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW01-04

Project: CLC Griggs & Walnut

Collection Date: 1/11/2019 12:22:00 PM

Lab ID: 1901481-004

Matrix: AQUEOUS

Received Date: 1/12/2019 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
Hexachlorobutadiene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
2-Hexanone	ND	10		µg/L	1	1/15/2019 3:23:22 AM	A56989
Isopropylbenzene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
4-Isopropyltoluene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
4-Methyl-2-pentanone	ND	10		µg/L	1	1/15/2019 3:23:22 AM	A56989
Methylene Chloride	ND	3.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
n-Butylbenzene	ND	3.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
n-Propylbenzene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
sec-Butylbenzene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
Styrene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
tert-Butylbenzene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
Tetrachloroethene (PCE)	3.7	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
trans-1,2-DCE	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
Trichlorofluoromethane	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
Vinyl chloride	ND	1.0		µg/L	1	1/15/2019 3:23:22 AM	A56989
Xylenes, Total	ND	1.5		µg/L	1	1/15/2019 3:23:22 AM	A56989
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	1/15/2019 3:23:22 AM	A56989
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	1/15/2019 3:23:22 AM	A56989
Surr: Dibromofluoromethane	105	70-130		%Rec	1	1/15/2019 3:23:22 AM	A56989
Surr: Toluene-d8	104	70-130		%Rec	1	1/15/2019 3:23:22 AM	A56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901481

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW01-05

Project: CLC Griggs & Walnut

Collection Date: 1/11/2019 12:48:00 PM

Lab ID: 1901481-005

Matrix: AQUEOUS

Received Date: 1/12/2019 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
Toluene	1.1	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
Ethylbenzene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
Naphthalene	ND	2.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
1-Methylnaphthalene	ND	4.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
2-Methylnaphthalene	ND	4.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
Acetone	ND	10		µg/L	1	1/15/2019 3:51:36 AM	A56989
Bromobenzene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
Bromodichloromethane	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
Bromoform	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
Bromomethane	ND	3.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
2-Butanone	ND	10		µg/L	1	1/15/2019 3:51:36 AM	A56989
Carbon disulfide	ND	10		µg/L	1	1/15/2019 3:51:36 AM	A56989
Carbon Tetrachloride	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
Chlorobenzene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
Chloroethane	ND	2.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
Chloroform	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
Chloromethane	ND	3.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
2-Chlorotoluene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
4-Chlorotoluene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
cis-1,2-DCE	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
Dibromochloromethane	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
Dibromomethane	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
1,1-Dichloroethane	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
1,1-Dichloroethene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
1,2-Dichloropropane	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
1,3-Dichloropropane	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
2,2-Dichloropropane	ND	2.0		µg/L	1	1/15/2019 3:51:36 AM	A56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901481

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW01-05

Project: CLC Griggs & Walnut

Collection Date: 1/11/2019 12:48:00 PM

Lab ID: 1901481-005

Matrix: AQUEOUS

Received Date: 1/12/2019 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
Hexachlorobutadiene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
2-Hexanone	ND	10		µg/L	1	1/15/2019 3:51:36 AM	A56989
Isopropylbenzene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
4-Isopropyltoluene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
4-Methyl-2-pentanone	ND	10		µg/L	1	1/15/2019 3:51:36 AM	A56989
Methylene Chloride	ND	3.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
n-Butylbenzene	ND	3.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
n-Propylbenzene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
sec-Butylbenzene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
Styrene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
tert-Butylbenzene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
Tetrachloroethene (PCE)	2.3	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
trans-1,2-DCE	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
Trichlorofluoromethane	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
Vinyl chloride	ND	1.0		µg/L	1	1/15/2019 3:51:36 AM	A56989
Xylenes, Total	ND	1.5		µg/L	1	1/15/2019 3:51:36 AM	A56989
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	1/15/2019 3:51:36 AM	A56989
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	1/15/2019 3:51:36 AM	A56989
Surr: Dibromofluoromethane	106	70-130		%Rec	1	1/15/2019 3:51:36 AM	A56989
Surr: Toluene-d8	103	70-130		%Rec	1	1/15/2019 3:51:36 AM	A56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901481

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW01-05 DUP

Project: CLC Griggs & Walnut

Collection Date: 1/11/2019 12:52:00 PM

Lab ID: 1901481-006

Matrix: AQUEOUS

Received Date: 1/12/2019 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
Toluene	1.1	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
Ethylbenzene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
Naphthalene	ND	2.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
1-Methylnaphthalene	ND	4.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
2-Methylnaphthalene	ND	4.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
Acetone	ND	10		µg/L	1	1/15/2019 4:19:49 AM	A56989
Bromobenzene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
Bromodichloromethane	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
Bromoform	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
Bromomethane	ND	3.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
2-Butanone	ND	10		µg/L	1	1/15/2019 4:19:49 AM	A56989
Carbon disulfide	ND	10		µg/L	1	1/15/2019 4:19:49 AM	A56989
Carbon Tetrachloride	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
Chlorobenzene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
Chloroethane	ND	2.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
Chloroform	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
Chloromethane	ND	3.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
2-Chlorotoluene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
4-Chlorotoluene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
cis-1,2-DCE	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
Dibromochloromethane	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
Dibromomethane	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
1,1-Dichloroethane	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
1,1-Dichloroethene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
1,2-Dichloropropane	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
1,3-Dichloropropane	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
2,2-Dichloropropane	ND	2.0		µg/L	1	1/15/2019 4:19:49 AM	A56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901481

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW01-05 DUP

Project: CLC Griggs & Walnut

Collection Date: 1/11/2019 12:52:00 PM

Lab ID: 1901481-006

Matrix: AQUEOUS

Received Date: 1/12/2019 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
Hexachlorobutadiene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
2-Hexanone	ND	10		µg/L	1	1/15/2019 4:19:49 AM	A56989
Isopropylbenzene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
4-Isopropyltoluene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
4-Methyl-2-pentanone	ND	10		µg/L	1	1/15/2019 4:19:49 AM	A56989
Methylene Chloride	ND	3.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
n-Butylbenzene	ND	3.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
n-Propylbenzene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
sec-Butylbenzene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
Styrene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
tert-Butylbenzene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
Tetrachloroethene (PCE)	2.3	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
trans-1,2-DCE	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
Trichlorofluoromethane	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
Vinyl chloride	ND	1.0		µg/L	1	1/15/2019 4:19:49 AM	A56989
Xylenes, Total	ND	1.5		µg/L	1	1/15/2019 4:19:49 AM	A56989
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	1/15/2019 4:19:49 AM	A56989
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	1/15/2019 4:19:49 AM	A56989
Surr: Dibromofluoromethane	105	70-130		%Rec	1	1/15/2019 4:19:49 AM	A56989
Surr: Toluene-d8	105	70-130		%Rec	1	1/15/2019 4:19:49 AM	A56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901481

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW01-06

Project: CLC Griggs & Walnut

Collection Date: 1/11/2019 12:55:00 PM

Lab ID: 1901481-007

Matrix: AQUEOUS

Received Date: 1/12/2019 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
Toluene	3.4	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
Ethylbenzene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
Naphthalene	ND	2.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
1-Methylnaphthalene	ND	4.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
2-Methylnaphthalene	ND	4.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
Acetone	ND	10		µg/L	1	1/15/2019 4:48:02 AM	A56989
Bromobenzene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
Bromodichloromethane	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
Bromoform	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
Bromomethane	ND	3.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
2-Butanone	ND	10		µg/L	1	1/15/2019 4:48:02 AM	A56989
Carbon disulfide	ND	10		µg/L	1	1/15/2019 4:48:02 AM	A56989
Carbon Tetrachloride	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
Chlorobenzene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
Chloroethane	ND	2.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
Chloroform	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
Chloromethane	ND	3.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
2-Chlorotoluene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
4-Chlorotoluene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
cis-1,2-DCE	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
Dibromochloromethane	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
Dibromomethane	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
1,1-Dichloroethane	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
1,1-Dichloroethene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
1,2-Dichloropropane	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
1,3-Dichloropropane	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
2,2-Dichloropropane	ND	2.0		µg/L	1	1/15/2019 4:48:02 AM	A56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901481

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW01-06

Project: CLC Griggs & Walnut

Collection Date: 1/11/2019 12:55:00 PM

Lab ID: 1901481-007

Matrix: AQUEOUS

Received Date: 1/12/2019 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
Hexachlorobutadiene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
2-Hexanone	ND	10		µg/L	1	1/15/2019 4:48:02 AM	A56989
Isopropylbenzene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
4-Isopropyltoluene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
4-Methyl-2-pentanone	ND	10		µg/L	1	1/15/2019 4:48:02 AM	A56989
Methylene Chloride	ND	3.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
n-Butylbenzene	ND	3.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
n-Propylbenzene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
sec-Butylbenzene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
Styrene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
tert-Butylbenzene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
trans-1,2-DCE	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
Trichlorofluoromethane	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
Vinyl chloride	ND	1.0		µg/L	1	1/15/2019 4:48:02 AM	A56989
Xylenes, Total	ND	1.5		µg/L	1	1/15/2019 4:48:02 AM	A56989
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	1/15/2019 4:48:02 AM	A56989
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	1/15/2019 4:48:02 AM	A56989
Surr: Dibromofluoromethane	103	70-130		%Rec	1	1/15/2019 4:48:02 AM	A56989
Surr: Toluene-d8	104	70-130		%Rec	1	1/15/2019 4:48:02 AM	A56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901481

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW01-07

Project: CLC Griggs & Walnut

Collection Date: 1/11/2019 12:57:00 PM

Lab ID: 1901481-008

Matrix: AQUEOUS

Received Date: 1/12/2019 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
Toluene	1.1	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
Ethylbenzene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
Naphthalene	ND	2.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
1-Methylnaphthalene	ND	4.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
2-Methylnaphthalene	ND	4.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
Acetone	ND	10		µg/L	1	1/15/2019 5:16:17 AM	A56989
Bromobenzene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
Bromodichloromethane	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
Bromoform	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
Bromomethane	ND	3.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
2-Butanone	ND	10		µg/L	1	1/15/2019 5:16:17 AM	A56989
Carbon disulfide	ND	10		µg/L	1	1/15/2019 5:16:17 AM	A56989
Carbon Tetrachloride	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
Chlorobenzene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
Chloroethane	ND	2.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
Chloroform	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
Chloromethane	ND	3.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
2-Chlorotoluene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
4-Chlorotoluene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
cis-1,2-DCE	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
Dibromochloromethane	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
Dibromomethane	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
1,1-Dichloroethane	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
1,1-Dichloroethene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
1,2-Dichloropropane	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
1,3-Dichloropropane	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
2,2-Dichloropropane	ND	2.0		µg/L	1	1/15/2019 5:16:17 AM	A56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901481

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: GWMW01-07

Project: CLC Griggs & Walnut

Collection Date: 1/11/2019 12:57:00 PM

Lab ID: 1901481-008

Matrix: AQUEOUS

Received Date: 1/12/2019 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
Hexachlorobutadiene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
2-Hexanone	ND	10		µg/L	1	1/15/2019 5:16:17 AM	A56989
Isopropylbenzene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
4-Isopropyltoluene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
4-Methyl-2-pentanone	ND	10		µg/L	1	1/15/2019 5:16:17 AM	A56989
Methylene Chloride	ND	3.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
n-Butylbenzene	ND	3.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
n-Propylbenzene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
sec-Butylbenzene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
Styrene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
tert-Butylbenzene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
trans-1,2-DCE	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
Trichlorofluoromethane	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
Vinyl chloride	ND	1.0		µg/L	1	1/15/2019 5:16:17 AM	A56989
Xylenes, Total	ND	1.5		µg/L	1	1/15/2019 5:16:17 AM	A56989
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	1/15/2019 5:16:17 AM	A56989
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	1/15/2019 5:16:17 AM	A56989
Surr: Dibromofluoromethane	104	70-130		%Rec	1	1/15/2019 5:16:17 AM	A56989
Surr: Toluene-d8	103	70-130		%Rec	1	1/15/2019 5:16:17 AM	A56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901481

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: Field Blank 191101

Project: CLC Griggs & Walnut

Collection Date: 1/11/2019 11:49:00 AM

Lab ID: 1901481-009

Matrix: AQUEOUS

Received Date: 1/12/2019 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
Toluene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
Ethylbenzene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
Naphthalene	ND	2.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
1-Methylnaphthalene	ND	4.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
2-Methylnaphthalene	ND	4.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
Acetone	ND	10		µg/L	1	1/15/2019 5:44:29 AM	A56989
Bromobenzene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
Bromodichloromethane	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
Bromoform	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
Bromomethane	ND	3.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
2-Butanone	ND	10		µg/L	1	1/15/2019 5:44:29 AM	A56989
Carbon disulfide	ND	10		µg/L	1	1/15/2019 5:44:29 AM	A56989
Carbon Tetrachloride	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
Chlorobenzene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
Chloroethane	ND	2.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
Chloroform	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
Chloromethane	ND	3.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
2-Chlorotoluene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
4-Chlorotoluene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
cis-1,2-DCE	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
Dibromochloromethane	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
Dibromomethane	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
1,1-Dichloroethane	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
1,1-Dichloroethene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
1,2-Dichloropropane	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
1,3-Dichloropropane	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
2,2-Dichloropropane	ND	2.0		µg/L	1	1/15/2019 5:44:29 AM	A56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901481

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: Field Blank 191101

Project: CLC Griggs & Walnut

Collection Date: 1/11/2019 11:49:00 AM

Lab ID: 1901481-009

Matrix: AQUEOUS

Received Date: 1/12/2019 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
Hexachlorobutadiene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
2-Hexanone	ND	10		µg/L	1	1/15/2019 5:44:29 AM	A56989
Isopropylbenzene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
4-Isopropyltoluene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
4-Methyl-2-pentanone	ND	10		µg/L	1	1/15/2019 5:44:29 AM	A56989
Methylene Chloride	ND	3.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
n-Butylbenzene	ND	3.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
n-Propylbenzene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
sec-Butylbenzene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
Styrene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
tert-Butylbenzene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
trans-1,2-DCE	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
Trichlorofluoromethane	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
Vinyl chloride	ND	1.0		µg/L	1	1/15/2019 5:44:29 AM	A56989
Xylenes, Total	ND	1.5		µg/L	1	1/15/2019 5:44:29 AM	A56989
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	1/15/2019 5:44:29 AM	A56989
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	1/15/2019 5:44:29 AM	A56989
Surr: Dibromofluoromethane	103	70-130		%Rec	1	1/15/2019 5:44:29 AM	A56989
Surr: Toluene-d8	104	70-130		%Rec	1	1/15/2019 5:44:29 AM	A56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901481

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: Trip Blank

Project: CLC Griggs & Walnut

Collection Date:

Lab ID: 1901481-010

Matrix: AQUEOUS

Received Date: 1/12/2019 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
Toluene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
Ethylbenzene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
Naphthalene	ND	2.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
1-Methylnaphthalene	ND	4.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
2-Methylnaphthalene	ND	4.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
Acetone	ND	10		µg/L	1	1/15/2019 6:12:42 AM	A56989
Bromobenzene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
Bromodichloromethane	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
Bromoform	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
Bromomethane	ND	3.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
2-Butanone	ND	10		µg/L	1	1/15/2019 6:12:42 AM	A56989
Carbon disulfide	ND	10		µg/L	1	1/15/2019 6:12:42 AM	A56989
Carbon Tetrachloride	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
Chlorobenzene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
Chloroethane	ND	2.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
Chloroform	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
Chloromethane	ND	3.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
2-Chlorotoluene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
4-Chlorotoluene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
cis-1,2-DCE	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
Dibromochloromethane	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
Dibromomethane	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
1,1-Dichloroethane	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
1,1-Dichloroethene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
1,2-Dichloropropane	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
1,3-Dichloropropane	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
2,2-Dichloropropane	ND	2.0		µg/L	1	1/15/2019 6:12:42 AM	A56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901481

Date Reported: 1/15/2019

CLIENT: City of Las Cruces

Client Sample ID: Trip Blank

Project: CLC Griggs & Walnut

Collection Date:

Lab ID: 1901481-010

Matrix: AQUEOUS

Received Date: 1/12/2019 12:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
Hexachlorobutadiene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
2-Hexanone	ND	10		µg/L	1	1/15/2019 6:12:42 AM	A56989
Isopropylbenzene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
4-Isopropyltoluene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
4-Methyl-2-pentanone	ND	10		µg/L	1	1/15/2019 6:12:42 AM	A56989
Methylene Chloride	ND	3.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
n-Butylbenzene	ND	3.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
n-Propylbenzene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
sec-Butylbenzene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
Styrene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
tert-Butylbenzene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
trans-1,2-DCE	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
Trichlorofluoromethane	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
Vinyl chloride	ND	1.0		µg/L	1	1/15/2019 6:12:42 AM	A56989
Xylenes, Total	ND	1.5		µg/L	1	1/15/2019 6:12:42 AM	A56989
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	1/15/2019 6:12:42 AM	A56989
Surr: 4-Bromofluorobenzene	109	70-130		%Rec	1	1/15/2019 6:12:42 AM	A56989
Surr: Dibromofluoromethane	104	70-130		%Rec	1	1/15/2019 6:12:42 AM	A56989
Surr: Toluene-d8	103	70-130		%Rec	1	1/15/2019 6:12:42 AM	A56989

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901481

15-Jan-19

Client: City of Las Cruces
Project: CLC Griggs & Walnut

Sample ID: 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: A56989		RunNo: 56989							
Prep Date:	Analysis Date: 1/14/2019		SeqNo: 1906356		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	19	1.0	20.00	0	97.4	70	130			
Chlorobenzene	20	1.0	20.00	0	100	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	97.4	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	91.2	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1901481

RcptNo: 1

Received By: Isaiah Ortiz 1/12/2019 12:00:00 PM

I-Ox

Completed By: Isaiah Ortiz 1/14/2019 8:06:56 AM

I-Ox

Reviewed By: *DAD 1/14/19*
LB: 1/14/19 JJZ

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

vv2 1/14/19
 # of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.0	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces

Mailing Address:

Phone #: 575.527.1700
 email or Fax#: larri.erstad

QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation: AZ Compliance
 NELAC Other
 EDD (Type)

Turn-Around Time:

Standard Rush

Project Name:

Clc Griggs & wood nut

Project #:

6818P186

Project Manager:

Savasi Gandarua

Sampler: Larri Erstad

On Ice: Yes No

of Coolers: 1

Cooler Temp (including CP): 0.0

Container Type and #

Preservative Type

HEAL No.

1901481

3 #CL

-001

3

-002

3

-003

3

-004

3

-005

3

-006

3

-007

3

-008

1

-009

2

-010

Date: 11/19 1700

Relinquished by: [Signature]

Date: 11/19 1700

Relinquished by: [Signature]

Received by: Erin Co

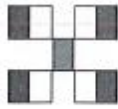
Date: 1/2/19 1200

Received by: [Signature]

Date: [Signature]

Remarks:

Invoice to Terracon - Las Cruces 4450 Bataan Memorial East Las Cruces NM



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX / MTBE / TMBs (6021)

TPH:8015D(GRO / DRO / MRO)

8081 Pesticides/8082 PCBs

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

RCRA 8 Metals

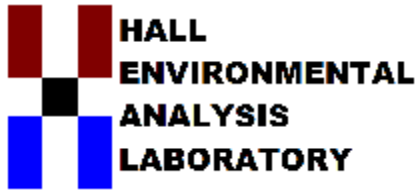
Cl, F, Br, NO₃, NO₂, PO₄, SO₄

8260 (P/VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 18, 2019

Surasi Gandara
City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3604
FAX

RE: CLC Griggs Walnut

OrderNo.: 1901567

Dear Surasi Gandara:

Hall Environmental Analysis Laboratory received 4 sample(s) on 1/15/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a white background.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces

Client Sample ID: GWMW06-01

Project: CLC Griggs Walnut

Collection Date: 1/12/2019 3:15:00 PM

Lab ID: 1901567-001

Matrix: AQUEOUS

Received Date: 1/15/2019 8:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	0.96	0.17	1.0	J	µg/L	1	1/17/2019 1:28:19 PM
Toluene	6.0	0.17	1.0		µg/L	1	1/17/2019 1:28:19 PM
Ethylbenzene	ND	0.22	1.0		µg/L	1	1/17/2019 1:28:19 PM
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	1/17/2019 1:28:19 PM
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	1/17/2019 1:28:19 PM
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	1/17/2019 1:28:19 PM
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	1/17/2019 1:28:19 PM
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	1/17/2019 1:28:19 PM
Naphthalene	ND	0.29	2.0		µg/L	1	1/17/2019 1:28:19 PM
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	1/17/2019 1:28:19 PM
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	1/17/2019 1:28:19 PM
Acetone	29	0.76	10		µg/L	1	1/17/2019 1:28:19 PM
Bromobenzene	ND	0.32	1.0		µg/L	1	1/17/2019 1:28:19 PM
Bromodichloromethane	ND	0.28	1.0		µg/L	1	1/17/2019 1:28:19 PM
Bromoform	ND	0.32	1.0		µg/L	1	1/17/2019 1:28:19 PM
Bromomethane	ND	0.27	3.0		µg/L	1	1/17/2019 1:28:19 PM
2-Butanone	7.8	1.4	10	J	µg/L	1	1/17/2019 1:28:19 PM
Carbon disulfide	ND	0.39	10		µg/L	1	1/17/2019 1:28:19 PM
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	1/17/2019 1:28:19 PM
Chlorobenzene	ND	0.29	1.0		µg/L	1	1/17/2019 1:28:19 PM
Chloroethane	ND	0.16	2.0		µg/L	1	1/17/2019 1:28:19 PM
Chloroform	ND	0.24	1.0		µg/L	1	1/17/2019 1:28:19 PM
Chloromethane	ND	0.32	3.0		µg/L	1	1/17/2019 1:28:19 PM
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	1/17/2019 1:28:19 PM
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	1/17/2019 1:28:19 PM
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	1/17/2019 1:28:19 PM
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	1/17/2019 1:28:19 PM
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	1/17/2019 1:28:19 PM
Dibromochloromethane	ND	0.24	1.0		µg/L	1	1/17/2019 1:28:19 PM
Dibromomethane	ND	0.32	1.0		µg/L	1	1/17/2019 1:28:19 PM
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	1/17/2019 1:28:19 PM
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	1/17/2019 1:28:19 PM
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	1/17/2019 1:28:19 PM
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	1/17/2019 1:28:19 PM
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	1/17/2019 1:28:19 PM
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	1/17/2019 1:28:19 PM
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	1/17/2019 1:28:19 PM
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	1/17/2019 1:28:19 PM
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	1/17/2019 1:28:19 PM
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	1/17/2019 1:28:19 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces

Client Sample ID: GWMW06-01

Project: CLC Griggs Walnut

Collection Date: 1/12/2019 3:15:00 PM

Lab ID: 1901567-001

Matrix: AQUEOUS

Received Date: 1/15/2019 8:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	1/17/2019 1:28:19 PM
2-Hexanone	ND	0.91	10		µg/L	1	1/17/2019 1:28:19 PM
Isopropylbenzene	ND	0.22	1.0		µg/L	1	1/17/2019 1:28:19 PM
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	1/17/2019 1:28:19 PM
4-Methyl-2-pentanone	0.91	0.45	10	J	µg/L	1	1/17/2019 1:28:19 PM
Methylene Chloride	ND	0.21	3.0		µg/L	1	1/17/2019 1:28:19 PM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	1/17/2019 1:28:19 PM
n-Propylbenzene	ND	0.24	1.0		µg/L	1	1/17/2019 1:28:19 PM
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	1/17/2019 1:28:19 PM
Styrene	ND	0.25	1.0		µg/L	1	1/17/2019 1:28:19 PM
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	1/17/2019 1:28:19 PM
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	1/17/2019 1:28:19 PM
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	1/17/2019 1:28:19 PM
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	1/17/2019 1:28:19 PM
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	1/17/2019 1:28:19 PM
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	1/17/2019 1:28:19 PM
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	1/17/2019 1:28:19 PM
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	1/17/2019 1:28:19 PM
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	1/17/2019 1:28:19 PM
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	1/17/2019 1:28:19 PM
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	1/17/2019 1:28:19 PM
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	1/17/2019 1:28:19 PM
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	1/17/2019 1:28:19 PM
Vinyl chloride	ND	0.12	1.0		µg/L	1	1/17/2019 1:28:19 PM
Xylenes, Total	ND	0.64	1.5		µg/L	1	1/17/2019 1:28:19 PM
Surr: 1,2-Dichloroethane-d4	98.6	0	70-130		%Rec	1	1/17/2019 1:28:19 PM
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	1	1/17/2019 1:28:19 PM
Surr: Dibromofluoromethane	97.0	0	70-130		%Rec	1	1/17/2019 1:28:19 PM
Surr: Toluene-d8	108	0	70-130		%Rec	1	1/17/2019 1:28:19 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces

Client Sample ID: GWMW06-02

Project: CLC Griggs Walnut

Collection Date: 1/12/2019 3:13:00 PM

Lab ID: 1901567-002

Matrix: AQUEOUS

Received Date: 1/15/2019 8:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	0.70	0.17	1.0	J	µg/L	1	1/17/2019 1:57:54 PM
Toluene	12	0.17	1.0		µg/L	1	1/17/2019 1:57:54 PM
Ethylbenzene	ND	0.22	1.0		µg/L	1	1/17/2019 1:57:54 PM
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	1/17/2019 1:57:54 PM
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	1/17/2019 1:57:54 PM
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	1/17/2019 1:57:54 PM
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	1/17/2019 1:57:54 PM
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	1/17/2019 1:57:54 PM
Naphthalene	ND	0.29	2.0		µg/L	1	1/17/2019 1:57:54 PM
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	1/17/2019 1:57:54 PM
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	1/17/2019 1:57:54 PM
Acetone	8.5	0.76	10	J	µg/L	1	1/17/2019 1:57:54 PM
Bromobenzene	ND	0.32	1.0		µg/L	1	1/17/2019 1:57:54 PM
Bromodichloromethane	ND	0.28	1.0		µg/L	1	1/17/2019 1:57:54 PM
Bromoform	ND	0.32	1.0		µg/L	1	1/17/2019 1:57:54 PM
Bromomethane	ND	0.27	3.0		µg/L	1	1/17/2019 1:57:54 PM
2-Butanone	6.4	1.4	10	J	µg/L	1	1/17/2019 1:57:54 PM
Carbon disulfide	ND	0.39	10		µg/L	1	1/17/2019 1:57:54 PM
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	1/17/2019 1:57:54 PM
Chlorobenzene	ND	0.29	1.0		µg/L	1	1/17/2019 1:57:54 PM
Chloroethane	ND	0.16	2.0		µg/L	1	1/17/2019 1:57:54 PM
Chloroform	ND	0.24	1.0		µg/L	1	1/17/2019 1:57:54 PM
Chloromethane	0.43	0.32	3.0	J	µg/L	1	1/17/2019 1:57:54 PM
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	1/17/2019 1:57:54 PM
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	1/17/2019 1:57:54 PM
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	1/17/2019 1:57:54 PM
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	1/17/2019 1:57:54 PM
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	1/17/2019 1:57:54 PM
Dibromochloromethane	ND	0.24	1.0		µg/L	1	1/17/2019 1:57:54 PM
Dibromomethane	ND	0.32	1.0		µg/L	1	1/17/2019 1:57:54 PM
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	1/17/2019 1:57:54 PM
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	1/17/2019 1:57:54 PM
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	1/17/2019 1:57:54 PM
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	1/17/2019 1:57:54 PM
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	1/17/2019 1:57:54 PM
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	1/17/2019 1:57:54 PM
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	1/17/2019 1:57:54 PM
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	1/17/2019 1:57:54 PM
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	1/17/2019 1:57:54 PM
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	1/17/2019 1:57:54 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** GWMW06-02**Project:** CLC Griggs Walnut**Collection Date:** 1/12/2019 3:13:00 PM**Lab ID:** 1901567-002**Matrix:** AQUEOUS**Received Date:** 1/15/2019 8:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	1/17/2019 1:57:54 PM
2-Hexanone	ND	0.91	10		µg/L	1	1/17/2019 1:57:54 PM
Isopropylbenzene	ND	0.22	1.0		µg/L	1	1/17/2019 1:57:54 PM
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	1/17/2019 1:57:54 PM
4-Methyl-2-pentanone	0.55	0.45	10	J	µg/L	1	1/17/2019 1:57:54 PM
Methylene Chloride	ND	0.21	3.0		µg/L	1	1/17/2019 1:57:54 PM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	1/17/2019 1:57:54 PM
n-Propylbenzene	ND	0.24	1.0		µg/L	1	1/17/2019 1:57:54 PM
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	1/17/2019 1:57:54 PM
Styrene	ND	0.25	1.0		µg/L	1	1/17/2019 1:57:54 PM
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	1/17/2019 1:57:54 PM
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	1/17/2019 1:57:54 PM
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	1/17/2019 1:57:54 PM
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	1/17/2019 1:57:54 PM
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	1/17/2019 1:57:54 PM
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	1/17/2019 1:57:54 PM
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	1/17/2019 1:57:54 PM
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	1/17/2019 1:57:54 PM
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	1/17/2019 1:57:54 PM
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	1/17/2019 1:57:54 PM
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	1/17/2019 1:57:54 PM
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	1/17/2019 1:57:54 PM
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	1/17/2019 1:57:54 PM
Vinyl chloride	ND	0.12	1.0		µg/L	1	1/17/2019 1:57:54 PM
Xylenes, Total	ND	0.64	1.5		µg/L	1	1/17/2019 1:57:54 PM
Surr: 1,2-Dichloroethane-d4	99.0	0	70-130		%Rec	1	1/17/2019 1:57:54 PM
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	1/17/2019 1:57:54 PM
Surr: Dibromofluoromethane	99.7	0	70-130		%Rec	1	1/17/2019 1:57:54 PM
Surr: Toluene-d8	109	0	70-130		%Rec	1	1/17/2019 1:57:54 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces

Client Sample ID: FB191201

Project: CLC Griggs Walnut

Collection Date: 1/12/2019 1:43:00 PM

Lab ID: 1901567-003

Matrix: AQUEOUS

Received Date: 1/15/2019 8:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.17	1.0		µg/L	1	1/17/2019 2:27:32 PM
Toluene	ND	0.17	1.0		µg/L	1	1/17/2019 2:27:32 PM
Ethylbenzene	ND	0.22	1.0		µg/L	1	1/17/2019 2:27:32 PM
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	1/17/2019 2:27:32 PM
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	1/17/2019 2:27:32 PM
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	1/17/2019 2:27:32 PM
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	1/17/2019 2:27:32 PM
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	1/17/2019 2:27:32 PM
Naphthalene	ND	0.29	2.0		µg/L	1	1/17/2019 2:27:32 PM
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	1/17/2019 2:27:32 PM
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	1/17/2019 2:27:32 PM
Acetone	4.5	0.76	10	J	µg/L	1	1/17/2019 2:27:32 PM
Bromobenzene	ND	0.32	1.0		µg/L	1	1/17/2019 2:27:32 PM
Bromodichloromethane	0.62	0.28	1.0	J	µg/L	1	1/17/2019 2:27:32 PM
Bromoform	ND	0.32	1.0		µg/L	1	1/17/2019 2:27:32 PM
Bromomethane	ND	0.27	3.0		µg/L	1	1/17/2019 2:27:32 PM
2-Butanone	4.2	1.4	10	J	µg/L	1	1/17/2019 2:27:32 PM
Carbon disulfide	ND	0.39	10		µg/L	1	1/17/2019 2:27:32 PM
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	1/17/2019 2:27:32 PM
Chlorobenzene	ND	0.29	1.0		µg/L	1	1/17/2019 2:27:32 PM
Chloroethane	ND	0.16	2.0		µg/L	1	1/17/2019 2:27:32 PM
Chloroform	0.56	0.24	1.0	J	µg/L	1	1/17/2019 2:27:32 PM
Chloromethane	ND	0.32	3.0		µg/L	1	1/17/2019 2:27:32 PM
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	1/17/2019 2:27:32 PM
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	1/17/2019 2:27:32 PM
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	1/17/2019 2:27:32 PM
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	1/17/2019 2:27:32 PM
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	1/17/2019 2:27:32 PM
Dibromochloromethane	0.28	0.24	1.0	J	µg/L	1	1/17/2019 2:27:32 PM
Dibromomethane	ND	0.32	1.0		µg/L	1	1/17/2019 2:27:32 PM
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	1/17/2019 2:27:32 PM
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	1/17/2019 2:27:32 PM
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	1/17/2019 2:27:32 PM
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	1/17/2019 2:27:32 PM
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	1/17/2019 2:27:32 PM
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	1/17/2019 2:27:32 PM
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	1/17/2019 2:27:32 PM
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	1/17/2019 2:27:32 PM
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	1/17/2019 2:27:32 PM
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	1/17/2019 2:27:32 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** FB191201**Project:** CLC Griggs Walnut**Collection Date:** 1/12/2019 1:43:00 PM**Lab ID:** 1901567-003**Matrix:** AQUEOUS**Received Date:** 1/15/2019 8:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	1/17/2019 2:27:32 PM
2-Hexanone	ND	0.91	10		µg/L	1	1/17/2019 2:27:32 PM
Isopropylbenzene	ND	0.22	1.0		µg/L	1	1/17/2019 2:27:32 PM
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	1/17/2019 2:27:32 PM
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	1/17/2019 2:27:32 PM
Methylene Chloride	ND	0.21	3.0		µg/L	1	1/17/2019 2:27:32 PM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	1/17/2019 2:27:32 PM
n-Propylbenzene	ND	0.24	1.0		µg/L	1	1/17/2019 2:27:32 PM
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	1/17/2019 2:27:32 PM
Styrene	ND	0.25	1.0		µg/L	1	1/17/2019 2:27:32 PM
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	1/17/2019 2:27:32 PM
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	1/17/2019 2:27:32 PM
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	1/17/2019 2:27:32 PM
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	1/17/2019 2:27:32 PM
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	1/17/2019 2:27:32 PM
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	1/17/2019 2:27:32 PM
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	1/17/2019 2:27:32 PM
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	1/17/2019 2:27:32 PM
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	1/17/2019 2:27:32 PM
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	1/17/2019 2:27:32 PM
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	1/17/2019 2:27:32 PM
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	1/17/2019 2:27:32 PM
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	1/17/2019 2:27:32 PM
Vinyl chloride	ND	0.12	1.0		µg/L	1	1/17/2019 2:27:32 PM
Xylenes, Total	ND	0.64	1.5		µg/L	1	1/17/2019 2:27:32 PM
Surr: 1,2-Dichloroethane-d4	105	0	70-130		%Rec	1	1/17/2019 2:27:32 PM
Surr: 4-Bromofluorobenzene	102	0	70-130		%Rec	1	1/17/2019 2:27:32 PM
Surr: Dibromofluoromethane	108	0	70-130		%Rec	1	1/17/2019 2:27:32 PM
Surr: Toluene-d8	108	0	70-130		%Rec	1	1/17/2019 2:27:32 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** Trip Blank**Project:** CLC Griggs Walnut**Collection Date:****Lab ID:** 1901567-004**Matrix:** TRIP BLANK**Received Date:** 1/15/2019 8:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Benzene	ND	0.17	1.0		µg/L	1	1/17/2019 2:56:46 PM
Toluene	ND	0.17	1.0		µg/L	1	1/17/2019 2:56:46 PM
Ethylbenzene	ND	0.22	1.0		µg/L	1	1/17/2019 2:56:46 PM
Methyl tert-butyl ether (MTBE)	ND	0.46	1.0		µg/L	1	1/17/2019 2:56:46 PM
1,2,4-Trimethylbenzene	ND	0.25	1.0		µg/L	1	1/17/2019 2:56:46 PM
1,3,5-Trimethylbenzene	ND	0.23	1.0		µg/L	1	1/17/2019 2:56:46 PM
1,2-Dichloroethane (EDC)	ND	0.19	1.0		µg/L	1	1/17/2019 2:56:46 PM
1,2-Dibromoethane (EDB)	ND	0.23	1.0		µg/L	1	1/17/2019 2:56:46 PM
Naphthalene	ND	0.29	2.0		µg/L	1	1/17/2019 2:56:46 PM
1-Methylnaphthalene	ND	0.34	4.0		µg/L	1	1/17/2019 2:56:46 PM
2-Methylnaphthalene	ND	0.35	4.0		µg/L	1	1/17/2019 2:56:46 PM
Acetone	3.4	0.76	10	J	µg/L	1	1/17/2019 2:56:46 PM
Bromobenzene	ND	0.32	1.0		µg/L	1	1/17/2019 2:56:46 PM
Bromodichloromethane	ND	0.28	1.0		µg/L	1	1/17/2019 2:56:46 PM
Bromoform	ND	0.32	1.0		µg/L	1	1/17/2019 2:56:46 PM
Bromomethane	ND	0.27	3.0		µg/L	1	1/17/2019 2:56:46 PM
2-Butanone	3.3	1.4	10	J	µg/L	1	1/17/2019 2:56:46 PM
Carbon disulfide	ND	0.39	10		µg/L	1	1/17/2019 2:56:46 PM
Carbon Tetrachloride	ND	0.14	1.0		µg/L	1	1/17/2019 2:56:46 PM
Chlorobenzene	ND	0.29	1.0		µg/L	1	1/17/2019 2:56:46 PM
Chloroethane	ND	0.16	2.0		µg/L	1	1/17/2019 2:56:46 PM
Chloroform	ND	0.24	1.0		µg/L	1	1/17/2019 2:56:46 PM
Chloromethane	ND	0.32	3.0		µg/L	1	1/17/2019 2:56:46 PM
2-Chlorotoluene	ND	0.25	1.0		µg/L	1	1/17/2019 2:56:46 PM
4-Chlorotoluene	ND	0.28	1.0		µg/L	1	1/17/2019 2:56:46 PM
cis-1,2-DCE	ND	0.38	1.0		µg/L	1	1/17/2019 2:56:46 PM
cis-1,3-Dichloropropene	ND	0.30	1.0		µg/L	1	1/17/2019 2:56:46 PM
1,2-Dibromo-3-chloropropane	ND	0.47	2.0		µg/L	1	1/17/2019 2:56:46 PM
Dibromochloromethane	ND	0.24	1.0		µg/L	1	1/17/2019 2:56:46 PM
Dibromomethane	ND	0.32	1.0		µg/L	1	1/17/2019 2:56:46 PM
1,2-Dichlorobenzene	ND	0.31	1.0		µg/L	1	1/17/2019 2:56:46 PM
1,3-Dichlorobenzene	ND	0.31	1.0		µg/L	1	1/17/2019 2:56:46 PM
1,4-Dichlorobenzene	ND	0.29	1.0		µg/L	1	1/17/2019 2:56:46 PM
Dichlorodifluoromethane	ND	0.26	1.0		µg/L	1	1/17/2019 2:56:46 PM
1,1-Dichloroethane	ND	0.18	1.0		µg/L	1	1/17/2019 2:56:46 PM
1,1-Dichloroethene	ND	0.12	1.0		µg/L	1	1/17/2019 2:56:46 PM
1,2-Dichloropropane	ND	0.17	1.0		µg/L	1	1/17/2019 2:56:46 PM
1,3-Dichloropropane	ND	0.27	1.0		µg/L	1	1/17/2019 2:56:46 PM
2,2-Dichloropropane	ND	0.23	2.0		µg/L	1	1/17/2019 2:56:46 PM
1,1-Dichloropropene	ND	0.16	1.0		µg/L	1	1/17/2019 2:56:46 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** Trip Blank**Project:** CLC Griggs Walnut**Collection Date:****Lab ID:** 1901567-004**Matrix:** TRIP BLANK**Received Date:** 1/15/2019 8:55:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: DJF
Hexachlorobutadiene	ND	0.39	1.0		µg/L	1	1/17/2019 2:56:46 PM
2-Hexanone	ND	0.91	10		µg/L	1	1/17/2019 2:56:46 PM
Isopropylbenzene	ND	0.22	1.0		µg/L	1	1/17/2019 2:56:46 PM
4-Isopropyltoluene	ND	0.24	1.0		µg/L	1	1/17/2019 2:56:46 PM
4-Methyl-2-pentanone	ND	0.45	10		µg/L	1	1/17/2019 2:56:46 PM
Methylene Chloride	ND	0.21	3.0		µg/L	1	1/17/2019 2:56:46 PM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	1/17/2019 2:56:46 PM
n-Propylbenzene	ND	0.24	1.0		µg/L	1	1/17/2019 2:56:46 PM
sec-Butylbenzene	ND	0.20	1.0		µg/L	1	1/17/2019 2:56:46 PM
Styrene	ND	0.25	1.0		µg/L	1	1/17/2019 2:56:46 PM
tert-Butylbenzene	ND	0.22	1.0		µg/L	1	1/17/2019 2:56:46 PM
1,1,1,2-Tetrachloroethane	ND	0.25	1.0		µg/L	1	1/17/2019 2:56:46 PM
1,1,2,2-Tetrachloroethane	ND	0.33	2.0		µg/L	1	1/17/2019 2:56:46 PM
Tetrachloroethene (PCE)	ND	0.15	1.0		µg/L	1	1/17/2019 2:56:46 PM
trans-1,2-DCE	ND	0.18	1.0		µg/L	1	1/17/2019 2:56:46 PM
trans-1,3-Dichloropropene	ND	0.28	1.0		µg/L	1	1/17/2019 2:56:46 PM
1,2,3-Trichlorobenzene	ND	0.28	1.0		µg/L	1	1/17/2019 2:56:46 PM
1,2,4-Trichlorobenzene	ND	0.27	1.0		µg/L	1	1/17/2019 2:56:46 PM
1,1,1-Trichloroethane	ND	0.16	1.0		µg/L	1	1/17/2019 2:56:46 PM
1,1,2-Trichloroethane	ND	0.23	1.0		µg/L	1	1/17/2019 2:56:46 PM
Trichloroethene (TCE)	ND	0.26	1.0		µg/L	1	1/17/2019 2:56:46 PM
Trichlorofluoromethane	ND	0.14	1.0		µg/L	1	1/17/2019 2:56:46 PM
1,2,3-Trichloropropane	ND	0.57	2.0		µg/L	1	1/17/2019 2:56:46 PM
Vinyl chloride	ND	0.12	1.0		µg/L	1	1/17/2019 2:56:46 PM
Xylenes, Total	ND	0.64	1.5		µg/L	1	1/17/2019 2:56:46 PM
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	1/17/2019 2:56:46 PM
Surr: 4-Bromofluorobenzene	103	0	70-130		%Rec	1	1/17/2019 2:56:46 PM
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	1/17/2019 2:56:46 PM
Surr: Toluene-d8	108	0	70-130		%Rec	1	1/17/2019 2:56:46 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901567

18-Jan-19

Client: City of Las Cruces
Project: CLC Griggs Walnut

Sample ID	rb	SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID:	A57086		RunNo:	57086				
Prep Date:		Analysis Date:	1/17/2019		SeqNo:	1909260	Units:	µg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901567

18-Jan-19

Client: City of Las Cruces
Project: CLC Griggs Walnut

Sample ID	rb	SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID:	A57086		RunNo:	57086				
Prep Date:		Analysis Date:	1/17/2019		SeqNo:	1909260	Units:	µg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	11		10.00		107	70	130			

Sample ID	100ng lcs	SampType:	LCS		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	LCSW	Batch ID:	A57086		RunNo:	57086				
Prep Date:		Analysis Date:	1/17/2019		SeqNo:	1909261	Units:	µg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	86.7	70	130			
Toluene	19	1.0	20.00	0	95.6	70	130			
Chlorobenzene	19	1.0	20.00	0	97.1	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901567

18-Jan-19

Client: City of Las Cruces
Project: CLC Griggs Walnut

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES								
Client ID: LCSW	Batch ID: A57086	RunNo: 57086								
Prep Date:	Analysis Date: 1/17/2019	SeqNo: 1909261 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19	1.0	20.00	0	92.6	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	82.3	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	10		10.00		105	70	130			
Surr: Toluene-d8	10		10.00		105	70	130			

Qualifiers:

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

Sample Log-In Check List

Client Name: **City of Las Cruces**

Work Order Number: **1901567**

ReptNo: **1**

Received By: **Erin Melendrez** 1/15/2019 8:55:00 AM
 Completed By: **Victoria Zellar** 1/15/2019 12:00:24 PM
 Reviewed By: *LB* 1/15/19 (C) 1400

Victoria Zellar
 Labeled by
 DAD 1/15/19

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0° C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH:
 (<2 or >12 unless noted)
 Adjusted?
 Checked by: DAD 1/15/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces

Mailing Address:

Phone #: 575 527-1700

email or Fax#: Larri.Erstad@terracon.com

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation: Az Compliance

NELAC Other

EDD (Type)

Turn-Around Time:

Standard Rush

Project Name: CLC Griggs & Walnut

Project #: 6818P186

Project Manager: Suasi Gandara

Sampler: Larri Erstad

On Ice: Yes No

of Coolers: 1

Cooler Temp (including CF): 4°C

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
1/12/19	1515	water	Gwmw06-01	2	HCL	1901507
1/12/19	1513	water	Gwmw06-02	3	HCL	-002
1/12/19	1243	water	FB191201	1	HCL	-003
1/12/19	--	water	Trip Blank	2	HCL	-004

Date: 1/14/19 Time: 1700

Date: 1/15/19 Time: 0855

Relinquished by: [Signature]

Relinquished by: [Signature]

Received by: [Signature] Via: FedEx Date: 1/15/19 Time: 0855

Received by: [Signature] Via: [Signature] Date: 1/15/19 Time: 0855

Analysis Request

BTEX / MTBE / TMB's (8021)

TPH:8015D(GRO / DRO / MRO)

8081 Pesticides/8082 PCB's

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

RCRA 8 Metals

Cl, F, Br, NO₃, NO₂, PO₄, SO₄

8260(VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)

Remarks: Invoice - Terracon Las Cruces
4450 Babacan Memorial East
Las Cruces, NM 88011



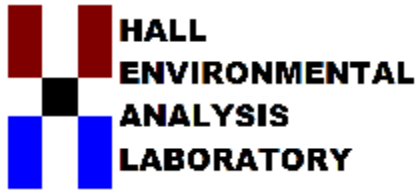
HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

February 01, 2019

Surasi Gandara
City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3604
FAX

RE: Griggs Walnut

OrderNo.: 1901B17

Dear Surasi Gandara:

Hall Environmental Analysis Laboratory received 13 sample(s) on 1/30/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW01-01

Project: Griggs Walnut

Collection Date: 1/29/2019 12:39:00 PM

Lab ID: 1901B17-001

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
Toluene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
Ethylbenzene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
Naphthalene	ND	2.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
1-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
2-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
Acetone	51	10		µg/L	1	1/31/2019 3:10:47 PM	R57401
Bromobenzene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
Bromodichloromethane	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
Bromoform	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
Bromomethane	ND	3.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
2-Butanone	ND	10		µg/L	1	1/31/2019 3:10:47 PM	R57401
Carbon disulfide	ND	10		µg/L	1	1/31/2019 3:10:47 PM	R57401
Carbon Tetrachloride	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
Chlorobenzene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
Chloroethane	ND	2.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
Chloroform	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
Chloromethane	ND	3.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
2-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
4-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
cis-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
Dibromochloromethane	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
Dibromomethane	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
1,1-Dichloroethane	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
1,1-Dichloroethene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
1,2-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
1,3-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
2,2-Dichloropropane	ND	2.0		µg/L	1	1/31/2019 3:10:47 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW01-01

Project: Griggs Walnut

Collection Date: 1/29/2019 12:39:00 PM

Lab ID: 1901B17-001

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
Hexachlorobutadiene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
2-Hexanone	ND	10		µg/L	1	1/31/2019 3:10:47 PM	R57401
Isopropylbenzene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
4-Isopropyltoluene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
4-Methyl-2-pentanone	ND	10		µg/L	1	1/31/2019 3:10:47 PM	R57401
Methylene Chloride	ND	3.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
n-Butylbenzene	ND	3.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
n-Propylbenzene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
sec-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
Styrene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
tert-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
trans-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
Trichlorofluoromethane	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
Vinyl chloride	ND	1.0		µg/L	1	1/31/2019 3:10:47 PM	R57401
Xylenes, Total	ND	1.5		µg/L	1	1/31/2019 3:10:47 PM	R57401
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	1/31/2019 3:10:47 PM	R57401
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	1/31/2019 3:10:47 PM	R57401
Surr: Dibromofluoromethane	111	70-130		%Rec	1	1/31/2019 3:10:47 PM	R57401
Surr: Toluene-d8	100	70-130		%Rec	1	1/31/2019 3:10:47 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW01-02

Project: Griggs Walnut

Collection Date: 1/29/2019 12:45:00 PM

Lab ID: 1901B17-002

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
Toluene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
Ethylbenzene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
Naphthalene	ND	2.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
1-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
2-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
Acetone	34	10		µg/L	1	1/31/2019 3:39:22 PM	R57401
Bromobenzene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
Bromodichloromethane	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
Bromoform	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
Bromomethane	ND	3.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
2-Butanone	ND	10		µg/L	1	1/31/2019 3:39:22 PM	R57401
Carbon disulfide	ND	10		µg/L	1	1/31/2019 3:39:22 PM	R57401
Carbon Tetrachloride	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
Chlorobenzene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
Chloroethane	ND	2.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
Chloroform	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
Chloromethane	ND	3.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
2-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
4-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
cis-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
Dibromochloromethane	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
Dibromomethane	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
1,1-Dichloroethane	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
1,1-Dichloroethene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
1,2-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
1,3-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
2,2-Dichloropropane	ND	2.0		µg/L	1	1/31/2019 3:39:22 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW01-02

Project: Griggs Walnut

Collection Date: 1/29/2019 12:45:00 PM

Lab ID: 1901B17-002

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
Hexachlorobutadiene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
2-Hexanone	ND	10		µg/L	1	1/31/2019 3:39:22 PM	R57401
Isopropylbenzene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
4-Isopropyltoluene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
4-Methyl-2-pentanone	ND	10		µg/L	1	1/31/2019 3:39:22 PM	R57401
Methylene Chloride	ND	3.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
n-Butylbenzene	ND	3.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
n-Propylbenzene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
sec-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
Styrene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
tert-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
trans-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
Trichlorofluoromethane	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
Vinyl chloride	ND	1.0		µg/L	1	1/31/2019 3:39:22 PM	R57401
Xylenes, Total	ND	1.5		µg/L	1	1/31/2019 3:39:22 PM	R57401
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	1/31/2019 3:39:22 PM	R57401
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	1/31/2019 3:39:22 PM	R57401
Surr: Dibromofluoromethane	114	70-130		%Rec	1	1/31/2019 3:39:22 PM	R57401
Surr: Toluene-d8	99.4	70-130		%Rec	1	1/31/2019 3:39:22 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW01-03

Project: Griggs Walnut

Collection Date: 1/29/2019 12:52:00 PM

Lab ID: 1901B17-003

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
Toluene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
Ethylbenzene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
Naphthalene	ND	2.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
1-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
2-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
Acetone	ND	10		µg/L	1	1/31/2019 4:08:03 PM	R57401
Bromobenzene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
Bromodichloromethane	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
Bromoform	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
Bromomethane	ND	3.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
2-Butanone	ND	10		µg/L	1	1/31/2019 4:08:03 PM	R57401
Carbon disulfide	ND	10		µg/L	1	1/31/2019 4:08:03 PM	R57401
Carbon Tetrachloride	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
Chlorobenzene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
Chloroethane	ND	2.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
Chloroform	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
Chloromethane	ND	3.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
2-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
4-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
cis-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
Dibromochloromethane	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
Dibromomethane	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
1,1-Dichloroethane	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
1,1-Dichloroethene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
1,2-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
1,3-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
2,2-Dichloropropane	ND	2.0		µg/L	1	1/31/2019 4:08:03 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW01-03

Project: Griggs Walnut

Collection Date: 1/29/2019 12:52:00 PM

Lab ID: 1901B17-003

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
Hexachlorobutadiene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
2-Hexanone	ND	10		µg/L	1	1/31/2019 4:08:03 PM	R57401
Isopropylbenzene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
4-Isopropyltoluene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
4-Methyl-2-pentanone	ND	10		µg/L	1	1/31/2019 4:08:03 PM	R57401
Methylene Chloride	ND	3.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
n-Butylbenzene	ND	3.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
n-Propylbenzene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
sec-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
Styrene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
tert-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
trans-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
Trichlorofluoromethane	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
Vinyl chloride	ND	1.0		µg/L	1	1/31/2019 4:08:03 PM	R57401
Xylenes, Total	ND	1.5		µg/L	1	1/31/2019 4:08:03 PM	R57401
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	1/31/2019 4:08:03 PM	R57401
Surr: 4-Bromofluorobenzene	109	70-130		%Rec	1	1/31/2019 4:08:03 PM	R57401
Surr: Dibromofluoromethane	110	70-130		%Rec	1	1/31/2019 4:08:03 PM	R57401
Surr: Toluene-d8	99.8	70-130		%Rec	1	1/31/2019 4:08:03 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW01-04

Project: Griggs Walnut

Collection Date: 1/29/2019 12:58:00 PM

Lab ID: 1901B17-004

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
Toluene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
Ethylbenzene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
Naphthalene	ND	2.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
1-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
2-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
Acetone	ND	10		µg/L	1	1/31/2019 4:36:34 PM	R57401
Bromobenzene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
Bromodichloromethane	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
Bromoform	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
Bromomethane	ND	3.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
2-Butanone	ND	10		µg/L	1	1/31/2019 4:36:34 PM	R57401
Carbon disulfide	ND	10		µg/L	1	1/31/2019 4:36:34 PM	R57401
Carbon Tetrachloride	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
Chlorobenzene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
Chloroethane	ND	2.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
Chloroform	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
Chloromethane	ND	3.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
2-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
4-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
cis-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
Dibromochloromethane	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
Dibromomethane	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
1,1-Dichloroethane	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
1,1-Dichloroethene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
1,2-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
1,3-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
2,2-Dichloropropane	ND	2.0		µg/L	1	1/31/2019 4:36:34 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW01-04

Project: Griggs Walnut

Collection Date: 1/29/2019 12:58:00 PM

Lab ID: 1901B17-004

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
Hexachlorobutadiene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
2-Hexanone	ND	10		µg/L	1	1/31/2019 4:36:34 PM	R57401
Isopropylbenzene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
4-Isopropyltoluene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
4-Methyl-2-pentanone	ND	10		µg/L	1	1/31/2019 4:36:34 PM	R57401
Methylene Chloride	ND	3.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
n-Butylbenzene	ND	3.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
n-Propylbenzene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
sec-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
Styrene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
tert-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
trans-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
Trichlorofluoromethane	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
Vinyl chloride	ND	1.0		µg/L	1	1/31/2019 4:36:34 PM	R57401
Xylenes, Total	ND	1.5		µg/L	1	1/31/2019 4:36:34 PM	R57401
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	1/31/2019 4:36:34 PM	R57401
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	1/31/2019 4:36:34 PM	R57401
Surr: Dibromofluoromethane	111	70-130		%Rec	1	1/31/2019 4:36:34 PM	R57401
Surr: Toluene-d8	97.9	70-130		%Rec	1	1/31/2019 4:36:34 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW01-05

Project: Griggs Walnut

Collection Date: 1/29/2019 1:02:00 PM

Lab ID: 1901B17-005

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
Toluene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
Ethylbenzene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
Naphthalene	ND	2.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
1-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
2-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
Acetone	ND	10		µg/L	1	1/31/2019 5:05:06 PM	R57401
Bromobenzene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
Bromodichloromethane	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
Bromoform	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
Bromomethane	ND	3.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
2-Butanone	ND	10		µg/L	1	1/31/2019 5:05:06 PM	R57401
Carbon disulfide	ND	10		µg/L	1	1/31/2019 5:05:06 PM	R57401
Carbon Tetrachloride	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
Chlorobenzene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
Chloroethane	ND	2.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
Chloroform	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
Chloromethane	ND	3.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
2-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
4-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
cis-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
Dibromochloromethane	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
Dibromomethane	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
1,1-Dichloroethane	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
1,1-Dichloroethene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
1,2-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
1,3-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
2,2-Dichloropropane	ND	2.0		µg/L	1	1/31/2019 5:05:06 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW01-05

Project: Griggs Walnut

Collection Date: 1/29/2019 1:02:00 PM

Lab ID: 1901B17-005

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
Hexachlorobutadiene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
2-Hexanone	ND	10		µg/L	1	1/31/2019 5:05:06 PM	R57401
Isopropylbenzene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
4-Isopropyltoluene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
4-Methyl-2-pentanone	ND	10		µg/L	1	1/31/2019 5:05:06 PM	R57401
Methylene Chloride	ND	3.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
n-Butylbenzene	ND	3.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
n-Propylbenzene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
sec-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
Styrene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
tert-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
trans-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
Trichlorofluoromethane	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
Vinyl chloride	ND	1.0		µg/L	1	1/31/2019 5:05:06 PM	R57401
Xylenes, Total	ND	1.5		µg/L	1	1/31/2019 5:05:06 PM	R57401
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	1/31/2019 5:05:06 PM	R57401
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	1/31/2019 5:05:06 PM	R57401
Surr: Dibromofluoromethane	116	70-130		%Rec	1	1/31/2019 5:05:06 PM	R57401
Surr: Toluene-d8	96.4	70-130		%Rec	1	1/31/2019 5:05:06 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW01-06

Project: Griggs Walnut

Collection Date: 1/29/2019 1:06:00 PM

Lab ID: 1901B17-006

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
Toluene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
Ethylbenzene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
Naphthalene	ND	2.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
1-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
2-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
Acetone	ND	10		µg/L	1	1/31/2019 5:33:49 PM	R57401
Bromobenzene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
Bromodichloromethane	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
Bromoform	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
Bromomethane	ND	3.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
2-Butanone	ND	10		µg/L	1	1/31/2019 5:33:49 PM	R57401
Carbon disulfide	ND	10		µg/L	1	1/31/2019 5:33:49 PM	R57401
Carbon Tetrachloride	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
Chlorobenzene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
Chloroethane	ND	2.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
Chloroform	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
Chloromethane	ND	3.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
2-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
4-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
cis-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
Dibromochloromethane	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
Dibromomethane	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
1,1-Dichloroethane	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
1,1-Dichloroethene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
1,2-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
1,3-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
2,2-Dichloropropane	ND	2.0		µg/L	1	1/31/2019 5:33:49 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW01-06

Project: Griggs Walnut

Collection Date: 1/29/2019 1:06:00 PM

Lab ID: 1901B17-006

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
Hexachlorobutadiene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
2-Hexanone	ND	10		µg/L	1	1/31/2019 5:33:49 PM	R57401
Isopropylbenzene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
4-Isopropyltoluene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
4-Methyl-2-pentanone	ND	10		µg/L	1	1/31/2019 5:33:49 PM	R57401
Methylene Chloride	ND	3.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
n-Butylbenzene	ND	3.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
n-Propylbenzene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
sec-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
Styrene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
tert-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
trans-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
Trichlorofluoromethane	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
Vinyl chloride	ND	1.0		µg/L	1	1/31/2019 5:33:49 PM	R57401
Xylenes, Total	ND	1.5		µg/L	1	1/31/2019 5:33:49 PM	R57401
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	1/31/2019 5:33:49 PM	R57401
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	1	1/31/2019 5:33:49 PM	R57401
Surr: Dibromofluoromethane	116	70-130		%Rec	1	1/31/2019 5:33:49 PM	R57401
Surr: Toluene-d8	99.4	70-130		%Rec	1	1/31/2019 5:33:49 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW01-06 DUP

Project: Griggs Walnut

Collection Date: 1/29/2019 1:11:00 PM

Lab ID: 1901B17-007

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
Toluene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
Ethylbenzene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
Naphthalene	ND	2.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
1-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
2-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
Acetone	ND	10		µg/L	1	1/31/2019 6:59:48 PM	R57401
Bromobenzene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
Bromodichloromethane	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
Bromoform	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
Bromomethane	ND	3.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
2-Butanone	ND	10		µg/L	1	1/31/2019 6:59:48 PM	R57401
Carbon disulfide	ND	10		µg/L	1	1/31/2019 6:59:48 PM	R57401
Carbon Tetrachloride	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
Chlorobenzene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
Chloroethane	ND	2.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
Chloroform	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
Chloromethane	ND	3.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
2-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
4-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
cis-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
Dibromochloromethane	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
Dibromomethane	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
1,1-Dichloroethane	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
1,1-Dichloroethene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
1,2-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
1,3-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
2,2-Dichloropropane	ND	2.0		µg/L	1	1/31/2019 6:59:48 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW01-06 DUP

Project: Griggs Walnut

Collection Date: 1/29/2019 1:11:00 PM

Lab ID: 1901B17-007

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
Hexachlorobutadiene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
2-Hexanone	ND	10		µg/L	1	1/31/2019 6:59:48 PM	R57401
Isopropylbenzene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
4-Isopropyltoluene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
4-Methyl-2-pentanone	ND	10		µg/L	1	1/31/2019 6:59:48 PM	R57401
Methylene Chloride	ND	3.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
n-Butylbenzene	ND	3.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
n-Propylbenzene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
sec-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
Styrene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
tert-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
trans-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
Trichlorofluoromethane	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
Vinyl chloride	ND	1.0		µg/L	1	1/31/2019 6:59:48 PM	R57401
Xylenes, Total	ND	1.5		µg/L	1	1/31/2019 6:59:48 PM	R57401
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	1/31/2019 6:59:48 PM	R57401
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	1/31/2019 6:59:48 PM	R57401
Surr: Dibromofluoromethane	112	70-130		%Rec	1	1/31/2019 6:59:48 PM	R57401
Surr: Toluene-d8	100	70-130		%Rec	1	1/31/2019 6:59:48 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW01-07

Project: Griggs Walnut

Collection Date: 1/29/2019 1:28:00 PM

Lab ID: 1901B17-008

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
Toluene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
Ethylbenzene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
Naphthalene	ND	2.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
1-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
2-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
Acetone	ND	10		µg/L	1	1/31/2019 7:28:26 PM	R57401
Bromobenzene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
Bromodichloromethane	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
Bromoform	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
Bromomethane	ND	3.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
2-Butanone	ND	10		µg/L	1	1/31/2019 7:28:26 PM	R57401
Carbon disulfide	ND	10		µg/L	1	1/31/2019 7:28:26 PM	R57401
Carbon Tetrachloride	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
Chlorobenzene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
Chloroethane	ND	2.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
Chloroform	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
Chloromethane	ND	3.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
2-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
4-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
cis-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
Dibromochloromethane	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
Dibromomethane	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
1,1-Dichloroethane	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
1,1-Dichloroethene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
1,2-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
1,3-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
2,2-Dichloropropane	ND	2.0		µg/L	1	1/31/2019 7:28:26 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW01-07

Project: Griggs Walnut

Collection Date: 1/29/2019 1:28:00 PM

Lab ID: 1901B17-008

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
Hexachlorobutadiene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
2-Hexanone	ND	10		µg/L	1	1/31/2019 7:28:26 PM	R57401
Isopropylbenzene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
4-Isopropyltoluene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
4-Methyl-2-pentanone	ND	10		µg/L	1	1/31/2019 7:28:26 PM	R57401
Methylene Chloride	ND	3.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
n-Butylbenzene	ND	3.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
n-Propylbenzene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
sec-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
Styrene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
tert-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
trans-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
Trichlorofluoromethane	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
Vinyl chloride	ND	1.0		µg/L	1	1/31/2019 7:28:26 PM	R57401
Xylenes, Total	ND	1.5		µg/L	1	1/31/2019 7:28:26 PM	R57401
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	1/31/2019 7:28:26 PM	R57401
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	1/31/2019 7:28:26 PM	R57401
Surr: Dibromofluoromethane	113	70-130		%Rec	1	1/31/2019 7:28:26 PM	R57401
Surr: Toluene-d8	99.4	70-130		%Rec	1	1/31/2019 7:28:26 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW01-08

Project: Griggs Walnut

Collection Date: 1/29/2019 1:33:00 PM

Lab ID: 1901B17-009

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
Toluene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
Ethylbenzene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
Naphthalene	ND	2.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
1-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
2-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
Acetone	ND	10		µg/L	1	1/31/2019 7:57:09 PM	R57401
Bromobenzene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
Bromodichloromethane	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
Bromoform	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
Bromomethane	ND	3.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
2-Butanone	ND	10		µg/L	1	1/31/2019 7:57:09 PM	R57401
Carbon disulfide	ND	10		µg/L	1	1/31/2019 7:57:09 PM	R57401
Carbon Tetrachloride	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
Chlorobenzene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
Chloroethane	ND	2.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
Chloroform	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
Chloromethane	ND	3.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
2-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
4-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
cis-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
Dibromochloromethane	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
Dibromomethane	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
1,1-Dichloroethane	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
1,1-Dichloroethene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
1,2-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
1,3-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
2,2-Dichloropropane	ND	2.0		µg/L	1	1/31/2019 7:57:09 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW01-08

Project: Griggs Walnut

Collection Date: 1/29/2019 1:33:00 PM

Lab ID: 1901B17-009

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
Hexachlorobutadiene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
2-Hexanone	ND	10		µg/L	1	1/31/2019 7:57:09 PM	R57401
Isopropylbenzene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
4-Isopropyltoluene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
4-Methyl-2-pentanone	ND	10		µg/L	1	1/31/2019 7:57:09 PM	R57401
Methylene Chloride	ND	3.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
n-Butylbenzene	ND	3.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
n-Propylbenzene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
sec-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
Styrene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
tert-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
trans-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
Trichlorofluoromethane	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
Vinyl chloride	ND	1.0		µg/L	1	1/31/2019 7:57:09 PM	R57401
Xylenes, Total	ND	1.5		µg/L	1	1/31/2019 7:57:09 PM	R57401
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	1/31/2019 7:57:09 PM	R57401
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	1/31/2019 7:57:09 PM	R57401
Surr: Dibromofluoromethane	110	70-130		%Rec	1	1/31/2019 7:57:09 PM	R57401
Surr: Toluene-d8	99.9	70-130		%Rec	1	1/31/2019 7:57:09 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW01-09

Project: Griggs Walnut

Collection Date: 1/29/2019 1:38:00 PM

Lab ID: 1901B17-010

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
Toluene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
Ethylbenzene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
Naphthalene	ND	2.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
1-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
2-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
Acetone	ND	10		µg/L	1	1/31/2019 8:25:47 PM	R57401
Bromobenzene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
Bromodichloromethane	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
Bromoform	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
Bromomethane	ND	3.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
2-Butanone	ND	10		µg/L	1	1/31/2019 8:25:47 PM	R57401
Carbon disulfide	ND	10		µg/L	1	1/31/2019 8:25:47 PM	R57401
Carbon Tetrachloride	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
Chlorobenzene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
Chloroethane	ND	2.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
Chloroform	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
Chloromethane	ND	3.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
2-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
4-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
cis-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
Dibromochloromethane	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
Dibromomethane	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
1,1-Dichloroethane	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
1,1-Dichloroethene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
1,2-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
1,3-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
2,2-Dichloropropane	ND	2.0		µg/L	1	1/31/2019 8:25:47 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW01-09

Project: Griggs Walnut

Collection Date: 1/29/2019 1:38:00 PM

Lab ID: 1901B17-010

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
Hexachlorobutadiene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
2-Hexanone	ND	10		µg/L	1	1/31/2019 8:25:47 PM	R57401
Isopropylbenzene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
4-Isopropyltoluene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
4-Methyl-2-pentanone	ND	10		µg/L	1	1/31/2019 8:25:47 PM	R57401
Methylene Chloride	ND	3.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
n-Butylbenzene	ND	3.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
n-Propylbenzene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
sec-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
Styrene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
tert-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
trans-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
Trichlorofluoromethane	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
Vinyl chloride	ND	1.0		µg/L	1	1/31/2019 8:25:47 PM	R57401
Xylenes, Total	ND	1.5		µg/L	1	1/31/2019 8:25:47 PM	R57401
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	1/31/2019 8:25:47 PM	R57401
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	1/31/2019 8:25:47 PM	R57401
Surr: Dibromofluoromethane	110	70-130		%Rec	1	1/31/2019 8:25:47 PM	R57401
Surr: Toluene-d8	98.9	70-130		%Rec	1	1/31/2019 8:25:47 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW01-10

Project: Griggs Walnut

Collection Date: 1/29/2019 1:43:00 AM

Lab ID: 1901B17-011

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
Toluene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
Ethylbenzene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
Naphthalene	ND	2.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
1-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
2-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
Acetone	ND	10		µg/L	1	1/31/2019 10:48:54 PM	R57401
Bromobenzene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
Bromodichloromethane	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
Bromoform	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
Bromomethane	ND	3.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
2-Butanone	ND	10		µg/L	1	1/31/2019 10:48:54 PM	R57401
Carbon disulfide	ND	10		µg/L	1	1/31/2019 10:48:54 PM	R57401
Carbon Tetrachloride	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
Chlorobenzene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
Chloroethane	ND	2.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
Chloroform	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
Chloromethane	ND	3.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
2-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
4-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
cis-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
Dibromochloromethane	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
Dibromomethane	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
1,1-Dichloroethane	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
1,1-Dichloroethene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
1,2-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
1,3-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
2,2-Dichloropropane	ND	2.0		µg/L	1	1/31/2019 10:48:54 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: NGMW01-10

Project: Griggs Walnut

Collection Date: 1/29/2019 1:43:00 AM

Lab ID: 1901B17-011

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
Hexachlorobutadiene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
2-Hexanone	ND	10		µg/L	1	1/31/2019 10:48:54 PM	R57401
Isopropylbenzene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
4-Isopropyltoluene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
4-Methyl-2-pentanone	ND	10		µg/L	1	1/31/2019 10:48:54 PM	R57401
Methylene Chloride	ND	3.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
n-Butylbenzene	ND	3.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
n-Propylbenzene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
sec-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
Styrene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
tert-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
trans-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
Trichlorofluoromethane	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
Vinyl chloride	ND	1.0		µg/L	1	1/31/2019 10:48:54 PM	R57401
Xylenes, Total	ND	1.5		µg/L	1	1/31/2019 10:48:54 PM	R57401
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	1/31/2019 10:48:54 PM	R57401
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	1/31/2019 10:48:54 PM	R57401
Surr: Dibromofluoromethane	109	70-130		%Rec	1	1/31/2019 10:48:54 PM	R57401
Surr: Toluene-d8	101	70-130		%Rec	1	1/31/2019 10:48:54 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: FB192901

Project: Griggs Walnut

Collection Date: 1/29/2019 1:53:00 PM

Lab ID: 1901B17-012

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
Toluene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
Ethylbenzene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
Naphthalene	ND	2.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
1-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
2-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
Acetone	ND	10		µg/L	1	1/31/2019 11:17:31 PM	R57401
Bromobenzene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
Bromodichloromethane	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
Bromoform	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
Bromomethane	ND	3.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
2-Butanone	ND	10		µg/L	1	1/31/2019 11:17:31 PM	R57401
Carbon disulfide	ND	10		µg/L	1	1/31/2019 11:17:31 PM	R57401
Carbon Tetrachloride	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
Chlorobenzene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
Chloroethane	ND	2.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
Chloroform	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
Chloromethane	ND	3.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
2-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
4-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
cis-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
Dibromochloromethane	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
Dibromomethane	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
1,1-Dichloroethane	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
1,1-Dichloroethene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
1,2-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
1,3-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
2,2-Dichloropropane	ND	2.0		µg/L	1	1/31/2019 11:17:31 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: FB192901

Project: Griggs Walnut

Collection Date: 1/29/2019 1:53:00 PM

Lab ID: 1901B17-012

Matrix: AQUEOUS

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
Hexachlorobutadiene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
2-Hexanone	ND	10		µg/L	1	1/31/2019 11:17:31 PM	R57401
Isopropylbenzene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
4-Isopropyltoluene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
4-Methyl-2-pentanone	ND	10		µg/L	1	1/31/2019 11:17:31 PM	R57401
Methylene Chloride	ND	3.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
n-Butylbenzene	ND	3.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
n-Propylbenzene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
sec-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
Styrene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
tert-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
trans-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
Trichlorofluoromethane	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
Vinyl chloride	ND	1.0		µg/L	1	1/31/2019 11:17:31 PM	R57401
Xylenes, Total	ND	1.5		µg/L	1	1/31/2019 11:17:31 PM	R57401
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	1/31/2019 11:17:31 PM	R57401
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	1/31/2019 11:17:31 PM	R57401
Surr: Dibromofluoromethane	111	70-130		%Rec	1	1/31/2019 11:17:31 PM	R57401
Surr: Toluene-d8	98.1	70-130		%Rec	1	1/31/2019 11:17:31 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: Trip Blank

Project: Griggs Walnut

Collection Date:

Lab ID: 1901B17-013

Matrix: TRIP BLANK

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
Benzene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
Toluene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
Ethylbenzene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
Naphthalene	ND	2.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
1-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
2-Methylnaphthalene	ND	4.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
Acetone	ND	10		µg/L	1	1/31/2019 11:46:03 PM	R57401
Bromobenzene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
Bromodichloromethane	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
Bromoform	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
Bromomethane	ND	3.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
2-Butanone	ND	10		µg/L	1	1/31/2019 11:46:03 PM	R57401
Carbon disulfide	ND	10		µg/L	1	1/31/2019 11:46:03 PM	R57401
Carbon Tetrachloride	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
Chlorobenzene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
Chloroethane	ND	2.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
Chloroform	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
Chloromethane	ND	3.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
2-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
4-Chlorotoluene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
cis-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
Dibromochloromethane	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
Dibromomethane	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
1,1-Dichloroethane	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
1,1-Dichloroethene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
1,2-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
1,3-Dichloropropane	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
2,2-Dichloropropane	ND	2.0		µg/L	1	1/31/2019 11:46:03 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1901B17

Date Reported: 2/1/2019

CLIENT: City of Las Cruces

Client Sample ID: Trip Blank

Project: Griggs Walnut

Collection Date:

Lab ID: 1901B17-013

Matrix: TRIP BLANK

Received Date: 1/30/2019 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: AG
1,1-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
Hexachlorobutadiene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
2-Hexanone	ND	10		µg/L	1	1/31/2019 11:46:03 PM	R57401
Isopropylbenzene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
4-Isopropyltoluene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
4-Methyl-2-pentanone	ND	10		µg/L	1	1/31/2019 11:46:03 PM	R57401
Methylene Chloride	ND	3.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
n-Butylbenzene	ND	3.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
n-Propylbenzene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
sec-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
Styrene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
tert-Butylbenzene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
trans-1,2-DCE	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
Trichlorofluoromethane	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
Vinyl chloride	ND	1.0		µg/L	1	1/31/2019 11:46:03 PM	R57401
Xylenes, Total	ND	1.5		µg/L	1	1/31/2019 11:46:03 PM	R57401
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	1/31/2019 11:46:03 PM	R57401
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	1/31/2019 11:46:03 PM	R57401
Surr: Dibromofluoromethane	108	70-130		%Rec	1	1/31/2019 11:46:03 PM	R57401
Surr: Toluene-d8	100	70-130		%Rec	1	1/31/2019 11:46:03 PM	R57401

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901B17

01-Feb-19

Client: City of Las Cruces

Project: Griggs Walnut

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R57401	RunNo:	57401					
Prep Date:		Analysis Date:	1/31/2019	SeqNo:	1920561	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	112	70	130			
Toluene	19	1.0	20.00	0	95.6	70	130			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	110	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	98.0	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		110	70	130			
Surr: Dibromofluoromethane	11		10.00		114	70	130			
Surr: Toluene-d8	9.8		10.00		98.4	70	130			

Sample ID	1901b17-006ams	SampType:	MS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	NGMW01-06	Batch ID:	R57401	RunNo:	57401					
Prep Date:		Analysis Date:	1/31/2019	SeqNo:	1920568	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	113	70	130			
Toluene	19	1.0	20.00	0	95.3	70	130			
Chlorobenzene	20	1.0	20.00	0	100	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	111	67.6	130			
Trichloroethene (TCE)	20	1.0	20.00	0	100	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	9.5		10.00		94.6	70	130			

Sample ID	1901b17-006amsd	SampType:	MSD	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	NGMW01-06	Batch ID:	R57401	RunNo:	57401					
Prep Date:		Analysis Date:	1/31/2019	SeqNo:	1920569	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	108	70	130	4.64	20	
Toluene	19	1.0	20.00	0	95.8	70	130	0.521	20	
Chlorobenzene	20	1.0	20.00	0	102	70	130	1.36	20	
1,1-Dichloroethene	21	1.0	20.00	0	105	67.6	130	5.62	20	
Trichloroethene (TCE)	19	1.0	20.00	0	93.1	70	130	7.33	20	
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		109	70	130	0	0	
Surr: Toluene-d8	9.6		10.00		95.7	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901B17

01-Feb-19

Client: City of Las Cruces

Project: Griggs Walnut

Sample ID	rb	SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID:	R57401		RunNo:	57401				
Prep Date:		Analysis Date:	1/31/2019		SeqNo:	1920577	Units:	µg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1901B17

01-Feb-19

Client: City of Las Cruces

Project: Griggs Walnut

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R57401	RunNo:	57401					
Prep Date:		Analysis Date:	1/31/2019	SeqNo:	1920577	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	9.9		10.00		99.0	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1901B17

RcptNo: 1

Received By: **Isaiah Ortiz** 1/30/2019 9:00:00 AM

I-Ox

Completed By: **Isaiah Ortiz** 1/30/2019 9:43:52 AM

I-Ox

Reviewed By: **ENM** 1/30/19

CB: *VUZ 1/30/19*

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

VUZ 1/30/19

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.8	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package: Standard Level 4 (Full Validation)

Accreditation: AZ Compliance

NELAC Other

EDD (Type)

Turn-Around Time:
 Standard Rush
 Project Name: Griggs Walnut

Project #: 6818 P186 Task 2

Project Manager:
Suzasi Sandara

Sampler: Lynn Erstad

On Ice: Yes No

of Coolers: 1

Cooler Temp (including CP): 0.8 °C

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No
1/29/19	1239	Water	NGMW 01-01	3	HCL	1901B17-001
	1245		NGMW 01-02	3		-002
	1252		NGMW 01-03	3		-003
	1258		NGMW 01-04	3		-004
	1302		NGMW 01-05	3		-005
	1306		NGMW 01-06	3		-006
	1315		NGMW 01-06 DUP	3		-007
	1318		NGMW 01-06 MSD	3		-008
	1328		NGMW 01-07	3		-009
	1333		NGMW 01-08	3		-010
	1338		NGMW 01-09	3		-011
	1343		NGMW 01-10	3		-012

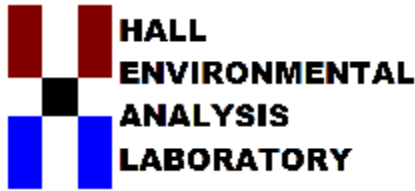
Date: 1/29/19 Time: 1500
 Relinquished by: [Signature]
 Date: 1/30/19 Time: 0900
 Received by: I-O Via: Fedex
 Date: 1/30/19 Time: 0900
 Received by: [Signature] Via: Fedex

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260(VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
							X		
							X		
							X		
							X		
							X		
							X		
							X		
							X		
							X		
							X		
							X		
							X		

Remarks: Invoice to Terracon

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 15, 2019

Surasi Gandara
City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3604
FAX

RE: CLC Griggs & Walnut

OrderNo.: 1903071

Dear Surasi Gandara:

Hall Environmental Analysis Laboratory received 2 sample(s) on 3/2/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces

Client Sample ID: CLC 18

Project: CLC Griggs & Walnut

Collection Date: 3/1/2019 1:20:00 PM

Lab ID: 1903071-001

Matrix: AQUEOUS

Received Date: 3/2/2019 9:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6020: TOTAL METALS							Analyst: DBK
Arsenic	0.0013	0.00050	0.0010		mg/L	1	3/7/2019 11:39:34 AM
Uranium	0.0086	0.00050	0.0010		mg/L	1	3/7/2019 11:39:34 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 1 of 3
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** City of Las Cruces**Client Sample ID:** CLC 27**Project:** CLC Griggs & Walnut**Collection Date:** 3/1/2019 1:28:00 PM**Lab ID:** 1903071-002**Matrix:** AQUEOUS**Received Date:** 3/2/2019 9:30:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6020: TOTAL METALS							Analyst: DBK
Arsenic	0.0016	0.00050	0.0010		mg/L	1	3/7/2019 11:43:19 AM
Uranium	0.016	0.00050	0.0010		mg/L	1	3/7/2019 11:43:19 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit



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Billings, MT 800.735.4489 • Casper, WY 866.235.0515
Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

CLIENT: Hall Environmental
Project: Not Indicated
Work Order: H19030025

Revised Date: 03/12/19

Report Date: 03/11/19

CASE NARRATIVE

Per client request, the Arsenic Speciation for sample H19030025-002 (1903071-002B CLC 27) was re-analyzed to confirm analytical results. The re-analysis, completed 3/11/19 was a Non-Detect (result <5 ug/L). The sample was analyzed a third time to confirm the re-analysis, and the results confirmed the revised value of ND. The report was revised with the data from the re-analysis. abc 3/12/19



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LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Hall Environmental
Project: Not Indicated
Lab ID: H19030025-001
Client Sample ID: 1903071-001B CLC 18

Revised Date: 03/12/19
Report Date: 03/11/19
Collection Date: 03/01/19 13:20
Date Received: 03/05/19
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SPECIATED, TOTAL							
Arsenic-III	ND	ug/L		5		E1632AM	03/06/19 14:49 / ber
Arsenic-V	ND	ug/L		5		E1632AM	03/06/19 14:49 / ber

Report
Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



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LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Hall Environmental
Project: Not Indicated
Lab ID: H19030025-002
Client Sample ID: 1903071-002B CLC 27

Revised Date: 03/12/19
Report Date: 03/11/19
Collection Date: 03/01/19 13:28
Date Received: 03/05/19
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SPECIATED, TOTAL							
Arsenic-III	ND	ug/L		5		E1632AM	03/11/19 15:18 / ber
Arsenic-V	ND	ug/L		5		E1632AM	03/11/19 15:18 / ber

Report
Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



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QA/QC Summary Report

Prepared by Helena, MT Branch

Revised Date: 03/12/19

Client: Hall Environmental

Report Date: 03/11/19

Project: Not Indicated

Work Order: H19030025

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM		Analytical Run: ARSENIC SPECIATION_190308A								
Lab ID: ICV_10r	2	Initial Calibration Verification Standard								03/06/19 13:07
Arsenic-III		28.3	ug/L	5.0	113	87.8	114			
Arsenic-V		21.8	ug/L	5.0	87	87	116			
Lab ID: CCV_11r	2	Continuing Calibration Verification Standard								03/06/19 13:19
Arsenic-III		50.7	ug/L	5.0	101	85	115			
Arsenic-V		56.8	ug/L	5.0	114	85	115			
Method: E1632AM		Batch: R142482								
Lab ID: MBLK_13r	2	Method Blank						Run: ARSENIC SPECIATION_1903		03/06/19 13:59
Arsenic-III		ND	ug/L	0.4						
Arsenic-V		ND	ug/L	0.6						
Lab ID: LFB_14r	2	Laboratory Fortified Blank						Run: ARSENIC SPECIATION_1903		03/06/19 14:11
Arsenic-III		52.5	ug/L	5.0	105	78	121			
Arsenic-V		53.7	ug/L	5.0	107	78	121			
Lab ID: H19030025-002A MS	2	Sample Matrix Spike						Run: ARSENIC SPECIATION_1903		03/06/19 15:13
Arsenic-III		51.4	ug/L	5.0	103	78	121			
Arsenic-V		62.7	ug/L	5.0	114	78	121			
Lab ID: H19030025-002A MSD	2	Sample Matrix Spike Duplicate						Run: ARSENIC SPECIATION_1903		03/06/19 15:25
Arsenic-III		54.5	ug/L	5.0	109	78	121	5.7	20	
Arsenic-V		63.1	ug/L	5.0	114	78	121	0.6	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



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Gillette, WY 800.686.7175 • Helena, MT 877.472.0711

QA/QC Summary Report

Prepared by Helena, MT Branch

Revised Date: 03/12/19

Client: Hall Environmental

Report Date: 03/11/19

Project: Not Indicated

Work Order: H19030025

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM		Analytical Run: ARSENIC SPECIATION_190311A								
Lab ID: ICV_10r	2	Initial Calibration Verification Standard								03/11/19 13:02
Arsenic-III		28.1	ug/L	5.0	113	87.6	114			
Arsenic-V		23.9	ug/L	5.0	96	87	116			
Lab ID: CCV_11r	2	Continuing Calibration Verification Standard								03/11/19 13:16
Arsenic-III		48.9	ug/L	5.0	98	85	115			
Arsenic-V		51.3	ug/L	5.0	103	85	115			
Method: E1632AM		Batch: R142555								
Lab ID: MBLK_13r	2	Method Blank						Run: ARSENIC SPECIATION_1903		03/11/19 13:42
Arsenic-III		ND	ug/L	0.4						
Arsenic-V		ND	ug/L	0.6						
Lab ID: LFB_14r	2	Laboratory Fortified Blank						Run: ARSENIC SPECIATION_1903		03/11/19 13:54
Arsenic-III		57.0	ug/L	5.0	114	78	121			
Arsenic-V		54.3	ug/L	5.0	109	78	121			
Lab ID: H19030059-003G MS	2	Sample Matrix Spike						Run: ARSENIC SPECIATION_1903		03/11/19 14:54
Arsenic-III		64.1	ug/L	5.0	128	78	121			S
Arsenic-V		85.3	ug/L	5.0	102	78	121			
Lab ID: H19030059-003G MSD	2	Sample Matrix Spike Duplicate						Run: ARSENIC SPECIATION_1903		03/11/19 15:06
Arsenic-III		63.9	ug/L	5.0	128	78	121	0.3	20	S
Arsenic-V		87.6	ug/L	5.0	106	78	121	2.7	20	
Lab ID: H19030025-002ADUP	2	Sample Duplicate						Run: ARSENIC SPECIATION_1903		03/11/19 15:30
Arsenic-III		ND	ug/L	5.0					20	
Arsenic-V		2.02	ug/L	5.0					20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1903071

15-Mar-19

Client: City of Las Cruces
Project: CLC Griggs & Walnut

Sample ID: MB-43503	SampType: MBLK	TestCode: EPA Method 6020: Total Metals								
Client ID: PBW	Batch ID: 43503	RunNo: 58185								
Prep Date: 3/5/2019	Analysis Date: 3/7/2019	SeqNo: 1951513	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Uranium	ND	0.0010								

Sample ID: MSLLCS-43503	SampType: LCSLL	TestCode: EPA Method 6020: Total Metals								
Client ID: BatchQC	Batch ID: 43503	RunNo: 58185								
Prep Date: 3/5/2019	Analysis Date: 3/7/2019	SeqNo: 1951514	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00087	0.0010	0.001000	0	87.4	70	130			J
Uranium	0.00074	0.0010	0.001000	0	73.7	70	130			J

Sample ID: MSLCS-43503	SampType: LCS	TestCode: EPA Method 6020: Total Metals								
Client ID: LCSW	Batch ID: 43503	RunNo: 58185								
Prep Date: 3/5/2019	Analysis Date: 3/7/2019	SeqNo: 1951515	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.046	0.0010	0.05000	0	92.3	80	120			
Uranium	0.041	0.0010	0.05000	0	82.2	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Sample Log-In Check List

Client Name: City of Las Cruces

Work Order Number: 1903071

RcptNo: 1

Received By: Desiree Dominguez 3/2/2019 9:30:00 AM

Completed By: Isalah Ortiz 3/4/2019 8:06:17 AM

Reviewed By: DAD 3/4/19
 LB: YG 3/4/19

IO
I-Ox

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? FedEx

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: 0 4
 (2 or >12 unless noted)
 Adjusted? NO
 Checked by: YG 3/4/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

16. Additional remarks:

17. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	0.8	Good	Yes			

APPENDIX H

FIELD LOGS

12-21-18

Gwmw-11-S - Sample #1210

Temp - 18.04

PH - 7.38

cond - 1.700 mS/cm

DO% 15.50

DO^m% = 14.5

ORP = +27.4

PH_{mV} -19.4

Smell

Gwmw 11-I - Sample #1230 Smell

Temp = 18.24 C

cond - 1.300 mS/cm

DO% 12.7

DO^m% 11.8

PH 7.67

PH_{mV} = -36.9

ORP = -46.8

Gwmw 11-D - Sample #1250

Temp 18.96

Cond 0.572

DO% 24.0

DO^m% 2.29

PH 8.18

NO SMELL

-68.1 PH_{mV}

-56.9 ORP

Field Blank FB181221 @ B05

12-21-18

Temp

mS/cm
CondDO
DO% %

PH

ORP

Gwmw 11-S- 1243

1.786

42.3

4.07

7.10

100.5

Sample #1540

NO SMELL - reddish

Gwmw 11-D

sample #1603

18.74

1.390

13.0

1.17

7.37

107.7

mw-1 No recovery

~~sample #1630~~

6

	Temp	Cond	DO %	DO mg/L	PH
12-24-18					
GWMW15-S @ 1055			No Smell		
Mtt	20.42	1.180	72.0	6.46	7.20
GWMW15-I @ 1115			No smell		
	20.48	1.682	64.0	5.71	7.13
GWMW15-D @ 1137			Smells sewage		
	20.22	0.852	16.0	1.46	7.60
MWSF5- @ 1220			No recovery		
MWSF9 @ 1335			Slight smell		
	20.0	1.207	65.9	5.96	7.56
MWSF9 Dup @ 1345			Slight Smell		
	20.15	1.209	65.6	5.91	7.57
FB182412 @ 1355					
MWSF10 @ 1425					
	20.39	1.633	57.4	5.19	7.32
EB182412 @ 1518					

12-26-18

MWSF2 - no recovery 0927

Disposed of 25 gals of purge water

@ WWTP @ 1100

	Temp C	Cond mS/cm	DO %	DO mg/L	PH
CLC18 @ 1155	20.08	0.746	22.7	2.07	7.5

CLC27 @ 1232	21.29	1.147	19.8	1.73	7.01
--------------	-------	-------	------	------	------

FB182612 @ 1510

12-27-18

CLC 26 - Set Pump @ 500'

Purged 3 gallons

Sample CLC 26 @ 1500

	Temp ^o	Conduct ^m	DO%	DO mg/L	pH
1500	20.4	1.569	60.0	5.32	7.73
1507	20.17	1.657	3.6	0.31	7.80
1510	20.37	1.584	2.4	0.22	7.94

FB182712 @ 1630

01-02-19
12-28-14 Arrived @ 0930 ~ 30°F

9

NGMW-3

Port 01	Temp	Cond	OC%	OR (mg)	pH
@ 0950	15.75	0.008	70.1	6.95	3.74
2-1005	13.47	0.008	63.1	6.66	4.54
3-1023	10.23	0.009	53.7	6.06	2.38
4-1030	9.13	0.008	51.0	5.84	2.69
4-Dup 1037	↓	↓	↓	↓	↓
4-MSD-1041	↓	↓	↓	↓	↓
5-1053	09.42	0.010	55.5	6.31	3.17
6-1103	10.30	0.012	57.3	6.15	3.88
7-1112	12.47	0.010	54.0	5.55	3.16
8-1122	13.56	0.012	54.1	5.55	3.87

NGMW-1 Arrive 1330 ~ 30°F

Port	Temp	Cond	OC%	OR (mg)	pH
01 @ 1350	16.27	0.0050	64.0	6.33	5.95
02 @ 1400	15.02	0.011	61.8	5.79	4.51
03-1406	17.47	0.010	60.8	5.72	4.30
04-1425	16.67	0.009	60.0	5.81	3.80
05-1434	17.49	0.009	57.5	5.39	4.1
06 1440	18.00	0.009	58.6	5.53	4.42
06 Dup 1445	↓	↓	↓	↓	↓
07-1450	18.03	0.009	60.2	5.62	3.80
08 1455	18.15	0.010	60.6	5.63	3.68
09 1500	18.30	0.009	62.2	5.88	3.48
10 1503	18.60	0.009	63.3	5.86	4.01

15140201 @ 1550

Return to Rain

1/3/19 Arrived @ 0945

NGMW02

port	Temp ^{°C}	Conduct ^{m/cm}	DO%	DO mg/L	pH
01-1010	16.64	0.029	72.7	7.08	4.58
02-1018	17.40	0.029	66.6	6.37	3.99
03-1025	17.6	0.010	65.0	6.5	3.56
04-1035	17.30	0.010	61.7	5.85	4.15
05-1045	17.14	0.023	60.2	5.32	3.99
06-1050	17.27	0.011	57.0	5.40	4.03
06 OVP T102	L	L	L	L	L
06 MSD-1107	L	L	L	L	L
07 1124	18.37	0.008	56.1	5.24	4.94
08 1131	19.53	0.010	56.1	5.15	3.65
09 1140	20.07	0.010	55.6	4.98	4.99

FB 190301 @ 1345

DTW 132.4

1/4/19 @ 1100

Gwinw-08 DTW - Tag 174.97⁹⁷ 1127

Port #3 = 174.59 Added 15 gals

purge pressure 167

Tag: 163.5

Sample " 14.5

port #3 etc

purge #3, #4, #5, #6 pressure 170

@ 1222 - 1.75 gals per port purged

purge #7 @ 1236 pressure 170 -

- 1.75 gals purged recharge 15 mins

pressure 170 @ 1300

2nd purge of #3, #4, #5, #6 - 1.75 gal per port

purge of #7 @ 1310 - 1.75 gals recharge 8 1/2

3rd purge, purge of #3, #4, #5, #6 @ 1323

pressure 180 #3, #4 purged 1.75 gal

#5, #6 - 1.25 gal purged

purge of #7 @ 1335 - 1.7 gal discolored

slight order

Sample discharge #3 pressure 147

@ 1354

port	Temp	Conduct ^{m/cm}	DO%	DO mg/L	pH
#3 @ 1354	20.70	1.630	13.10	1.14	7.52
#4 @ 1405	20.31	0.958	79.9	6.30	7.67
#5 @ 1404	20.55	1.499	11.3	0.89	7.24
#6 @ 1440	20.38	1.459	7.8	0.69	7.5
#7 @ 1448	20.26	1.728	17.3	1.24	7.93

FB 190401 @ 1645

Return to Rain

1/4/19
 Purge #2 port @ 110 @ 1417

Port	DTW	Time	
3	181.72	@ 15:00	} to be re measured 1/7/19
4	183.22	@ 15:15	
5		@ 15:25	

Suggestion of Seals for Manholes
 to prevent storm water in vault.

1/7/19 - GWMW 08 - DTW

arrive @ 0800

Port	DTW	Time
3	174'9"	0805
4	175'4"	0810
5	175'3 1/2"	0815
6	175'11"	0820
7	175'4"	0825

GWMW-10

1/7/19 arrived @ 09:20
 Tag 223'8" @ 740
 port #1 = 223'8" Add water 15 gal
 Tag 210'7"

Purge pressure = 188

purge #1, #2, #3, #4 @ 1041 -
 #1 not purging, #2, #3, #4 - 2 gals ea.
 purge #1, #5, #6, #7 @ 1109
 #5, #6, #7 - 2 gals ea.

raised purge pressure to 230 psi for port #1
 purged ~1.5 gal No blow out pressurized
 for the dominis -

2nd purge on #2, #3, #4 @ 1228
 purged 2 gals ea.

2nd purge on #5, #6, #7 @ 1403
 blew #5, #6, #7 @ 1415 - 2 gals ea. not blowing
 raised pressure to 225 psi @ 1421 @ 1430 1 gal

No blow out -

3rd purge on #2, #3, #4, #1 @ 1437 Start 1438
 #2, #3, #4 Blew @ 1448 - 2 gals ea. #1

#1 did not produce water.

3rd purge #5, #6, #7 @ 1457 Start water @ 1458
 #5, #6, #7 Blew @ 1508 - 2 gal ea

Port	Time	Temp	GWMW #03		Sample pressure 165 psi		
			cond m/cm	DO%	DO mg/L	PH	
1	1719	14.8	1.022	49.7	4.93	7.05	
2	1534	20.62	1.464	7.0	0.82	8.21	
3	1555	20.35	1.399	7.5	0.65	8.12	
4	1615	20.12	1.161	12.4	0.94	8.19	
5	1626	20.26	0.498	18.3	1.02	9.07	
6	1641	20.10	0.615	22.7	1.90	8.3	
7	1656	20.11	0.326	10.5	0.90	8.7	
End Day	1544	18.72	1.418	9.0	0.77	8.0	

FB 190701 @ 1605

1/8/19 Arrived WWTP @ 0715 - discharged 95 gals

1/8/19 GWMW 10 arr @ 1115

Port	DTW	Time
1	223'8"	1128
2	223'7 1/2"	1133
3	223'7 1/2"	1138
4	223'8"	1143
5	223'8" <small>At jell reading</small>	1151
6	223'8"	1156
7	223'8"	1202

12
14

FB 190801 @ 1427

1/8/19 Arrive @ 1330 GWMW-03

1410 - Port #1 - 127' Tag = 1000" @ 1417

1446 - began removing 10" of water from Tag. removed - 2 gals Tag = 107'9" pressure

1517 - began purge #1, #2, #3 153 psi

1518 - purge began port #3 blackish-odor

1525 - #3, #2, #1 blew - 1 3/4 gal ea.

1549 - began 2nd purge #1, #2, #3

1550 - water began #3 blackish-odor

1554 #2 blew - 3/4 gal

1556 #3 blew - 3/4 gal

1600 #1 blew - 1 1/2 gal

1648 began 3rd purge #1, #2, #3

1649 - purge water began #1, #3, #2 #3 slight black

1651 #2 blew - 1/2 gal

1656 #3 blew - 1/4 gal.

1658 #1 blew - 1 3/4 gal

1750 began sampling ports #1, #2, #3

Port	Temp	Cond m/cm	DO%	DO mg/L	PH	
1	1755	19.73	2.574	8.3	0.92	6.64
2	1810	18.79	1.680	8.3	0.72	11.29
3	1828	17.84	1.055	6.0	0.47	11.22

Sample pressure 131 psi

Port	DTW	Time
1	126" 126"	1823 - 126'11"
2	126" 126"	1831 124'10"
3		1840 131"

Att in the rain

16 7/9/19 GWMW-09 Arrive 0745
 port # 1-2 1/8" @ 0805 Tag @ 210'5"
 Added water 0817 = 15 gals Tag = 200'
 0842 Set up Nitro purge pressure 196psi
 Pe 0856 began 1st purge #1, #2, #3, #4
 0858 purge water began #1, #2, #3, #4
 0911 blew #1, #3, #2, #4 - 2 1/4 gal ea
 0930 2nd purge #5, #6, #7
 0931 purge water began #5, #6, #7 #7 slight grey
 0944 blew #6, #7, #5 - 2 1/4 gal ea
 1006 2nd purge #1, #2, #3, #4
 1008 purge water began #1, #2, #3, #4 #1 slight brown
 1019 blew #1, #3, #2, #4 - 2 1/4 gal ea.
 1038 2nd purge #5, #6, #7
 1040 purge water began #5, #6, #7
 1052 blew #6, #7, #5 - 2 1/4 gal ea
 1104 3rd purge #1, #2, #3, #4
 1105 purge water began #1, #2, #3, #4 - #1, #2 slight brown
 1117 blew #3, #2, #1, #4 - 2 1/4 gal ea.
 1126 3rd purge #5, #6, #7
 1127 purge water began #5, #6, #7 -
 1140 blew #6, #7, #5 - 2 1/4 gal ea
 1245 Empty Waste Water @ WWTP 65 gals

7/9/19 GWMW 09 Sample pressure 174psi

BEGAN LIGHT RAIN @ 1330

Port	Temp	Cond	DO%	DOmg/L	PT
1 ¹⁴⁰⁷ 1409	19.69	0.315	6.3	0.58	7.57
2 ¹⁴²⁰ 1428	19.18	0.356	7.1	0.66	8.04
2 Dup 1431					
2 USD 1436					
3 ¹⁴⁴⁷ 1451	19.82	0.412	5.6	0.51	8.32
4 ¹⁵¹⁵ 1520	19.78	.435	4.3	0.40	8.70
5 ¹⁵³³ 1541	19.20	0.525	9.2	0.84	10.48
6 ¹⁶⁰¹ 1606	19.66	0.921	5.4	0.49	9.25
7 ¹⁶²⁰ 1625	19.53	0.455	5.1	0.47	9.52

FBI A0901 @ 1050

7/10/19 @ 1130 Measurements @ GWMW-09

Port	DTW	Time
1	213'	1251
2	212'2"	1259
3	211'10"	1306
4	212'1/2"	1312
5	212'2"	1324
6	212'5"	1330
7	212'	1336

10/19 11a Empty waste water @ WWTP 15gals

11/19 Arrived @ 0730 GWMW-01

0800 - Port # 197'6" Tag = 192'8"

0900 Added 10 gal Tag = 186'6"

0820 Set up regulator

Dump pressure = 175psi

0915 Removed tubing

0932 began purge #1, #2, #3, #4

0934 purge water began #1, #2, #3, #4

0942 blew #2, #1, #4, #3 - 1 1/2 gal ea

0956 1st purge #5, #6, #7 -

0958 purge water began #5, #6, #7 - #5 light grey #6-#7 brown

1008 blew #5, #6, #7 - 1 3/4 gal ea

1020 2nd purge #1, #2, #3, #4

1022 purge water began #1, #2, #3, #4 - #2 lt brown

1029 blew #1, #2, #4, #3 - 1 1/2 gal ea

1038 2nd purge #5, #6, #7

1039 purge water start #5, #6, #7 - #5 light grey

1048 blew #6, #5, #7 - 1 3/4 gal ea

1055 3rd purge #1, #2, #3, #4 -

1057 purge water began #1, #2, #3, #4 - #1, #2 light brown

1103 blew #2, #1, #3, #4 - 1 1/2 gal ea

1130 3rd purge #5, #6, #7

1131 purge water began #5, #6, #7

1130 blew #6, #7, #5

11/19

GWMW 01

Sample pressure 15.2

19

~~Arrived @ 10:00 Clear Sunny~~

Port	Temp	Cond	DO%	DO mg/l	pH	
1 ¹²¹⁰ 1217	20.66	1.944	10.0	0.85	7.76	
2	1214	20.61	2.155	3.6	0.32	7.18
3	1219	20.84	2.042	3.7	0.32	7.78
4	1222	20.37	2.046	5.0	0.44	7.86
5 ¹²¹⁶ 1248	19.64	1.934	9.1	0.82	7.70	
5 ¹²¹⁶ 1352						
6	1255	20.02	1.781	5.4	0.49	7.78
7	1257	20.26	0.490	15.1	1.27	8.01

EB191101 @ 1149

Discharged 35 gal @ WWTP

11/19 GWMW-01 DTW

Port	DTW	Time
1	192'5"	1203
2	192'4"	1207
3	192'5"	1212
4	192'7"	1216
5	192'8"	1220 1220
6	192'8"	1225
7	192'10"	1229

1 20

GWMW-06

Purge pressure
131 psi
Sample pressure
109 psi

1/12/19 Arrived 10:45

port #1 = 92'3"

Tag = 95'8" Add 15 gals water @ 1126

port #2
Tag = 81'7"

1140 - Set up Regulator

1200 1st purge #1, #2

1201 Purge water started #1, #2 - light brown

1208 Blew #2, #1 - 2 gals ea

1245 2nd purge #1, #2

1246 Purge water started #1, #2 - light brown

1252 blew #2 - 1 1/2 gal

1255 blew #1 - 2 gal

1345 3rd purge #1, #2

1346 Purge water began

1354 blew #2 - 1 1/2 gals

1357 blew #1 - 2 gals

01/12/19 GWMW-06 Sample Pressure 109 21
Arrived @ 10:45 Clear, Sunny

PORT	TEMP	COND	DO%	DOmg/L	PH
------	------	------	-----	--------	----

1 ^{11:10}	1515	19.80	1.600	7.9	0.72	8.01
--------------------	------	-------	-------	-----	------	------

2 ^{11:20}	1513	19.29	2.245	0.9	0.08	11.81
--------------------	------	-------	-------	-----	------	-------

FB191201 @ 1343

1/14/19 GWMW-06 DTW

Port	DTW	Time
1	91' 87'6"	1247
2	96'9"	1251

1/15/18 Arrived @ NGMW01 @ 0845

DTW = 127.08

Set NGMW01 @ 1027 1/15/18

1100 - Arrived @ NGMW02

DTW = 132.40

1138 Set NGMW02

NGMW03

1306 DTW = 137.2

Set NGMW03

1335 Set NGMW03

1/29/19

PDB	Time
01	1239
02	1245
03	1250
04	1258
05	1302
06	1306
06DIP	1311
06MSD	1315
07	1328
08	1333
09	1338
10	1343

FB 192901 @ 1353

Tailgate Safety Meeting

Project ID: 6818PO186 Day: Monday
 Location: Griggs Lass Cruces Date: 5-6-19
 Project Coordinator: _____ No. of Personnel Present: 2

Check Topics Discussed

Scheduled Activities: Integrity ^{GW} MW-10 - Gwmw-09

Chemical/Physical Hazards
 Contaminants of Concern
 Material Safety Data Sheets
 Overhead & Underground Utilities
 Extraordinary Site Conditions
 Lifting/Slips/Trips/Falls
 Heat/Cold Stress (Inc. Sunburn)
 Other: _____

Vehicle/Heavy Equipment
 Drill Rig "KILL" Switches
 Operation & Inspection
 Preventive Maintenance
 Rotating Augers/Moving Parts

Traffic Control

Sanitation & Hygiene
 Drinking Water/Fluids
 Restrooms
 Personal Cleanliness

First Aid
 Facilities/Kits/Eyewashes ✓

Personal Protective Equipment - Level D ✓
 Hard Hats/Hearing Protection
 Steel-Toed Boots
 Glasses/Goggles/Shields
 Gloves
 Contingency: Level C
 Respirators & Tyvek/Saranex



Housekeeping
 Waste Containers
 Waste Materials
 Waste Water/Decon. Water

Fire Prevention
 Locations of Extinguishers *Truck*
 Smoking
 Hot Work
 Explosive & Flammable Liquids
 Other: _____

Emergency Procedures/Site Safety
 "Buddy System"
 Communication
 Facility-Specific Regulations
 Rally Point

Emergency Facilities (and Directions)
 Name: Mt. View
 Address: East Lohman
 Tel. No.: _____

Safety Meeting Attendees:

Name	Signature	Name	Signature
<u>Larni Erstad</u>			
<u>Bris Casadwell</u>			

Tailgate Safety Meeting

Project ID: 68P180186 Day: Tuesday
 Location: Griggs - Las Cruces Date: 5-6-19
 Project Coordinator: _____ No. of Personnel Present: 2-3

Check Topics Discussed

Scheduled Activities: Integrity - Blomw-08:01

Chemical/Physical Hazards

- Contaminants of Concern
- Material Safety Data Sheets
- Overhead & Underground Utilities
- Extraordinary Site Conditions
- Lifting/Slips/Trips/Falls
- Heat/Cold Stress (Inc. Sunburn)
- Other: _____

Vehicle/Heavy Equipment

- Drill Rig "KILL" Switches
- Operation & Inspection
- Preventive Maintenance
- Rotating Augers/Moving Parts

Sanitation & Hygiene

- Drinking Water/Fluids
- Restrooms
- Personal Cleanliness

First Aid

- Facilities/Kits/Eyewashes

Personal Protective Equipment - Level D

- Hard Hats/Hearing Protection
- Steel-Toed Boots
- Glasses/Goggles/Shields
- Gloves
- Contingency: Level C
- Respirators & Tyvek/Saranex

Housekeeping

- Waste Containers
- Waste Materials
- Waste Water/Decon. Water

Fire Prevention

- Locations of Extinguishers
- Smoking
- Hot Work
- Explosive & Flammable Liquids
- Other: _____

Emergency Procedures/Site Safety

- "Buddy System"
- Communication
- Facility-Specific Regulations
- Rally Point

Emergency Facilities (and Directions)

Name: Mt. View
 Address: E. Lohman
 Tel. No.: 911

Safety Meeting Attendees:

Name	Signature	Name	Signature
<u>Larri Erstad</u>	<u>[Signature]</u>		
<u>Bill Casadewell</u>	<u>[Signature]</u>		
<u>ALICIA C. ORRANTIA</u>	<u>[Signature]</u>		

Tailgate Safety Meeting

Project ID: 6818P0186 Day: Wed
 Location: Griggs - Las Cruces Date: 5/8/19
 Project Coordinator: _____ No. of Personnel Present: 2

Check Topics Discussed

Scheduled Activities: Purge GWMW-01, 08, 09, 10

Chemical/Physical Hazards

- Contaminants of Concern ACE
- Material Safety Data Sheets
- Overhead & Underground Utilities
- ↪ Extraordinary Site Conditions - uneven
- ↪ Lifting/Slips/Trips/Falls
- ↪ Heat/Cold Stress (Inc. Sunburn)
- Other: _____

Vehicle/Heavy Equipment 5

- Drill Rig "KILL" Switches
- Operation & Inspection
- Preventive Maintenance
- Rotating Augers/Moving Parts

First Aid

- ↪ Facilities/Kits/Eyewashes

Sanitation & Hygiene

- ↪ Drinking Water/Fluids
- ↪ Restrooms
- ↪ Personal Cleanliness

Personal Protective Equipment - Level D

- ↪ Hard Hats/Hearing Protection
- ↪ Steel-Toed Boots
- ↪ Glasses/Goggles/Shields
- ↪ Gloves
- Contingency: Level C
- Respirators & Tyvek/Saranex

Housekeeping

- ↪ Waste Containers
- ↪ Waste Materials
- ↪ Waste Water/Decon. Water - Tank

Emergency Procedures/Site Safety

- ↪ "Buddy System"
- ↪ Communication
- Facility-Specific Regulations
- Rally Point

Fire Prevention

- ↪ Locations of Extinguishers
- ↪ Smoking
- Hot Work
- Explosive & Flammable Liquids
- Other: _____

Emergency Facilities (and Directions)

Name: Mt. View
 Address: East Lohman - Las Cruces
 Tel. No.: 911

Safety Meeting Attendees:

Name	Signature	Name	Signature
<u>Alicia C. Orantia</u>	<u>Alicia C. Orantia</u>		
<u>Larri Erstad</u>	<u>Larri Erstad</u>		

Tailgate Safety Meeting

Project ID: 6818P184 Day: Thurs
 Location: Griggs - Las Cruces Date: 5-9-19
 Project Coordinator: _____ No. of Personnel Present: 2

Check Topics Discussed

Scheduled Activities: Pump, GUMW - 08 & 09 Sample CLEJO

Chemical/Physical Hazards
 Contaminants of Concern - PCE
 Material Safety Data Sheets
 Overhead & Underground Utilities
 Extraordinary Site Conditions - woven
 Lifting/Slips/Trips/Falls
 Heat/Cold Stress (Inc. Sunburn)
 Other: _____

Vehicle/Heavy Equipment 6
 Drill Rig "KILL" Switches
 Operation & Inspection
 Preventive Maintenance
 Rotating Augers/Moving Parts

First Aid
 Facilities/Kits/Eyewashes TRUCK

Sanitation & Hygiene
 Drinking Water/Fluids
 Restrooms
 Personal Cleanliness

Personal Protective Equipment - Level D
 Hard Hats/Hearing Protection
 Steel-Toed Boots
 Glasses/Goggles/Shields
 Gloves
 Contingency: Level C
 Respirators & Tyvek/Saranex

Housekeeping
 Waste Containers
 Waste Materials
 Waste Water/Decon. Water - TANK


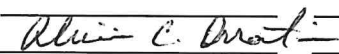
Emergency Procedures/Site Safety
 "Buddy System"
 Communication
 Facility-Specific Regulations
 Rally Point

Fire Prevention
 Locations of Extinguishers - TRUCK
 Smoking
 Hot Work
 Explosive & Flammable Liquids
 Other: _____

Emergency Facilities (and Directions)

Name: Mt. View
 Address: East Lohman
 Tel. No.: 911

Safety Meeting Attendees:

Name	Signature	Name	Signature
<u>LARI ERSTAD</u>			
<u>ALICIA C. ORNSTEIN</u>			

Daily Site Safety Checklist

Job Name and Number: 6818P186 CLC Griggs & Walnut
 Person Completing Form: Larri Erstad Date(s): 5-2 → 5-9 -19

Instructions: Use form for up to five consecutive days. Write in date, place checkmark to indicate item has been completed. Deficiencies must be corrected. Completed form to be maintained with the Project files and a copy submitted to the Office Manager.

Checklist Item	Date				
	5/2/19	5/6/19	5/7/19	5/8/19	5/9/19
The HSP (including emergency phone numbers) has been reviewed and signed by JSP staff, subcontractors, and visitors, and is available at the site.	✓	✓	/	✓	✓
SDSs are available for each hazardous chemical at the site.	✓	✓	/	✓	✓
Tailgate Safety Meeting has been conducted for all site workers and visitors (and updated as necessary).	✓	✓	/	✓	✓
Copies of Hospital Route map and emergency phone numbers are available in all vehicles.	✓	✓	/	✓	✓
An operating, fully charged cell phone is available at the site.	✓	✓	/	✓	✓
A fully stocked first aid kit and eye wash bottle are readily available.	✓	✓	/	✓	✓
Fire extinguishers are available for use and are fully charged.	✓	✓	/	✓	✓
All workers and visitors have training and medical monitoring appropriate for assigned tasks.	✓	✓	/	✓	✓
JSP personnel and subcontractors have discussed hazards associated with site-specific work.	✓	✓	/	✓	✓
Any potential slips, trips, or fall hazards have been identified and mitigated where possible.	✓	✓	/	✓	✓
Site control measures have been established for present conditions (e.g., safety cones or caution tape).	✓	✓	/	✓	✓
Proper PPE has been identified and is being used for present conditions.	✓	✓	/	✓	✓
Personnel monitoring is being conducted for present conditions.					
On-site equipment is noted and is in safe working order.					
Electrical power operated tools are properly grounded and used with a GFCI.					
Excavated soils are properly stored and labeled.					
Excavations are properly shored/sloped and barricaded.					
Used disposable PPE and garbage are bagged for proper disposal.	✓	✓	/	✓	✓
All Health and Safety concerns have been communicated to the SSO and the Project Coordinator.	✓	✓	/	✓	✓

Tailgate Safety Meeting

Project ID: 6818P186 Day: Thursday
 Location: Las Cruces Date: 5-2-19
 Project Coordinator: _____ No. of Personnel Present: 1

Check Topics Discussed

Scheduled Activities: Measure CIC 20 @ GWMW-15S, 15D, @ 15I

Chemical/Physical Hazards

- Contaminants of Concern PCE
- Material Safety Data Sheets
- Overhead & Underground Utilities
- Extraordinary Site Conditions
- Lifting/Slips/Trips/Falls ✓
- Heat/Cold Stress (Inc. Sunburn) Heat
- Other: _____

Vehicle/Heavy Equipment ⊗

- Drill Rig "KILL" Switches
- Operation & Inspection
- Preventive Maintenance
- Rotating Augers/Moving Parts

Sanitation & Hygiene

- Drinking Water/Fluids ✓
- Restrooms
- Personal Cleanliness

First Aid

- Facilities/Kits/Eyewashes ✓

Personal Protective Equipment - Level D

- Hard Hats/Hearing Protection ✓
- Steel-Toed Boots ✓
- Glasses/Goggles/Shields ✓
- Gloves ✓
- Contingency: Level C
- Respirators & Tyvek/Saranex

Housekeeping ⊗

- Waste Containers
- Waste Materials
- Waste Water/Decon. Water

Fire Prevention

- Locations of Extinguishers -truck
- Smoking
- Hot Work
- Explosive & Flammable Liquids
- Other: _____

Emergency Procedures/Site Safety ⊗

- "Buddy System"
- Communication
- Facility-Specific Regulations
- Rally Point

Emergency Facilities (and Directions)

Name: Mountain View Hospital
 Address: East Lohman
 Tel. No.: 911

Safety Meeting Attendees:

Name	Signature	Name	Signature
<u>Lami Erstad</u>	<u>[Signature]</u>	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

3-19

Re-Sampled CLC ~~X~~18 @ 1320

Re-Sampled CLC 27 @ 1327

5-2-19

Measure DTW - Arrived CLC 20 @ 1402 Left 1410

	DTW	Time
CLC 20 -	238.60	1404

Arrived Gwmw15 @ 1430 Left @ 1505

Gwmw15-S 241.1 1445

Gwmw15-ID 241.7 1452

Gwmw15-D 241.7 1458

5-6-19

GUMW-10 - Arrive 0815

Bill called Kelly
~ 10:10 AM

Tag	222.93
Port 1	222.58
2	222.67
3	222.69
4	222.65
5	222.58
6	222.62
7	222.65

Added 15 gals

Tag = 213.64

DB Stevens suggested we move to GUMW-09

GUMW-09

Arrived ~ 1430

Tag	212.26
Port 1	212.00
2	212.37
3	212.02
4	212.05
5	211.29
6	211.36
7	211.82

1545
measured
GUMW-10Added 18 gals
Tag 206.05

5-7-19

Bill & Larri & Alicea

GUMW-08

Arrive - 0700

Tag	172.06
Port 2	172.07
4	172.13
5	172.14
6	173.22
7	172.12

Added 14 1/2 gal

Tag - 162.60

GUMW-01 Arrive - 1530

Tag	196.29
port 1	189.80
2	189.78
3	189.93
4	190.37
5	190.29
6	190.04
7	189.8
Added	14 gal
Tag	181.43

Arr'd
Alicea - 0752

Bill left - 0800

Alicea left - 1230

Bill Arr'd ~ 1210

5-7-19 approx 1620 -

Bill Casadevall instructed

Terracon to start purging

the wells on 5-8-19 &

then get DTW measurement

after the purge

process.

5/8/19 GWMW-01 Arrived 0715
Alicia & Larr

began set-up.

purge pressure 175 psi

0812 began purge on Port #1, #2, #3, #4
0814 purge water began #3, #4, #1, #2
0822 blew #2, #1, #3, #4 - ~~1/2~~ gal ea. 1 3/4 gal
0840 began purge on Port #5, #6, #7
0841 purge water began #6, #7, #5
#6 - light tan #7 - slight black debris
0850 blew #6, #7
0853 blew #5 1 3/4 gal ea.
Slight odor in purged water

Moved to Gwmw-10 @ 0905

DTW GWMW-01 5-8-19 Arrived 1102

Port	DTW	TIME	
1	191.04	1119	3.96 3.96
2	190.88	1123	4.12
3	191.99	1127	3.01
4	191.95	1130	3.05
5	192.05	1134	2.95
6	191.9	1137	3.1
7	191.77	1140	3.23
TAG	191.94	11:15	3.00

5/8/19 GWMW-10~~8~~ Arrived 0910

Set-up

Purge Pressure 180 psi

Alicia &
Larr

0929 began Purge #1, #2, #3, #4
0931 purge water began #1, 2, 3, 4
0940 blew #2, #3, #4 - 2 gals ea
light tan in Color light odor
1030 #1 purged 1/4 gal did NOT Blow only
dripped. - Allowed to stay pressurized
longer

* Port #1 NOT Purging properly -

1032 began purge #5, #6, #7
1033 purge water began #7, #6, #5
1043 blew #5, #7, #6 - 2 gal ea
light tan in Color light Odor

1055 Moved back to GWMW-01

Port	Time	DTW
Tag	1423	220.28
1	1352	220.37
2	1358	220.47
3	1403	220.42
4	1408	220.47
5	1412	220.55
6	1416	220.46
7	1419	220.53

Done
1445

Rite in the Rain

5/8/19 CLC 20

Alicea & Larrri

Arrived 1500

measured rope & attached hydrastore
@ 335'

Set Hydra Sleeve @ 1545

Done @ 1615

Calibrated YSI 5/9/19 @ 0800

Digport
237.25

	Temp	pH
7.0	22.32C	7.0
10.0	21.70	10.0

CLC 20	Arrived	0850	Alicea & Larrri
Sample	CLC 20		

Temp ^o	Conductivity	DO%	DO mg/L	pH
-------------------	--------------	-----	---------	----

NO Sample

When the hydrastore was retrieved it was dry. The 2 other openings, where DTW was measured are too small in diameter to set the hydrastore.

There must be some obstruction within the well.

Left @ 1108

5-9-19 GWMW-08 Alicea & Larrri

Arrived 0715

Purge pressure 167 psi
Set up * parts #1 #2 inoperable

0748 began purge #3, #4, #5, #6

0750 purge water began #4, 5, 3, 6

0755 blew #3, #5, #4, #6 - 1/3/4 gal ea.

began port #3 - tan in color No odor

0808 began purge #7

0809 purge water began #7

0816 blew #7

Left 0840 to
CLC 20

Tag	DTW	Time
# 3	172.5	1545
# 4	172.41	1548
# 5	172.57	1552
# 6	172.51	1556
# 7	172.67	1600
	172.47	1603

5-9-19 GWMW-09

Alicia & Lari

Arrived 1125

Set up - Avg Pressure 196psi

1144 began purge on #1, #2, #3, #4

1145 purge water began #3, #2, #1, #4

1158 blew #1, #3, #4, #2 - 2 1/4 gal ea
#1 - tan in color - Odor all

1214 began purge on #5, #6, #7

1215 purge water began #5, #6, #7

1223 blew #5, #7, #6 - 2 1/4 gal ea
light tan in color - Odor

Lyt @ 1310

Discharged 45 gallons @ WWTP

WRONG WELL			GWMW-09		
Tag	DTW	TIME	Port	Time	DTW
3	172.5	1545	1	1619	210.37
4	172.41	1548	2	1622	210.42
5	172.57	1552	3	1626	210.44
5	172.51	1556	4	1629	210.39
			5	1632	210.42
			6	1635	210.43
			7	1639	210.37
			Tag	21616	210.48

Appendix F
FLUTe Well Evaluation



FLUTE Well Evaluation

1. Background

The Griggs–Walnut Ground Water Plume Superfund Site (GWP site) groundwater monitoring network includes six Flexible Liner Underground Technologies (FLUTE) wells, which are depth discrete multi-port wells. These wells were installed in 2002 and 2003 under the oversight of the U.S. Environmental Protection Agency (EPA) as part of the remedial investigation (RI) at the GWP site (CH2MHill, 2006). The wells currently included in the EPA-approved GWP site sampling and analysis plan (SAP) include GWMW-01 (7 ports), GWMW-03 (3 ports), GWMW-06 (ports 1 and 2), GWMW-08 (5 ports), GWMW-09 (7 ports), and GWMW-10 (7 ports).

FLUTE well construction at the GWP site is discussed in the RI report (CH2MHill, 2006). Each FLUTE well was constructed using 6-inch-diameter steel well casing within a 12-inch-diameter borehole. Cement grout was injected into the annular space surrounding the steel casing. After steel casings and the cement grout were in place, well casings and the cement grout were perforated at the designated sampling intervals using cyclonite explosive charges. Each perforated interval was 10 feet long with 20 perforations per screened interval.

FLUTE sampling port and liner installation are discussed generally in Cherry et al. (2007) and specific to the GWP site in CH2MHill (2006). The FLUTE system relies on a flexible liner to seal off the separate sample zones within the well casings. At each perforated sampling interval, a permeable mesh spacer is attached to the liner material to allow water to flow from the screened zone to the sampling port. The mesh forms a pervious but thin (1- to 2-millimeter) annulus between the liner and the steel casing, and it intersects all groundwater flow paths that encounter the casing perforations in that interval. A sampling port is placed through the liner and into the mesh spacer, and is connected to tubing inside the flexible liner. The tubing for each sampling port is connected to a designated pump tube and a sample tube, allowing for pressurization and sample collection during monitoring events (Figure 1).

The FLUTE system relies on sufficient dilation (also referred to as “inflation”) of the flexible liner to create and maintain a seal between the various depth-discrete sampling ports. Dilation is



achieved by maintaining water within the interior of the liner approximately 10 to 15 feet higher than the head of the surrounding formation.

2. Motivation

Per EPA's request, as part of the annual sampling event, FLUTE well representative Ian Sharp was at the GWP site to provide training on proper maintenance, sampling, and water level monitoring procedures. The training was conducted on January 4, 2019 and FLUTE well sampling was conducted from January 4 to 11, 2019. Water level measurements and groundwater quality samples were collected in accordance with the written standard operating procedure (SOP) included in the SAP, as well as in conjunction with verbal directions provided by Mr. Sharp (specifically, how long is appropriate to wait between purging ports and measuring the water level in each port).

Review of data collected from the FLUTE wells as part of the annual sampling event identified the following potential issues:

- Upon arrival at most of the FLUTE wells (GMMW-1, GMMW-3, GMMW-8, GMMW-9, and GMMW-10) the water level within the flexible liner was very similar to or less than the groundwater elevation in the surrounding formation, indicating lack of sufficient liner dilation.
- The final groundwater level measurements in different ports at each FLUTE well were virtually identical (i.e., less than 1 foot difference for GMMW-01, GMMW-06, and GMMW-10). Based on the concurrent data for the conventional (non-FLUTE) wells, and historical data for the FLUTE wells, larger difference in the ports are expected, reflecting a downward vertical gradient.
- The water level elevations calculated from measured depths to water for the FLUTE wells were several feet higher than those for other non-FLUTE wells in the network.
- In some FLUTE wells where large differences (>15 micrograms per liter [$\mu\text{g/L}$]) in PCE concentrations had previously been observed between ports, January 2019 PCE



concentrations were very similar to each other (within 5 µg/L). Port-specific water quality data are available for the last four years, and were compared to water quality data results from 2019. In the 2018/2019 event, FLUTE wells GMMW-09 and GMMW-10 had very similar PCE concentrations across ports compared to many of the earlier events.

These observations suggest that the FLUTE ports were not isolated from one another in the period prior to the sampling event due a lack of dilation of the FLUTE liner. Without sufficient dilation, there would not be a good seal between intervals, and water within the FLUTE wells would be able to blend across ports. Although water is added to the liner prior to sampling (consistent with SOPs), if a competent seal is not maintained in the period between sampling events, the sampled water quality results are likely biased due to blending between ports prior to the sampling event when there is no seal.

Mr. Sharp from FLUTE was contacted and the well setup, sampling, and water level measurement procedures that were used during the sampling were reviewed and found to be consistent with FLUTE guidance. Mr. Sharp indicated, however, that the FLUTE liners do have an operational shelf life; based on the information collected and the age of liners (over 15 years old), Mr. Sharp confirmed that the FLUTE well liners at the GWP site are likely at the end of their life and require replacement. He also confirmed that if the liners lack sufficient integrity, the samples collected during the 2018/2019 event would not be representative of the surrounding formation.

3. Well Integrity Testing

Based on recommendation by Mr. Sharp of FLUTE, a testing procedure was performed to further evaluate the integrity of the FLUTE well liners. The general FLUTE well testing procedure consisted of the following steps:

1. Upon arrival at each well, measure water level in the liner and all ports.
2. Add water to the liner to the “fill level.” The fill level should be approximately 10 feet above the current groundwater elevation in the port with the highest groundwater elevation. Record the volume of water added. Use potable water to fill the liner.



3. Track and time the water level in the liner frequently (once per minute or at sufficient frequency to detected changes of 0.2 foot). Add additional water to the liner to the fill level when the water level falls to a pre-determined target level (approximately 5 feet below the fill level), or more than 1 hour after water is added, whichever comes first. It is important that the fill level be consistent so that there is the same driving head each time.
4. Continue Step 3 until the rate of water level decline either approaches zero or stabilizes at a consistent value for a period of several hours.
5. Measure the water level in each port as described in the SOP (Ports must be fully purged and allowed to recharge before an accurate water level can be measured per the SOP.).
6. Wait 12 to 24 hours after completing testing, and then measure the water level in the liner again.

The procedure outlined above is intended to capture the following processes: (1) water is added to the liner, (2) the added water must make its way down to the standing water level in the liner (about 200 hundred feet); during this time the water level in the liner will rise. After the added water has reached the water currently in the liner, the water level in the liner will begin to fall. The water level fall may be due to a combination of factors:

- The well liner may be underdiluted, and the added water is providing pressure to fully inflate the well liner and press it against the well casing.
- The well liner may lack integrity from tears, holes, or degradation of the liner material itself, and water is leaking out of the liner into the casing and formation.

Under most circumstances, the rate of water level change inside the liner will be highest in the beginning and will slowly reduce from that initial rate as the liner dilates. If the rate stabilizes, that is an indication that the liner has been breached. If the rate continues to slow each time it is measured after water addition, that can be an indication that the integrity of the liner is satisfactory. FLUTe indicated that the time required to complete the test should be a few hours,



but that the test time would be determined by the permeability of the formation and is unique to each borehole.

Liner integrity testing for GMMW-08, GMMW-09, and GMMWM-10 was completed on May 6 and 7, 2019. The complete data from the liner integrity tests are included in Attachment 1. Based on the rate of water level fall, water levels in the wells were not measured the following day (Step 6 above) in all cases. Data collected usually captured some water level rise (as the added water filled the well liner), and water level fall. Figures 2 through 4 show the depth to water level data collected during the test as the water level was falling.

The volume of water added to the liner is relatively small (6.5 percent or less of the total volume of water within the liners). For example, in GMMW-10, a total of 22 gallons of water was added to the liner; the total volume of water in storage in the liner is 560 gallons. The total volume of water added to each well is provided in Attachment 1.

At GMMW-08 (Figure 2) and GMMW-09 (Figure 3), the rate of water level fall was fairly consistent for a period of several hours, indicating a compromised liner. For GMMW-10, the rate of water level fall decreased slightly across the three tests (Figure 4); however, the magnitude of the fall in each test raised red flags regarding liner integrity, and water level decline continued for the full duration of the test (31 hours), indicating that the liner lacks integrity.

Based on these results, DBS&A concluded that the well liners in the wells that were tested (GMMW-08, GMMW-09, and GMMW-10) lack integrity and that the FLUTE well data are not valid. FLUTE data in these locations have therefore been qualified as “Rf (Rejected, FLUTE well liner lacks integrity).” Based on these tests, it is likely that the remaining FLUTE well liners that were not tested also lack integrity.

4. Toluene and Arsenic Leaching

Cherry et al. (2007) state that leaching of toluene, total organic carbon (TOC), and arsenic from FLUTE liner material has been documented in field systems and laboratory tests. Toluene,



which is used in the production of the urethane coating, has been found in the groundwater samples at concentrations of several hundred $\mu\text{g/L}$, with more typical values of 10 to 70 $\mu\text{g/L}$ soon after the liner installation. The liner material also contains arsenic to prevent mildew formation. In laboratory tests, arsenic was present at concentrations as high as 200 $\mu\text{g/L}$ in water that had contacted liner samples for periods of several weeks.

Historical GWP site toluene and arsenic data for FLUTE and non-FLUTE wells were compared to evaluate potential leaching from the FLUTE liners and bias of results for these compounds. For toluene, data were available in the DBS&A environmental database from 2012 to 2019 for both the FLUTE and non-FLUTE wells. Figure 5 presents a comparison of histograms of toluene concentrations for the FLUTE and non-FLUTE wells (non-detect results are plotted at one-half the reporting limit). Toluene was not detected in any sample from the non-FLUTE wells; therefore, all results are plotted in the “0–5 $\mu\text{g/L}$ ” bin of the histogram. In contrast, toluene was detected at concentrations as high as 110 $\mu\text{g/L}$ in the FLUTE wells. These results indicate that toluene is leaching from the FLUTE liners and that toluene results at the FLUTE locations are therefore biased. For this reason, current and historical toluene detections at the FLUTE locations have been qualified as “RI (Rejected, constituent leaches from FLUTE liner).”

Similar histograms for arsenic are presented in Figure 6. Arsenic data were available for the FLUTE wells for 2017 and for non-FLUTE wells for 2012–2018. Arsenic is known to be naturally occurring in the vicinity of the GWP site; however, arsenic leaching from the FLUTE liners may bias the results higher than they would be otherwise. Arsenic detections at the FLUTE wells appear higher than those at the non-FLUTE wells, with a greater frequency of detection at concentrations of 5 to 120 $\mu\text{g/L}$. The GWP site RI (CH2MHill, 2007) also noted discrepancy of arsenic concentrations between the FLUTE and non-FLUTE wells. For these reasons, GWP site arsenic data from the FLUTE wells have been qualified as “RI (rejected, constituent leaches from FLUTE liner).”

5. Recommendations

Based on the 2018/2019 event sampling results, consultation with the FLUTE manufacturer, and the field integrity testing described above, DBS&A makes the following recommendations:



- Revisions to the groundwater monitoring network should be made to address the FLUTE well deficiencies. Recommendations regarding whether FLUTE wells should have their liners replaced or whether conventional wells should be constructed and used moving forward instead will be outlined in an upcoming memorandum to be submitted to EPA.
- If the FLUTE well liners are replaced and the FLUTE wells continue to be used, water should be added to the liners at least once per year—ideally several times per year—to maintain the water pressure within the liner.
- The site-specific FLUTE SOP will be modified to indicate that water should be added to the liner at least 24 hours prior to water quality sampling. In addition, the water level in the liner will need to be at least 10 feet above the water level in the port with the highest water elevation immediately prior to purging for sampling.
- Data collected from the FLUTE wells have been rejected in some instances due to lack of liner integrity, and in the case of arsenic and toluene, due to leaching of those constituents from the liner material.

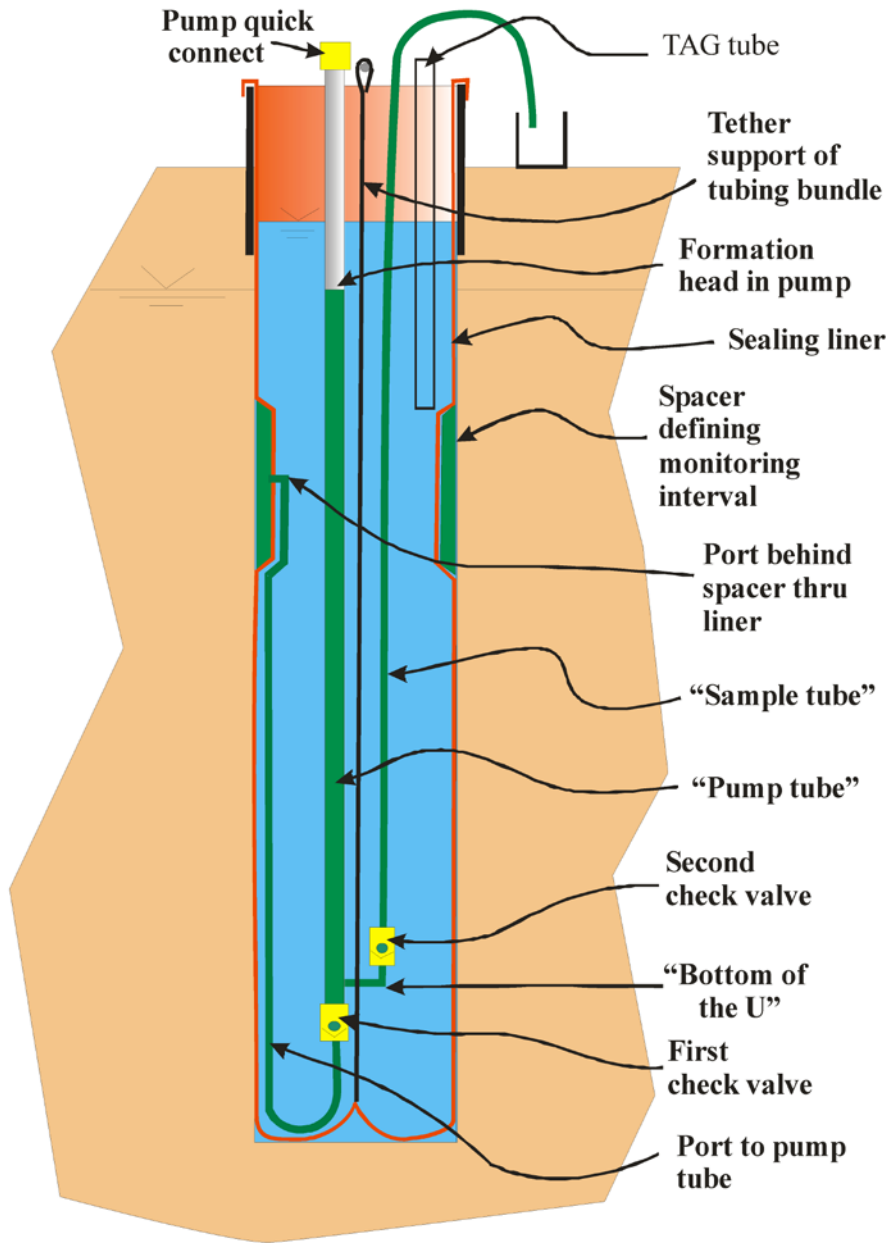
References

CH2M Hill. 2006a. *Remedial investigation report, Version 1.2, Griggs and Walnut Ground Water Plume Superfund Site, Las Cruces, New Mexico*. November 2006.

CH2M Hill. 2006b. *Feasibility study report, Version 1.2, Griggs and Walnut Ground Water Plume Superfund Site, Las Cruces, New Mexico*. November 2006.

Cherry, J.A., B.L. Parker, and C. Keller. 2007. A new depth-discrete multilevel monitoring approach for fractured rock. *Ground Water Monitoring and Remediation* 27(2): 57–70.

(Single port system shown for clarity)



GRIGGS-WALNUT GROUND WATER PLUME SITE
REMEDIAL ACTION
FLUTe Well Pump System



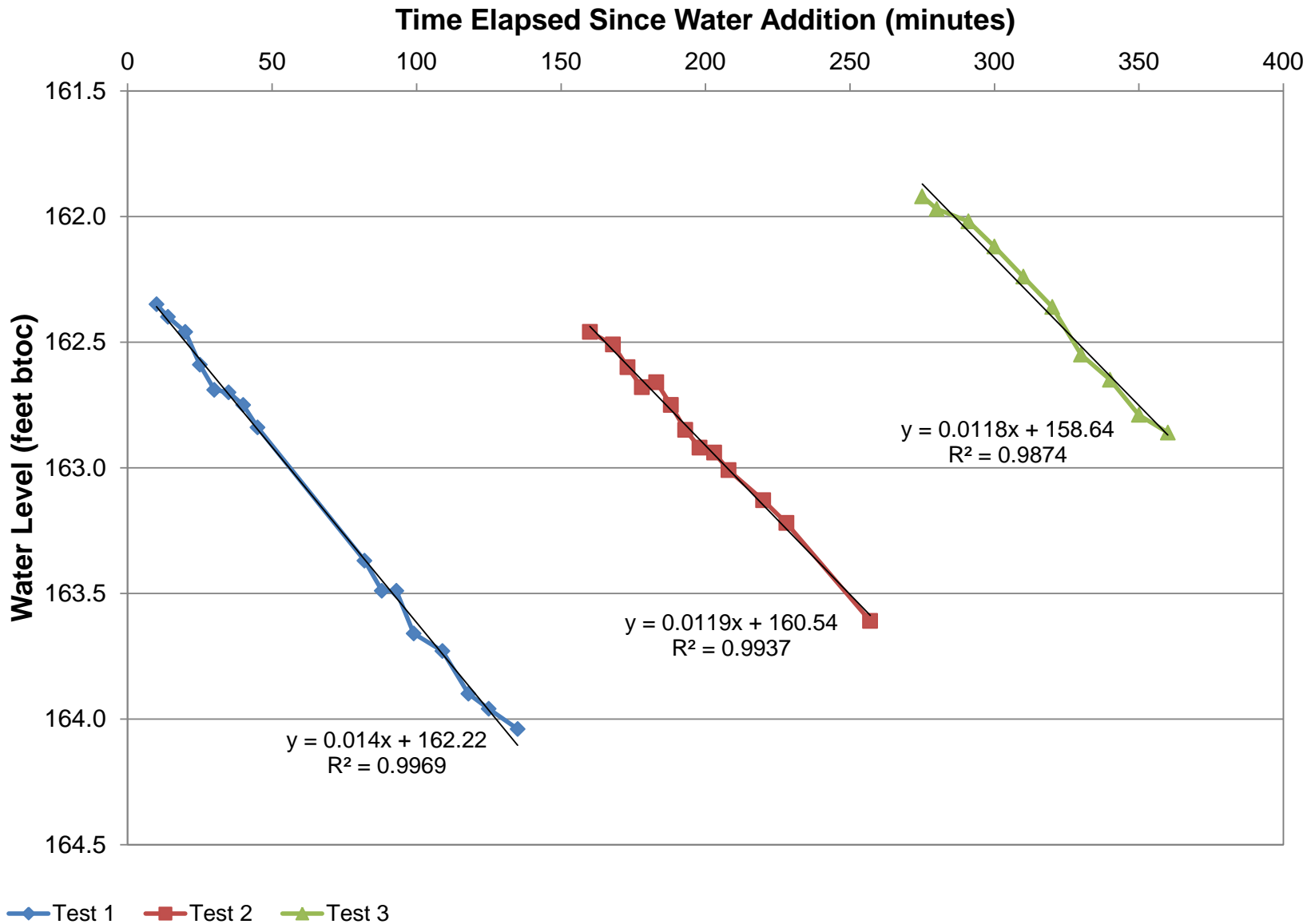


Figure 2



Daniel B. Stephens & Associates, Inc.

5/22/19

GRIGGS-WALNUT GROUND WATER PLUME SITE
REMEDIAL ACTION

Falling Water Level Data, GWMW-08

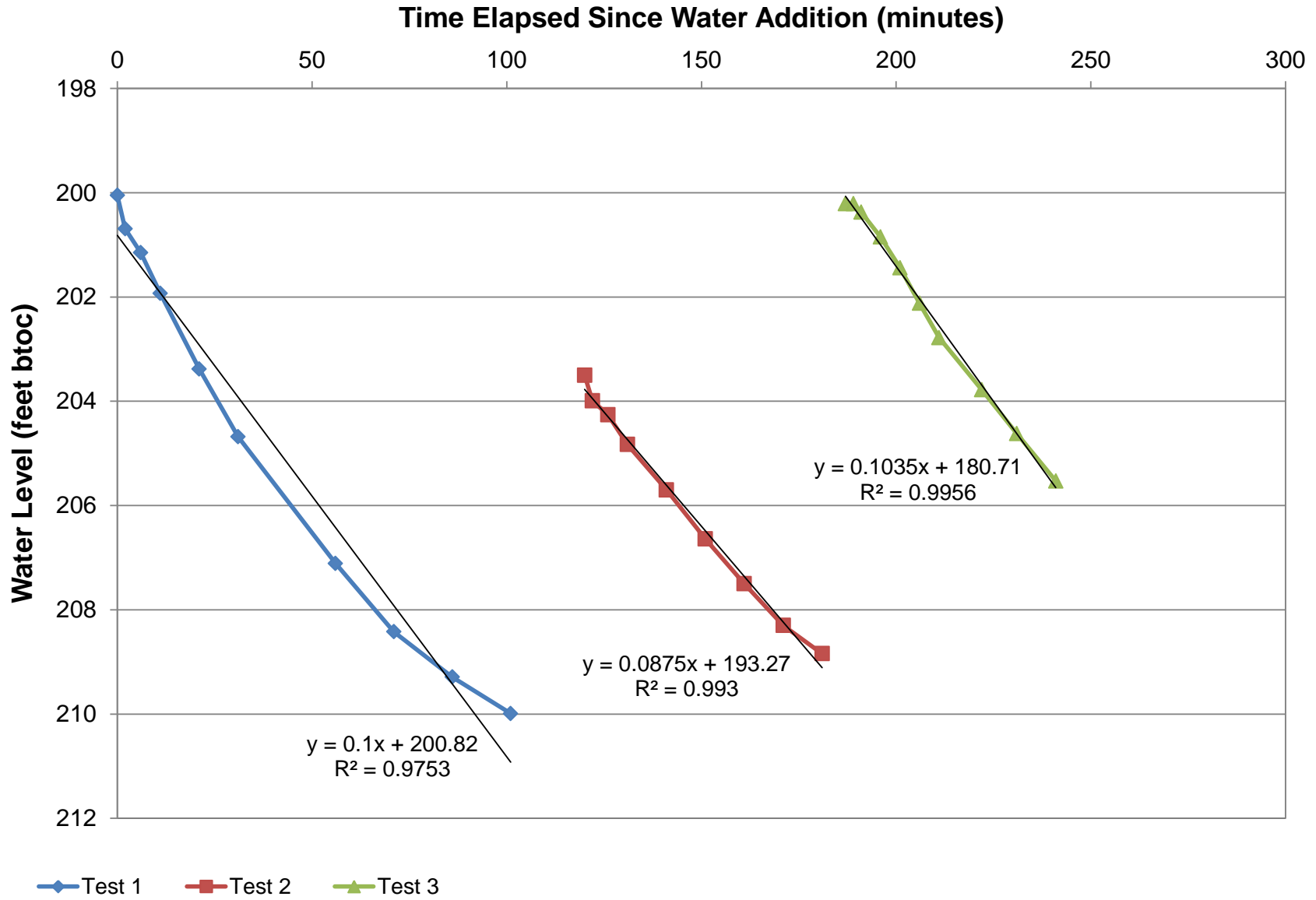


Figure 3



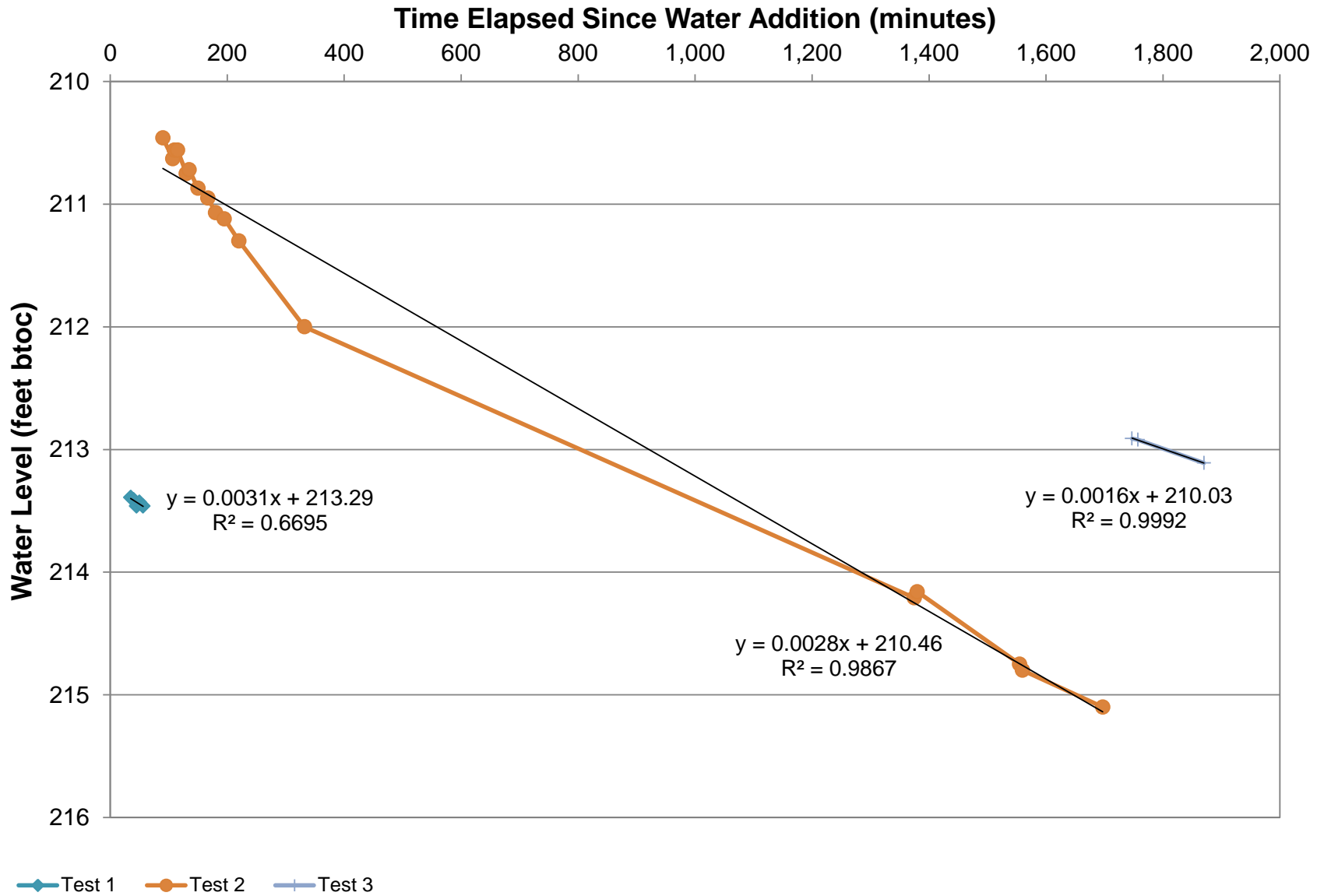
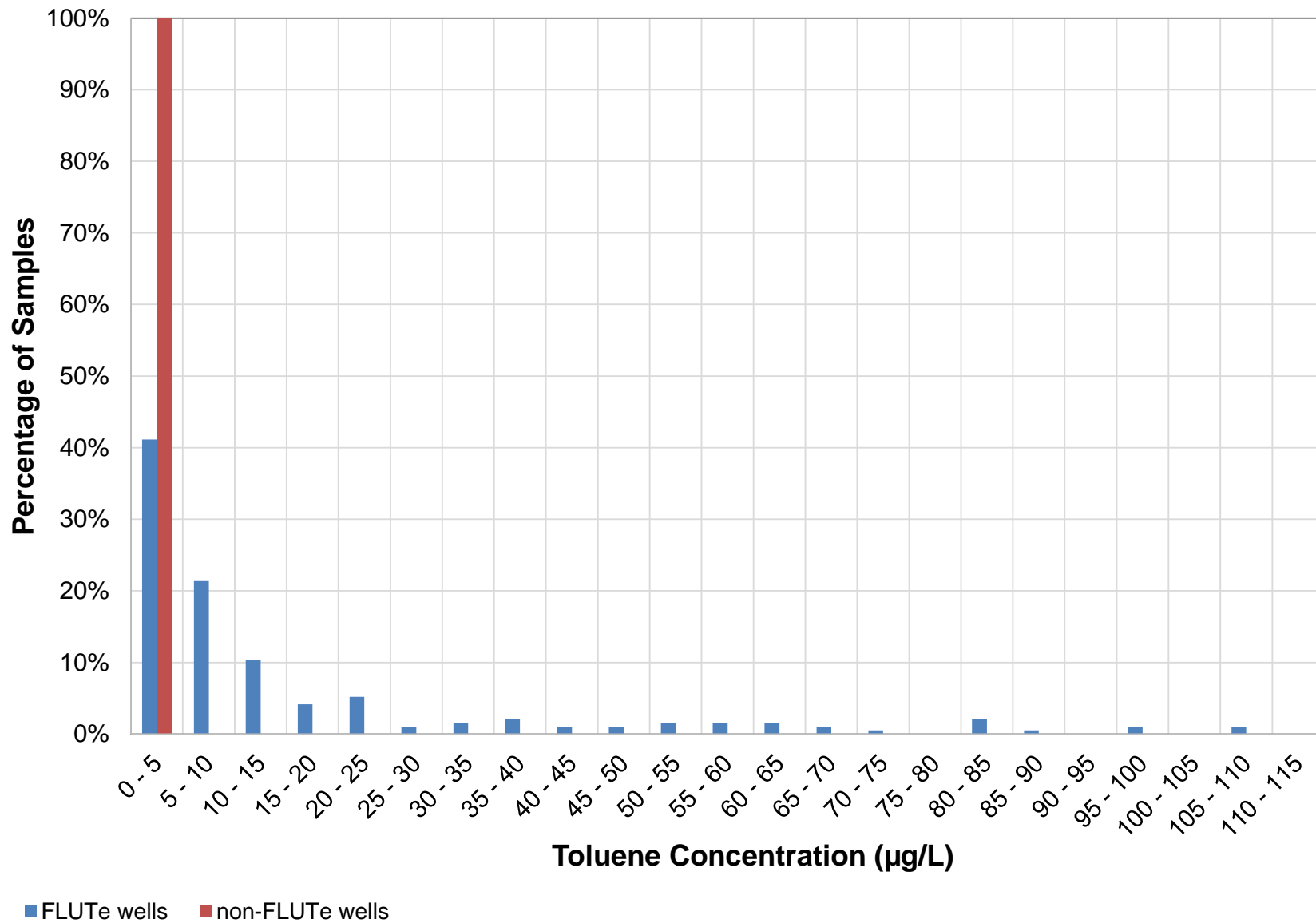


Figure 4





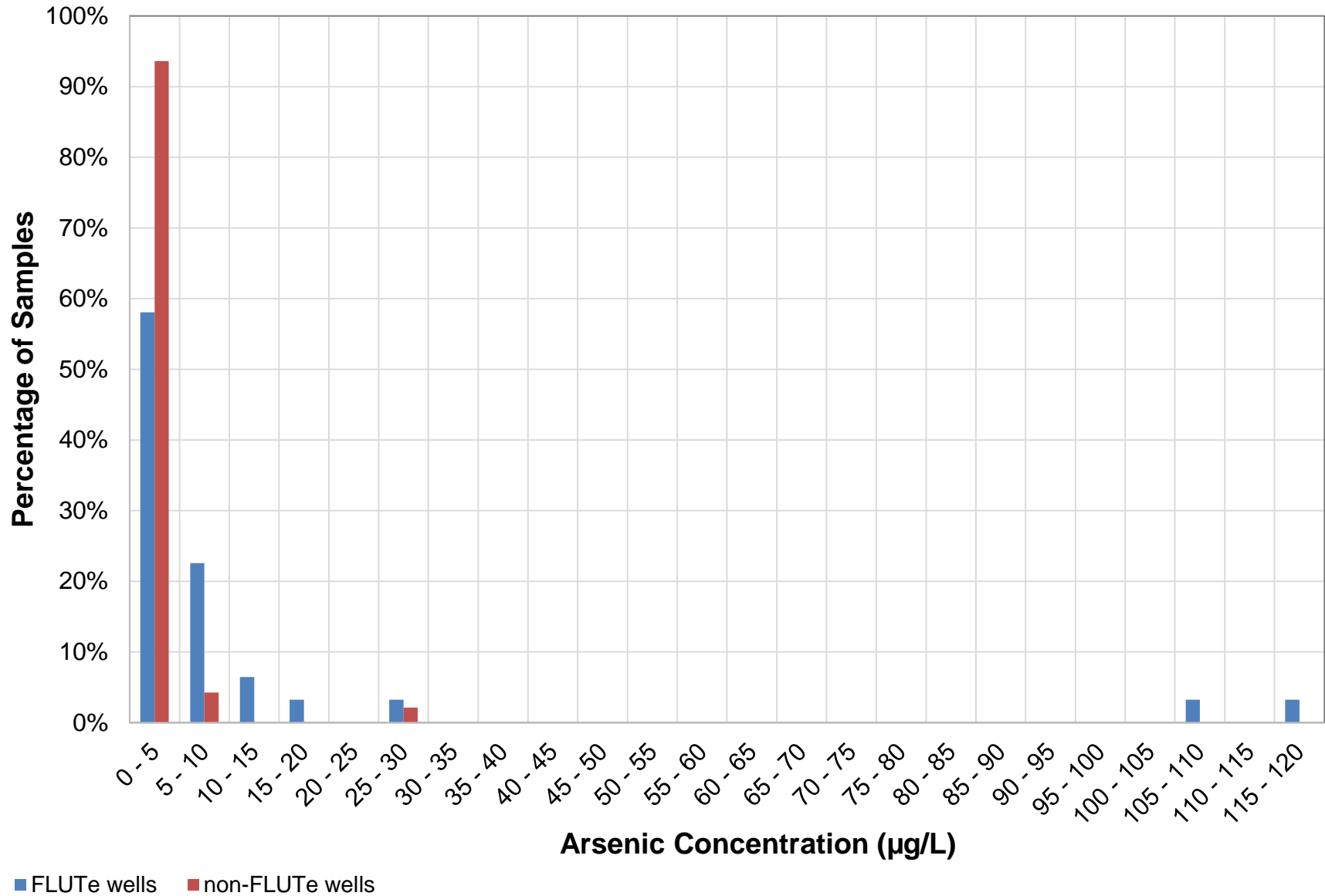
GRIGGS-WALNUT GROUND WATER PLUME SITE
REMEDIAL ACTION
Toluene Histogram

Figure 5



Daniel B. Stephens & Associates, Inc.

5/22/19



GRIGGS-WALNUT GROUND WATER PLUME SITE
REMEDIAL ACTION
Arsenic Histogram

Figure 6



Attachment 1

**Field Data from FLUTe Well
Liner Integrity Testing**

Griggs Walnut Ground Water Superfund Site FLUTE Well Testing Program

Well Name GMMW-08
 Staff Erstad, Casadevall

Date 5/7/2019
 Weather Cloudy, 67F

Volume of Water Added
14.5 gallons
7:46 time

Volume of Water Added
3 gallons
10:15 time

Volume of Water Added
3 gallons
12:15 time

Volume of Water Added				Volume of Water Added				Volume of Water Added					
Time	Time Elapsed	Water Level	Rate of change feet/min	Time	Time Elapsed	Consecutive	Water Level	Rate of change feet/min	Time	Time Elapsed	Consecutive	Water Level	Rate of change feet/min
7:55	0	162.6		10:20	0:00	145.00	162.75		12:20	0	265.00	161.96	
7:58	3.00	162.48	0.04	10:25	5.00	150.00	162.5	0.05	12:27	7.00	272.00	161.92	0.01
8:01	6.00	162.43	0.02	10:30	10.00	155.00	162.42	0.02	12:30	10.00	275.00	161.92	0.00
8:05	10.00	162.35	0.02	10:35	15.00	160.00	162.46	-0.01	12:35	15.00	280.00	161.97	-0.01
8:09	14.00	162.4	-0.01	10:43	23.00	168.00	162.51	-0.01	12:46	26.00	291.00	162.02	0.00
8:15	20.00	162.46	-0.01	10:48	28.00	173.00	162.6	-0.02	12:55	35.00	300.00	162.12	-0.01
8:20	25.00	162.59	-0.03	10:53	33.00	178.00	162.68	-0.02	13:05	45.00	310.00	162.24	-0.01
8:25	30.00	162.69	-0.02	10:58	38.00	183.00	162.66	0.00	13:15	55.00	320.00	162.36	-0.01
8:30	35.00	162.7	0.00	11:03	43.00	188.00	162.75	-0.02	13:25	65.00	330.00	162.55	-0.02
8:35	40.00	162.75	-0.01	11:08	48.00	193.00	162.85	-0.02	13:35	75.00	340.00	162.65	-0.01
8:40	45.00	162.84	-0.02	11:13	53.00	198.00	162.92	-0.01	13:45	85.00	350.00	162.79	-0.01
9:17	82.00	163.37	-0.01	11:18	58.00	203.00	162.94	0.00	13:55	95.00	360.00	162.86	-0.01
9:23	88.00	163.49	-0.02	11:23	63.00	208.00	163.01	-0.01					
9:28	93.00	163.49	0.00	11:35	75.00	220.00	163.13	-0.01					
9:34	99.00	163.66	-0.03	11:43	83.00	228.00	163.22	-0.01					
9:44	109.00	163.73	-0.01	12:12	112.00	257.00	163.61	-0.01					
9:53	118.00	163.9	-0.02										
10:00	125.00	163.96	-0.01										
10:10	135.00	164.04	-0.01										

Rate of Change over whole test
 -0.012 ft/min -0.6 days to fall 10 ft

Rate of Change over whole test
 -0.010 ft/min -0.7 days to fall 10 ft

Rate of Change over whole test
 -0.011 ft/min -0.7 days to fall 10 ft

Water Levels from entire well

Time:	0720	Liner	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7				
Initial		172.06	--	--	172.07	172.13	172.14	173.22	172.12				

NOTES

Positive rate of change = water level rising
 Negative rate of change = water level falling

Appendix G

Letter Sent to Agencies and Agency Responses



Joint Superfund Project

City of Las Cruces and Doña Ana County



February 26, 2019

Mr. Mark Garman, Program Manager
Superfund Oversight Section
New Mexico Environment Department
Ground Water Quality Bureau
P.O. Box 5469
Santa Fe, NM 87502-5469

Dear Mr. Garman:

Thank you for your help and support to the City of Las Cruces and Dona Ana County, acting as the Joint Superfund Project (JSP) for the Griggs and Walnut Ground Water Plume Superfund Site (GWP). The United States Environmental Protection Agency (EPA) issued a new Unilateral Administrative Order (UAO) with a January 4, 2018 effective date.

In accordance with the UAO Scope of Work, Paragraph 11.e., an Institutional Control Implementation and Assurance Plan (ICIAP) was developed and approved by EPA. As part of the ICIAP, we are required to contact you annually to inquire and determine if any new releases have occurred that may affect groundwater or the remediation efforts within the plume footprint. We believe that no releases have occurred but appreciate you reviewing your records and notifying us of any new releases that may affect our remediation efforts.

Attached for your review, is a map depicting the well moratorium (plume footprint) instituted October 6, 2011, by the New Mexico Office of the State Engineer. Because the remediation project started in 2012, we are requesting any information related to releases between 2012 and 2018 within the plume footprint or buffer zone you may have.

We appreciate your assistance in this matter, and respectfully request your response for the following:

- Confirm that no new releases have been reported in the plume footprint OR
- If new releases have been reported in the plume footprint, please indicate:
 - location
 - date of release
 - contact person and information so that the JSP can coordinate data sharing

Mr. Mark Garman
February 26, 2019
Page 2

We truly appreciate your consideration in this matter and hope we can receive your response prior to March 15, 2019, so we may include it with the GWP annual report to EPA. Below is my contact information and please feel free to respond via email to awidmer@las-cruces.org if you wish.

Adrienne L. Widmer, P.E.
Las Cruces Utilities
680 N. Motel Boulevard
Las Cruces, NM 88007

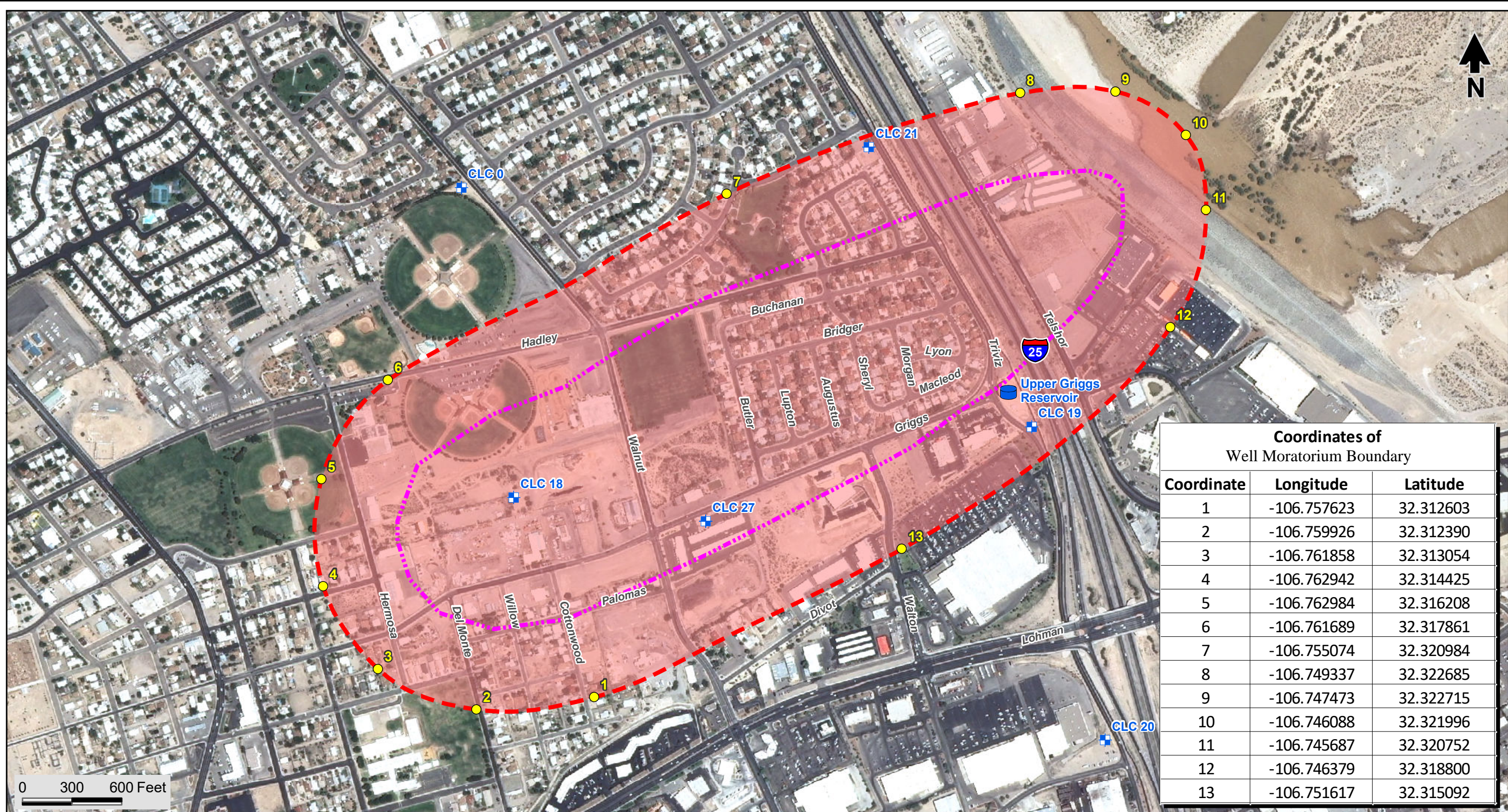
Sincerely,



Adrienne L. Widmer, P.E.
Project Manager, Griggs and Walnut Groundwater Plume Superfund Site
Water Administrator, City of Las Cruces Utilities

Attachment: As noted

cc: Jorge A. Garcia, Ph.D., P.E., Las Cruces Utilities Director
Dave Medeiros, Attorney Contract Attorney, Dona Ana County and JSP, via email
Michelle Hunter, Bureau Chief, NMED Ground Water Quality Bureau
Justin Ball, Acting Program Manager, Remediation Oversight Section,
Ground Water Quality Bureau
Dana Bahar, Bureau Chief, NMED Petroleum Storage Tank Bureau
Martyne Kieling, NMED Superfund Oversight Section, via email
Angelo Ortelli, NMED Superfund Oversight Section, via email
Kelly Jayne, P.E., via email



Coordinates of Well Moratorium Boundary		
Coordinate	Longitude	Latitude
1	-106.757623	32.312603
2	-106.759926	32.312390
3	-106.761858	32.313054
4	-106.762942	32.314425
5	-106.762984	32.316208
6	-106.761689	32.317861
7	-106.755074	32.320984
8	-106.749337	32.322685
9	-106.747473	32.322715
10	-106.746088	32.321996
11	-106.745687	32.320752
12	-106.746379	32.318800
13	-106.751617	32.315092

Explanation

- City of Las Cruces supply well
- City of Las Cruces water reservoir
- Well moratorium boundary
- Coordinate of well moratorium boundary
- PCE in groundwater greater than 5 µg/L

Sources: 1. National Agricultural Imagery Program August 2009
 Downloaded from RGIS
 2. JSAI, 2009

\\ss6abq\Projects\ES09.0306_Griggs-Walnut\GIS\MXD\Site_maps\Well_moratorium.mxd

Jayne, Kelly

From: Adrienne Widmer <awidmer@las-cruces.org>
Sent: Thursday, February 28, 2019 3:35 PM
To: Jayne, Kelly
Subject: Fwd: Griggs and Walnut Ground Water Plume Institutional Controls

Sent from my iPhone

Begin forwarded message:

From: "Ball, Justin, NMENV" <Justin.Ball@state.nm.us>
Date: February 28, 2019 at 2:45:59 PM MST
To: "Widmer, Adrienne" <awidmer@las-cruces.org>
Cc: "Hunter, Michelle, NMENV" <Michelle.Hunter@state.nm.us>, "Garman, Mark, NMENV" <Mark.Garman@state.nm.us>
Subject: RE: Griggs and Walnut Ground Water Plume Institutional Controls

Adrienne:

Additionally, there are no Voluntary Remediation Sites within the Well Moratorium Boundary.

Cheers
Justin

From: Ball, Justin, NMENV
Sent: Wednesday, February 27, 2019 4:29 PM
To: 'Adrienne Widmer' <awidmer@las-cruces.org>
Cc: Hunter, Michelle, NMENV <Michelle.Hunter@state.nm.us>; Garman, Mark, NMENV <Mark.Garman@state.nm.us>
Subject: RE: Griggs and Walnut Ground Water Plume Institutional Controls

Adrienne:

The only site of interest within the Well Moratorium Boundary under the State Clean-up Program is the Dona Ana County Fleet Maintenance Yard. A closure letter for the site is attached. You are welcome to review the file at our District 1 Office in Albuquerque. It is approximately an inch thick.

Site Name 2	Location	City 2	County 2	Latitude 1	Longitude1	Even
DAC Fleet Maintenance Yard, Las Cruces	2025 E. Griggs	Las Cruces	Doña Ana	32.314312	-106.760527	multi

Hope this is helpful
Justin Ball

Justin D. Ball, P.G.
Acting Program Manager
Remediation Oversight Section
Ground Water Quality Bureau
New Mexico Environment Department
NMED: District 1 Office
121 Tijeras Avenue, NE
Albuquerque, NM 87102-3400
(505) 222-9522
Fax (505) 222-9510
justin.ball@state.nm.us

From: Adrienne Widmer <awidmer@las-cruces.org>
Sent: Wednesday, February 27, 2019 11:45 AM
To: Garman, Mark, NMENV <Mark.Garman@state.nm.us>
Cc: Jorge Garcia <jogarcia@las-cruces.org>; Medeiros, David <davem@donaanacounty.org>; Hunter, Michelle, NMENV <Michelle.Hunter@state.nm.us>; Ball, Justin, NMENV <Justin.Ball@state.nm.us>; Bahar, Dana, NMENV <dana.bahar@state.nm.us>; Kieling, Martyne, NMENV <Martyne.Kieling@state.nm.us>; Ortelli, Angelo, NMENV <Angelo.Ortelli@state.nm.us>; Kelly Jayne <kjayne@dbstephens.com>
Subject: [EXT] Griggs and Walnut Ground Water Plume Institutional Controls
Importance: High

Dear Mr. Garman,

Attached please find a letter regarding coordinating with you about any potential releases within the footprint of the PCE Plume.

We appreciate any assistance you may be able to give us and respectfully request reply prior to March 15, 2019.

An email reply will suffice. Please let me know if you have any questions,

Thank you

Adrienne L. Widmer, P.E.
Administrator/Water/Utilities

Direct: 575-528-3514 Main: 575-528-3515, Fax: 575-528-3691, awidmer@las-cruces.org



Jayne, Kelly

From: Garman, Mark, NMENV <Mark.Garman@state.nm.us>
Sent: Monday, March 04, 2019 2:51 PM
To: Widmer, Adrienne
Cc: Jorge Garcia; Medeiros, David; Hunter, Michelle, NMENV; Ball, Justin, NMENV; Bahar, Dana, NMENV; Kieling, Martyne, NMENV; Ortelli, Angelo, NMENV; Jayne, Kelly
Subject: RE: Griggs and Walnut Ground Water Plume Institutional Controls

Hello Adrienne,

The NMED Superfund Oversight Section is not aware of any releases since 2012 within the Griggs and Walnut Superfund Site Well Moratorium footprint.

Mark Garman
NMED GWQB Superfund Oversight Section

From: Adrienne Widmer <awidmer@las-cruces.org>
Sent: Wednesday, February 27, 2019 11:45 AM
To: Garman, Mark, NMENV <Mark.Garman@state.nm.us>
Cc: Jorge Garcia <jogarcia@las-cruces.org>; Medeiros, David <davem@donaanacounty.org>; Hunter, Michelle, NMENV <Michelle.Hunter@state.nm.us>; Ball, Justin, NMENV <Justin.Ball@state.nm.us>; Bahar, Dana, NMENV <dana.bahar@state.nm.us>; Kieling, Martyne, NMENV <Martyne.Kieling@state.nm.us>; Ortelli, Angelo, NMENV <Angelo.Ortelli@state.nm.us>; Kelly Jayne <kjayne@dbstephens.com>
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Importance: High

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Thank you

Adrienne L. Widmer, P.E.

Administrator/Water/Utilities

Direct: 575-528-3514 Main: 575-528-3515, Fax: 575-528-3691, awidmer@las-cruces.org





Joint Superfund Project

City of Las Cruces and Doña Ana County



February 26, 2019

Ms. Dana Bahar, Bureau Chief
New Mexico Environment Department
Petroleum Storage Tank Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe NM, 87505

Dear Ms. Bahar:

Thank you for your help and support to the City of Las Cruces and Dona Ana County, acting as the Joint Superfund Project (JSP) for the Griggs and Walnut Ground Water Plume Superfund Site (GWP). The United States Environmental Protection Agency (EPA) issued a new Unilateral Administrative Order (UAO) with a January 4, 2018 effective date.

In accordance with the UAO Scope of Work, Paragraph 11.e., an Institutional Control Implementation and Assurance Plan (ICIAP) was developed and approved by EPA. As part of the ICIAP, we are required to contact you annually to inquire and determine if any new releases have occurred that may affect groundwater or the remediation efforts within the plume footprint. We believe that no releases have occurred but appreciate you reviewing your records and notifying us of any new releases that may affect our remediation efforts.

Attached for your review, is a map depicting the well moratorium (plume footprint) instituted October 6, 2011, by the New Mexico Office of the State Engineer. Because the remediation project started in 2012, we are requesting any information related to releases between 2012 and 2018 within the plume footprint or buffer zone you may have.

We appreciate your assistance in this matter, and respectfully request your response for the following:

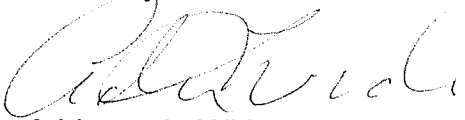
- Confirm that no new releases have been reported in the plume footprint OR
- If new releases have been reported in the plume footprint, please indicate:
 - location
 - date of release
 - contact person and information so that the JSP can coordinate data sharing

Ms. Dana Bahar
February 26, 2019
Page 2

We truly appreciate your consideration in this matter and hope we can receive your response prior to March 15, 2019, so we may include it with the GWP annual report to EPA. Below is my contact information and please feel free to respond via email to awidmer@las-cruces.org if you wish.

Adrienne L. Widmer, P.E.
Las Cruces Utilities
680 N. Motel Boulevard
Las Cruces, NM 88007

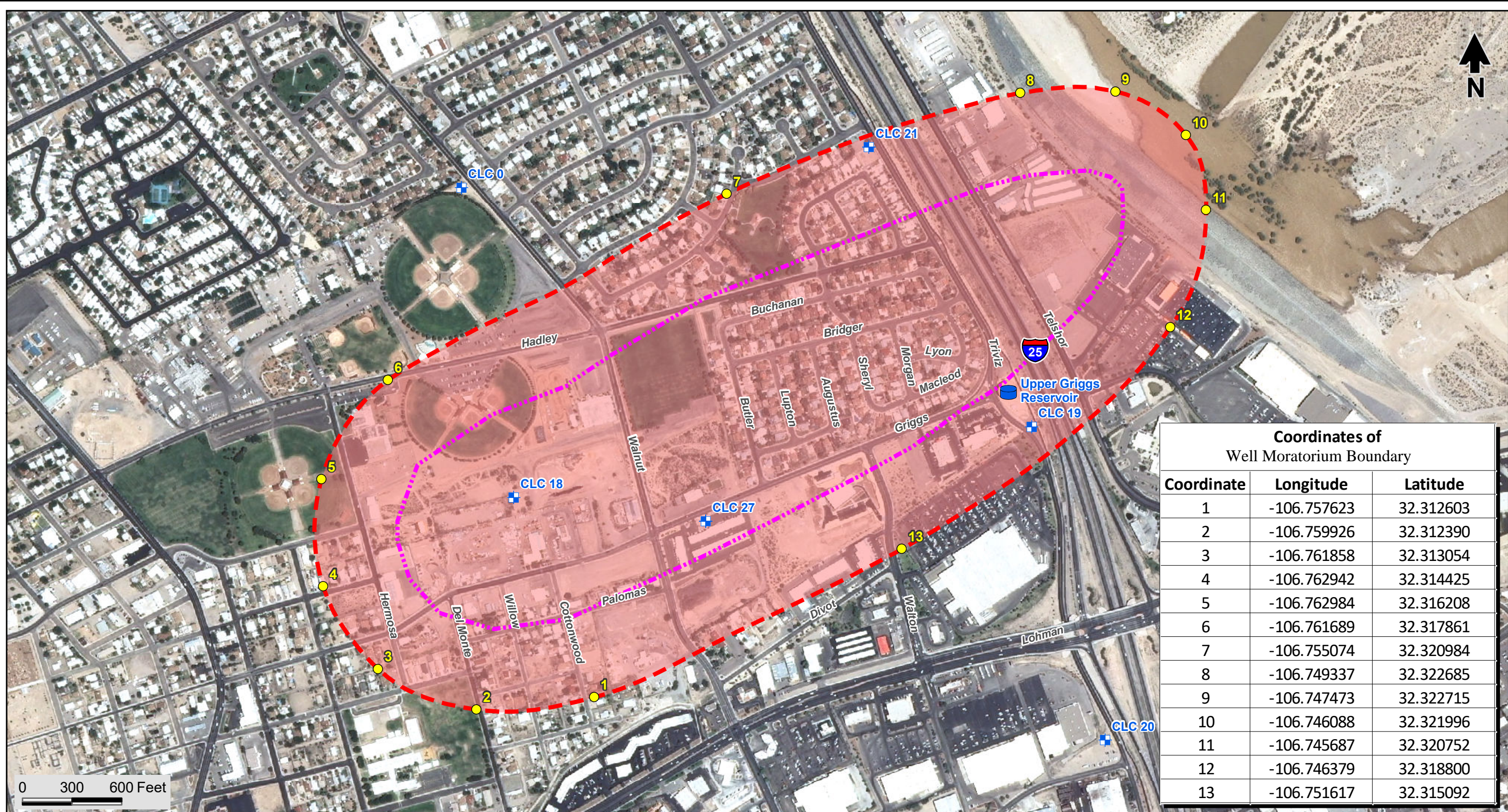
Sincerely,



Adrienne L. Widmer, P.E.
Project Manager, Griggs and Walnut Groundwater Plume Superfund Site
Water Administrator, City of Las Cruces Utilities

Attachment: As noted

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Dave Medeiros, Attorney Contract Attorney, Dona Ana County and JSP, via email
Michelle Hunter, Bureau Chief, NMED Ground Water Quality Bureau
Justin Ball, Acting Program Manager, Remediation Oversight Section,
Ground Water Quality Bureau
Mark Garman, Program Manager, NMED Superfund Oversight Section
Martyne Kieling, NMED Superfund Oversight Section, via email
Angelo Ortelli, NMED Superfund Oversight Section, via email
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Explanation

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- Coordinate of well moratorium boundary
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Sources: 1. National Agricultural Imagery Program
August 2009
Downloaded from RGIS
2. JSAI, 2009

\\ss6abq\Projects\ES09.0306_Griggs-Walnut\GIS\MXDs\Site_maps\Well_moratorium.mxd

Jayne, Kelly

From: Bahar, Dana, NMENV <dana.bahar@state.nm.us>
Sent: Monday, March 04, 2019 4:28 PM
To: Widmer, Adrienne; Garman, Mark, NMENV
Cc: Jorge Garcia; Medeiros, David; Hunter, Michelle, NMENV; Ball, Justin, NMENV; Kieling, Martyne, NMENV; Ortelli, Angelo, NMENV; Jayne, Kelly; Goerger, Lorena, NMENV
Subject: RE: Griggs and Walnut Ground Water Plume Institutional Controls

Hi Adrienne,

Likewise, PSTB has not identified any new releases within the the plume footprint (the well moratorium area) as noted on the map. Should you have additional questions or require information on known PSTB release sites, please contact Lorena Goerger (copied on this e-mail) or myself.

Thanks,

Dana Bahar
(505) 476-4377
https://www.env.nm.gov/petroleum_storage_tank/
Twitter @NMEnvDep; #IamNMED.

From: Adrienne Widmer <awidmer@las-cruces.org>
Sent: Monday, March 4, 2019 4:00 PM
To: Garman, Mark, NMENV <Mark.Garman@state.nm.us>
Cc: Jorge Garcia <jogarcia@las-cruces.org>; Medeiros, David <davem@donaanacounty.org>; Hunter, Michelle, NMENV <Michelle.Hunter@state.nm.us>; Ball, Justin, NMENV <Justin.Ball@state.nm.us>; Bahar, Dana, NMENV <dana.bahar@state.nm.us>; Kieling, Martyne, NMENV <Martyne.Kieling@state.nm.us>; Ortelli, Angelo, NMENV <Angelo.Ortelli@state.nm.us>; Kelly Jayne <kjayne@dbstephens.com>
Subject: [EXT] Re: Griggs and Walnut Ground Water Plume Institutional Controls

Thank you!!!
Adrienne

Sent from my iPhone

On Mar 4, 2019, at 2:51 PM, Garman, Mark, NMENV <Mark.Garman@state.nm.us> wrote:

Hello Adrienne,

The NMED Superfund Oversight Section is not aware of any releases since 2012 within the Griggs and Walnut Superfund Site Well Moratorium footprint.

Mark Garman
NMED GWQB Superfund Oversight Section

From: Adrienne Widmer <awidmer@las-cruces.org>
Sent: Wednesday, February 27, 2019 11:45 AM
To: Garman, Mark, NMENV <Mark.Garman@state.nm.us>

Cc: Jorge Garcia <jogarcia@las-cruces.org>; Medeiros, David <davem@donaanacounty.org>; Hunter, Michelle, NMENV <Michelle.Hunter@state.nm.us>; Ball, Justin, NMENV <Justin.Ball@state.nm.us>; Bahar, Dana, NMENV <dana.bahar@state.nm.us>; Kieling, Martyne, NMENV <Martyne.Kieling@state.nm.us>; Ortelli, Angelo, NMENV <Angelo.Ortelli@state.nm.us>; Kelly Jayne <kjayne@dbstephens.com>

Subject: [EXT] Griggs and Walnut Ground Water Plume Institutional Controls

Importance: High

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Thank you

Adrienne L. Widmer, P.E.

Administrator/Water/Utilities

Direct: 575-528-3514 Main: 575-528-3515, Fax: 575-528-3691, awidmer@las-cruces.org

<image001.jpg>



Joint Superfund Project

City of Las Cruces and Doña Ana County



February 26, 2019

Ms. Andrea Mendoza, P.E.
District IV Supervisor
New Mexico Office of the State Engineer
1680 Hickory Loop, Suite J
Las Cruces, NM 88005-6598

Dear Ms. Mendoza:

Thank you for your help and support to the City of Las Cruces and Dona Ana County, acting as the Joint Superfund Project (JSP) for the Griggs and Walnut Ground Water Plume Superfund Site (GWP). On October 6, 2011, your office instituted an Order that no new appropriations of ground water, including new Section 72-12-1.1, 72-12-1.2 and 72-12-1.3 (NMSA) wells and no transfers of water to existing wells except for those submitted on behalf of the City of Las Cruces and Dona Ana County Joint Superfund Project for the installation of monitor wells associated with the EPA-mandated ground water remedial action will be allowed within the area of the plume footprint.

The United States Environmental Protection Agency (EPA) issued a new Unilateral Administrative Order (UAO) with a January 4, 2018 effective date. In accordance with the UAO Scope of Work, Paragraph 11.e., an Institutional Control Implementation and Assurance Plan (ICIAP) was developed and approved by the EPA.

As part of the ICIAP, we are required to contact you annually to inquire if the Order has been effective. Attached for your review, is a map depicting the Order. Because the remediation project started in 2012, we are requesting if any activities related to the Order inside the plume footprint between 2012 and 2018 have occurred.

We appreciate your assistance in this matter and respectfully request your response for the following:

- Confirm that no new appropriations of ground water, including new Section 72-12-1.1, 72-12-1.2 and 72-12-1.3 (NMSA) wells, and no transfers of water to existing wells except for those submitted on behalf of the City of Las Cruces and Dona Ana County Joint Superfund Project for the installation of monitor wells associated with the EPA-mandated ground water remedial action will be allowed within the area of the plume footprint.

Ms. Andrea Mendoza, P.E.
February 26, 2019
Page 2

Thank you for your consideration in this matter, and hope we can receive your response prior to March 15, 2019, so we may include it with the GWP annual report to EPA. Below is my contact information, and please feel free to respond via email to awidmer@las-cruces.org if you wish.

Adrienne L. Widmer, P.E.
Las Cruces Utilities
680 N. Motel Boulevard
Las Cruces, NM 88007

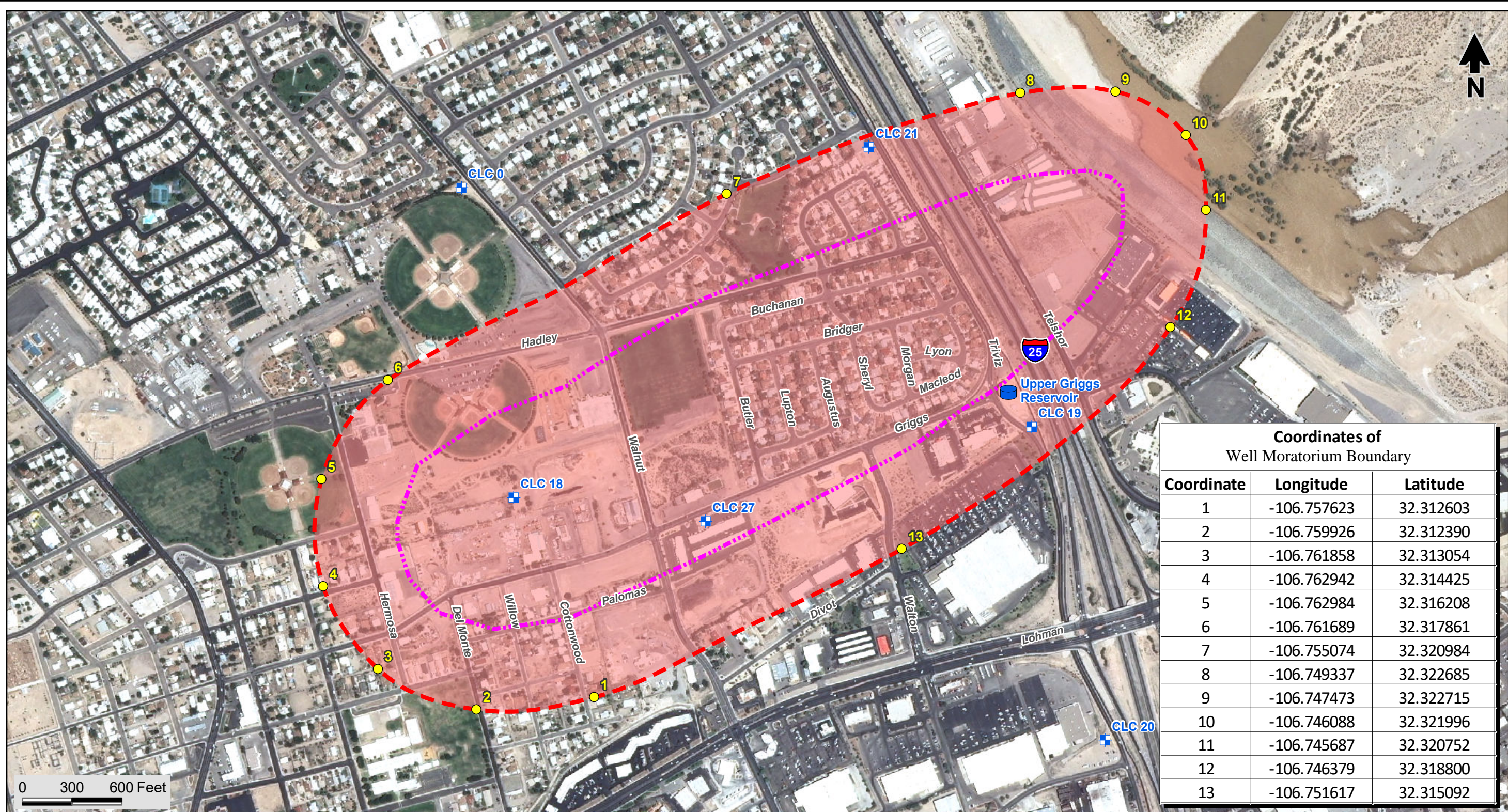
Sincerely,



Adrienne L. Widmer, P.E.
Project Manager, Griggs and Walnut Groundwater Plume Superfund Site
Water Administrator, City of Las Cruces Utilities

Attachment: As noted

cc: Jorge A. Garcia, Ph.D., P.E., Las Cruces Utilities Director
Dave Medeiros, Attorney Contract Attorney, Dona Ana County and JSP, via email
Jerri Pohl, Supervisor of Statewide Projects, New Mexico Office of the State Engineer,
via email
Kelly Jayne, P.E., via email



Coordinates of Well Moratorium Boundary		
Coordinate	Longitude	Latitude
1	-106.757623	32.312603
2	-106.759926	32.312390
3	-106.761858	32.313054
4	-106.762942	32.314425
5	-106.762984	32.316208
6	-106.761689	32.317861
7	-106.755074	32.320984
8	-106.749337	32.322685
9	-106.747473	32.322715
10	-106.746088	32.321996
11	-106.745687	32.320752
12	-106.746379	32.318800
13	-106.751617	32.315092

Explanation

- City of Las Cruces supply well
- City of Las Cruces water reservoir
- Well moratorium boundary
- Coordinate of well moratorium boundary
- PCE in groundwater greater than 5 µg/L

Sources: 1. National Agricultural Imagery Program
 August 2009
 Downloaded from RGIS
 2. JSAI, 2009

Jayne, Kelly

From: Adrienne Widmer <awidmer@las-cruces.org>
Sent: Wednesday, February 27, 2019 4:40 PM
To: Pohl, Jerri, OSE; Mendoza, Andrea J., OSE
Cc: Jorge Garcia; Medeiros, David; Jayne, Kelly; Estrada, Daniel, OSE; Scott, Frank, OSE
Subject: RE: Griggs and Walnut Ground Water Plume Institutional Controls

Thank you Jerri,
I have updated my email list with the correct spelling and appreciate you catching that for us.
Thank you also for the information below, we will use this from here on out to keep track of the order.
We appreciate you assistance,

Adrienne L. Widmer, P.E.

Administrator/Water/Utilities

Direct: 575-528-3514 Main: 575-528-3515, Fax: 575-528-3691, awidmer@las-cruces.org



From: Pohl, Jerri, OSE <Jerri.Pohl@state.nm.us>
Sent: Wednesday, February 27, 2019 4:04 PM
To: Adrienne Widmer <awidmer@las-cruces.org>; Mendoza, Andrea J., OSE <andrea.mendoza@state.nm.us>
Cc: Jorge Garcia <jogarcia@las-cruces.org>; Medeiros, David <davem@donaanacounty.org>; Kelly Jayne <kjayne@dbstephens.com>; Estrada, Daniel, OSE <Daniel.Estrada@state.nm.us>; Scott, Frank, OSE <Frank.Scott@state.nm.us>
Subject: RE: Griggs and Walnut Ground Water Plume Institutional Controls

Hello Ms. Widmer. I am responding as your email did not reach Andrea due to a misspelling of her name. I have corrected the spelling for this response.

While we are happy to verify this yearly, you may check this at any time from any computer. Within the last two years, we have added a dynamic map to our website which illustrates the well/well permits within the state. This will allow you or the EPA to continually check the success of our process to restrict drilling. Please follow this link: https://gis.ose.state.nm.us/gisapps/ose_pod_locations/ Type in Las Cruces, NM in the address bar which will zoom to the area. You will see a small oval shaped red polygon right along I-25. When you zoom in to at least 1:19,000 resolution, the well locations and their OSE POD numbers will appear:



The wells that show in this polygon are mostly permits for monitoring (LRG-430 and LRG-15920) that were in the name of the City of Las Cruces, except LRG-4070 which was an exploratory well drilled by the City. The most recent was related to a permit LRG-15920 PODS1 and 2 that were drilled for monitoring purposes in 2015.

You may, if you wish, replicate this view on your computer screen by accessing the OSE POD Locations map on the link above, then zoom into that area, then you can click on the well dots within the OSE POD Locations map and see more information pertaining to each well. When the viewer clicks on the red circle itself, information is provided to the public regarding the source of the drilling restrictions such as this:

(1 of 3)

Water Right Regulation: Griggs & Walnut GW Plume Superfund Site

Regulation Type	Quality Restriction Area
Name	Griggs & Walnut GW Plume Superfund Site
Alternative Name	Griggs & Walnut Superfund Site
Requirements	Restrictions for new appropriations, including 72-12-1.1, 72-12-1.2 and 72-12-1.3
Established Purpose	To protect human health
Document Reference	State Engineer Order Issued October 2011
Source Document	State Engineer Order Oct 2011
District Office	Las Cruces
Geologic Unit	Unknown
OSE District	District 4
Jurisdiction	EPA and NMENV
Domestic Well Limit	
Well Limit	
Acres	361.91
Modified Date	10/5/2011
Effective Date	10/12/2011
Created Date	4/25/2016

Attachments:

- [Griggs and Walnut - OSE Order PDF](#)
- [Griggs and Walnut Request to OSE for Temp Moratorium.pdf](#)
- [Griggs and Walnut Request to OSE attachment Page 3 .sm.jpg](#)
- [Griggs and Walnut Request to OSE attachment.pdf](#)

Please do not hesitate to call with any questions or concerns.

Jerri Pohl
 Statewide Projects
 505-827-7848

From: Adrienne Widmer <awidmer@las-cruces.org>
Sent: Wednesday, February 27, 2019 11:55 AM
To: Andrea Mendoza (andrea.medoza@state.nm.us) <andrea.medoza@state.nm.us>
Cc: Jorge Garcia <jogarcia@las-cruces.org>; Medeiros, David <davem@donaanacounty.org>; Pohl, Jerri, OSE <Jerri.Pohl@state.nm.us>; Kelly Jayne <kjayne@dbstephens.com>
Subject: [EXT] Griggs and Walnut Ground Water Plume Institutional Controls
Importance: High

Dear Ms. Mendoza,

Attached please find a letter regarding coordinating with you about the effectiveness of the October 6, 2011 Order related to water rights and wells within the plume footprint. I have included a copy of the moratorium for your reference.

We appreciate any assistance you may be able to give us and respectfully request reply prior to March 15, 2019. An email reply will suffice. Please let me know if you have any questions,

Thank you,

Adrienne L. Widmer, P.E.
Administrator/Water/Utilities
Direct: 575-528-3514 Main: 575-528-3515, Fax: 575-528-3691, awidmer@las-cruces.org



Appendix H
Data Validation Report



Data Validation Report

A total of 327 samples were collected between January 1, 2017 and January 30, 2019 as part of the Griggs-Walnut Ground Water Plume Superfund Site (GWP site) remedial action. These samples include 224 remediation system (process) samples collected by City of Las Cruces (CLC) staff and 103 samples associated with the baseline sampling event completed in December 2018 and January 2019 collected by Terracon. All samples were submitted for analysis to Hall Environmental Analysis Laboratory (HEAL) in Albuquerque, New Mexico. Analytical results for the samples were provided by HEAL in both PDF form and as an electronic data deliverable (EDD). Analyses for volatile organic compounds (VOCs) were performed using U.S. Environmental Protection Agency (EPA) method 8260B, and analysis for dissolved and total uranium and arsenic were completed using EPA method 200.8. Table 1 summarizes the groundwater samples that were required to be collected, along with those actually collected, during the baseline sampling event.

Table 2 provides information on each of the samples analyzed as part of this data validation report. The criteria used in evaluation of the samples are detailed in the updated project sampling and analysis plan (SAP).

As part of the data quality review, the project team identified concerns regarding data collected from the FLUTE wells (GWMW-01, -03, -06, -08, -09, and -10). Additional investigations into the FLUTE well integrity were conducted in May 2019. The testing procedures and results are discussed in detail in Appendix F of this annual report. Based on the results of 2018/2019 sampling and the FLUTE liner integrity testing, the groundwater level and water quality data from the FLUTE wells for the January 2019 sampling event were rejected and will not be used in data evaluation. FLUTE results for the January 2019 sampling event are qualified as “Rf (Rejected, the data are unusable. FLUTE well liner lacks integrity).” In addition, as discussed in Appendix F of this annual report, the FLUTE liners leach toluene and arsenic; therefore, sample results for these constituents for the FLUTE wells are biased high. All FLUTE arsenic and toluene detections are therefore qualified as “RI (Rejected, the data are unusable. FLUTE liner leaches constituent).”



Laboratory verification of the data is sufficient and acceptable. Instrument continuing calibration verification analysis, quality control (QC) reference standards, and instrument blanks were analyzed with each batch where the data were provided. A total of 5 matrix spikes (MS) and matrix spike duplicates (MSD) were analyzed at a frequency of approximately 7 percent for the samples collected as part of the baseline sampling event. A total of 32 field duplicate samples were analyzed, including 1 per month for process sampling and at a frequency of 10 percent for the baseline sampling event.

QC for the air and water samples is evaluated in Table 3. The following comments address the relevant QC criteria outlined in Table 3 of the SAP and any deviations that were observed during the data validation and verification process:

- All process water, groundwater, and air stripper samples were reported as being collected in the appropriate sample containers by the receiving laboratory and were analyzed within the appropriate holding times per Tables 11 and 12 of the SAP.
- Three sample locations included in the groundwater sampling plan were not sampled as part of the baseline sampling event. These include MW-5, MWSF-2, and MWSF-5. Based on Terracon's groundwater monitoring report, these three wells were dry and therefore could not be sampled. A total of 327 samples were included in the data verification and validation process out of a possible 330 samples based on the SAP. Data completeness is therefore met at a rate of 99 percent (exceeding the control limit of 90 percent).
- The SAP states that temperature blanks should be placed in each cooler to ensure that temperature requirements are satisfied during shipment to the laboratory. Temperature blanks were not listed as samples on any of the chain of custody forms. However, the laboratory reported that all samples were received at the appropriate temperature based on direct (non-invasive) measurement of a non-dedicated sample in each cooler upon receipt using an infrared thermometer. Future revisions of the SAP will rely on either the use of dedicated temperature blanks, or direct temperature measurements taken by the receiving laboratory with an infrared thermometer.



- As part of the data validation process, 10 percent of the EDD sample results were reviewed against the PDF deliverable to verify consistency. As a result of this review, four files were identified to have inconsistencies. In all four cases, the PDF files contained values that were reported below the laboratory practical quantitation limit (PQL) but above the method detection limit (MDL), and were issued with a J flag indicating that the analyte was detected below the quantitation limit. The original EDD reported these values as non-detect. HEAL was contacted regarding this issue and has since provided revised EDDs containing the flagged values, along with guidance to ensure that all future EDD files contain the necessary flags. The revised EDDs were uploaded to the project database.
- All analytical results are reported in units of micrograms per liter ($\mu\text{g/L}$). The method detection limit and reporting limit (reported as PQLs) for each analyte were below the respective maximum contaminant level for all samples. No samples were diluted. The sensitivity requirements for the analyses were satisfied.
- Results from 38 of the laboratory control sample (LCS) analyses were provided by HEAL. LCS recoveries were provided for benzene, toluene, chlorobenzene, 1,1-dichloroethene (1,1-DCE), and trichloroethene (TCE). Accuracy of the LCS analyses is acceptable, with recoveries ranging between 77 and 126 percent (compared to control limits 70 to 130 percent).
- HEAL provided results for 5 sets of MS and MSD analyses. MS and MSD recoveries were provided for benzene, toluene, chlorobenzene, 1,1-DCE, and TCE. The MS and MSD recoveries were acceptable and ranged from 86 to 113 percent (compared to control limits 50 to 150 percent). The maximum relative percent difference (RPD) between MS and MSD recoveries was 11 percent for 1,1-DCE (less than the control limit of 30 percent). These analyses demonstrate acceptable precision and accuracy of the analytical laboratory data.
- VOC result quantitation is acceptable. No dilutions were applied to any of the samples, and all values were reported at the appropriate level of detection and within calibration range.



- One equipment blank was submitted with a batch of samples collected on December 24, 2018. Based on the SAP, the process used to collect the equipment blank should be described in the field log book; however, this information was not recorded in the field log book. PCE, the primary Site COC, was not detected in any field blank samples. The equipment blank had positive detections for chloroform, bromodichloromethane, bromoform, and dibromochloromethane, with the results included in Table 4. These contaminants are known disinfectant byproducts and are most likely associated with the source water used to collect the field blank. None of these analytes were detected in any of the samples submitted with the batch, and therefore no flags were issued. Laboratory-grade distilled water will be required to be used as source water for blanks for future monitoring events to reduce the likelihood of the presence of disinfection byproducts. Field sampling staff was also instructed to maintain appropriate notes regarding equipment blanks in future monitoring events.
- Field blanks were required to be collected at a frequency of 10 percent during the baseline sampling event. Results from 12 field blanks were provided, which exceeds the minimum requirement of 7 samples.
- A total of 8 field blank samples had positive detections for VOCs including acetone, 2-butanone, bromodichloromethane, and chloroform. Table 5 summarizes the positive detections in the field blank samples. PCE, the primary Site COC, was not detected in any field blank samples. A majority of the analytes that were detected in the field blanks were not detected in the groundwater well samples. However, 5 well samples did have positive detections of VOCs that were present in the field blanks. The detections in the wells were lower than the detections in the field blanks. These results are summarized in Tables 6a and 6b. A qualifying flag of U has been added to the database for these samples and the result changed to non-detect (per EPA guidance), which indicates that the analyte was detected in a field blank below the laboratory PQL. In the case of GWMW06-01, the acetone concentration was 29 µg/L, compared to the field blank acetone concentration of 4.5 µg/L. Based on EPA guidance (U.S. EPA, 2017), because the sample concentration is more than twice the field blank concentration, a qualifying flag of J+ was issued indicating that the result should be considered as estimated.



- Trip blanks are required to be submitted at a rate of 1 per day during baseline sampling. Trip blanks are typically supplied by the laboratory and are transported with the sample containers to the field site and back again. A total of 12 trip blanks were submitted during the baseline sampling event; this frequency met the QC criteria. PCE, the primary Site COC, was not detected in any field blank samples. There were positive detections in two samples of acetone and 2-butanone, with the results provided in Table 7. Samples collected on December 27, 2018 did not have a positive detection for acetone; however, samples collected on January 12, 2019 did have positive detections for acetone and 2-Butanone. The two trip blank samples were already qualified with a J+ flag based on results of the accompanying field blank.
- A total of 32 sets of duplicate samples were submitted to HEAL as part of the QC criteria, including 28 groundwater samples and 4 air stripper samples. One duplicate per month was collected for process sampling (25 samples) along with one at the appropriate frequency of 10 percent (7 samples) for the baseline sampling event. Precision is evaluated based on a maximum allowable RPD of 50 percent. The results of the analyses are provided in Table 8. A total of 31 of the 32 duplicate sets of samples met the QC criteria.

Sample ES1-180215 DUP was collected as a field duplicate of primary sample ES1-180215. All analytes with a positive detection for these samples are presented in Table 9.

Precision is acceptable with the exception of chloroform with an RPD of 59 percent. Due to the field duplicate precision exceeding criteria, results for chloroform in the primary and duplicate samples are qualified as J+ and should be considered as estimated.

Performance was acceptable with the following exceptions:

- Based on the observations from the FLUTE wells and results of the FLUTE well integrity liner testing described in Appendix F, all FLUTE well data are rejected for 2019.
- Equipment blank samples are not required for process sampling, but are required for the baseline sampling event at a rate of one per day when non-dedicated sampling equipment is used. Out of the 71 sample locations, only 1 location (CLC 26) used non-



dedicated sampling equipment in the form of a bladder pump. However, no equipment blank was collected when this sample was taken. Because only a single sample was collected using the non-dedicated equipment and the data are in line with past trends, data collected from CLC 26 are considered acceptable. Sampling staff have been instructed to collect equipment blanks in future monitoring events whenever non-dedicated sampling equipment is used.

- Trip blanks are required to be submitted at a rate of 1 per day during process sampling. Only 1 trip blank was submitted out of the 25 process sampling events. Although the appropriate number of trip blanks were not submitted with the process sampling events, the data are considered acceptable based on the consistency of the results with prior data, the results of the laboratory verification processes, and the results from other field QA/QC samples. Laboratory and sampling staff have been instructed to include the correct number of trip blanks in future monitoring events.



Table 1. Groundwater Samples Collected for Baseline Event

Well Name	Required Number of Samples	Actual Number of Samples
CLC 18	1	1
CLC 26	1	1
CLC 27	1	1
GWMW-01	7	8
GWMW-03	3	3
GWMW-06 Port 1	1	1
GWMW-06 Port 2	1	1
GWMW-08	5	5
GWMW-09	7	8
GWMW-10	7	8
GWMW-11-S	1	1
GWMW-11-I	1	1
GWMW-11-D	1	1
GWMW-15-S	1	1
GWMW-15-I	1	1
GWMW-15-D	1	1
GWMW-16-S	1	1
GWMW-16-D	1	1
MW-5	1	0
MW-SF2	1	0
MW-SF5	1	0
MW-SF9	1	2
MW-SF10	1	1
NGMW-01	10	11
NGMW-02	9	10
NWMW-03	8	9



Table 2. Sample Information
Page 1 of 9

Sample ID	Sample Date	Lab Sample ID	Dilutions/Comments
AS1-170130	1/30/2017	1701c23-001a	No dilution
AS2-170130	1/30/2017	1701c23-002a	No dilution
CLC18-170130	1/30/2017	1701c25-001a	No dilution
IS1-170130	1/30/2017	1701c25-002a	No dilution
IS1-170130 DUP	1/30/2017	1701c25-003a	No dilution/field duplicate
C1-170130	1/30/2017	1701c25-004a	No dilution
C2-170130	1/30/2017	1701c25-005a	No dilution
ES1-170130	1/30/2017	1701c25-006a	No dilution
CLC27-170130	1/30/2017	1701c25-007a	No dilution
AS1-170223	2/23/2017	1702a99-001a	No dilution
AS2-170223	2/23/2017	1702a99-002a	No dilution
CLC18-170223	2/23/2017	1702b06-001a	No dilution
CLC18-170223 Dup	2/23/2017	1702b06-002a	No dilution/field duplicate
IS1-170223	2/23/2017	1702b06-003a	No dilution
C1-170223	2/23/2017	1702b06-004a	No dilution
C2-170223	2/23/2017	1702b06-005a	No dilution
ES1-170223	2/23/2017	1702b06-006a	No dilution
CLC27-170223	2/23/2017	1702b06-007a	No dilution
AS1-170322	3/22/2017	1703b92-001a	No dilution
AS2-170322	3/22/2017	1703b92-002a	No dilution
CLC18-170322	3/22/2017	1703b96-001a	No dilution
CLC27-170322	3/22/2017	1703b96-002a	No dilution
CLC27-170322DUP	3/22/2017	1703b96-003a	No dilution/field duplicate
CLCIS1-170322	3/22/2017	1703b96-004a	No dilution
CLC C1-170322	3/22/2017	1703b96-005a	No dilution
CLC C2-170322	3/22/2017	1703b96-006a	No dilution
CLC ES1-17322	3/22/2017	1703b96-007a	No dilution
AS1-170425	4/25/2017	1704b63-001a	No dilution
AS2-170425	4/25/2017	1704b63-002a	No dilution
CLC 18-170425	4/25/2017	1704B64-001a	No dilution
CLC 27-170425	4/25/2017	1704B64-002a	No dilution
CLC IS1-170425	4/25/2017	1704B64-003a	No dilution
CLC C1-170425	4/25/2017	1704B64-004a	No dilution
CLC C1-170425 DUP	4/25/2017	1704B64-005a	No dilution/field duplicate
CLC C2-170425	4/25/2017	1704B64-006a	No dilution
CLC ES1-170425	4/25/2017	1704B64-007a	No dilution



Table 2. Sample Information
Page 2 of 9

Sample ID	Sample Date	Lab Sample ID	Dilutions/Comments
CLC18-170518	5/18/2017	1705a96-001a	No dilution
CLC27-170518	5/18/2017	1705a96-002a	No dilution
CLCIS1-170518	5/18/2017	1705a96-003a	No dilution
CLCC1-170518	5/18/2017	1705a96-004a	No dilution
CLCC2-170518	5/18/2017	1705a96-005a	No dilution
CLCC2-170518DUP	5/18/2017	1705a96-006a	No dilution/field duplicate
CLCES1-170518	5/18/2017	1705a96-007a	No dilution
CLC 18-170623	6/23/2017	1706d41-001a	No dilution
CLC 27-170623	6/23/2017	1706d41-002a	No dilution
CLC IS1-170623	6/23/2017	1706d41-003a	No dilution
CLC C1-170623	6/23/2017	1706d41-004a	No dilution
CLC C2-170623	6/23/2017	1706d41-005a	No dilution
CLC ES1-170623	6/23/2017	1706d41-006a	No dilution
AS1-170623	6/23/2017	1706d42-001a	No dilution
AS1-170623 Dup	6/23/2017	1706d42-002a	No dilution/field duplicate
AS2-170623	6/23/2017	1706d42-003a	No dilution
CLC18-170719	7/19/2017	1707a81-001a	No dilution
CLC27-170719	7/19/2017	1707a81-002a	No dilution
CLCIS1-170719	7/19/2017	1707a81-003a	No dilution
CLCC1-170719	7/19/2017	1707a81-004a	No dilution
CLCC2-170719	7/19/2017	1707a81-005a	No dilution
CLCES1-170719	7/19/2017	1707a81-006a	No dilution
CLCES1-170719Dup	7/19/2017	1707a81-007a	No dilution/field duplicate
AS1-170719	7/19/2017	1707b75-001a	No dilution
AS2-170719	7/19/2017	1707b75-002a	No dilution
CLC 18-170815	8/15/2017	1708960-001a	No dilution
CLC 27-170815	8/15/2017	1708960-002a	No dilution
CLC IS1-170815	8/15/2017	1708960-003a	No dilution
CLC IS1-170815DUP	8/15/2017	1708960-004a	No dilution/field duplicate
CLC C1-170815	8/15/2017	1708960-005a	No dilution
CLC C2-170815	8/15/2017	1708960-006a	No dilution
CLC ES1-170815	8/15/2017	1708960-007a	No dilution
AS1-170815	8/15/2017	1708961-001a	No dilution
AS2-170815	8/15/2017	1708961-002a	No dilution
CLC 18-170920	9/20/2017	1709c16-001a	No dilution
CLC 27-170920	9/20/2017	1709c16-002a	No dilution
CLC IS1-170920	9/20/2017	1709c16-003a	No dilution



Table 2. Sample Information
Page 3 of 9

Sample ID	Sample Date	Lab Sample ID	Dilutions/Comments
CLC C1-170920	9/20/2017	1709c16-004a	No dilution
CLC C2-170920	9/20/2017	1709c16-005a	No dilution
CLC ES1-170920	9/20/2017	1709c16-006a	No dilution
CLC 18-170920DUP	9/20/2017	1709c16-007a	No dilution/field duplicate
AS1-170920	9/20/2017	1709c17-001a	No dilution
AS2-170920	9/20/2017	1709c17-002a	No dilution
CLC18_171011	10/11/2017	1710710-001a	No dilution
CLC27_171011	10/11/2017	1710710-002a	No dilution
CLC27_171011 Dup	10/11/2017	1710710-003a	No dilution/field duplicate
CLCIS1_171011	10/11/2017	1710710-004a	No dilution
CLCC1_171011	10/11/2017	1710710-005a	No dilution
CLCC2_171011	10/11/2017	1710710-006a	No dilution
CLCES1_171011	10/11/2017	1710710-007a	No dilution
AS1-171011	10/11/2017	1710711-001a	No dilution
AS2-171011	10/11/2017	1710711-002a	No dilution
CLC 18-171116	11/16/2017	1711922-001a	No dilution
CLC 27-171116	11/16/2017	1711922-002a	No dilution
CLC IS1-171116	11/16/2017	1711922-003a	No dilution
CLC C1-171116	11/16/2017	1711922-004a	No dilution
CLC C1-171116 Dupe	11/16/2017	1711922-005a	No dilution/field duplicate
CLC C2-171116	11/16/2017	1711922-006a	No dilution
CLC ES1-171116	11/16/2017	1711922-007a	No dilution
AS1- 171116	11/16/2017	1711923-001a	No dilution
AS2- 171116	11/16/2017	1711923-002a	No dilution
CLC 18-171220	12/20/2017	1712c98-001a	No dilution
CLC 27-171220	12/20/2017	1712c98-002a	No dilution
CLC IS1-171220	12/20/2017	1712c98-003a	No dilution
CLC C1-171220	12/20/2017	1712c98-004a	No dilution
CLC C2-171220	12/20/2017	1712c98-005a	No dilution
CLC C2-171220 DUP	12/20/2017	1712c98-006a	No dilution/field duplicate
CLC ES1-171220	12/20/2017	1712c98-007a	No dilution
AS1-171220	12/20/2017	1712d01-001a	No dilution
AS2-171220	12/20/2017	1712d01-002a	No dilution
CLC 18-180117	1/17/2018	1801930-001a	No dilution
CLC 27-180117	1/17/2018	1801930-002a	No dilution
CLC IS1-180117	1/17/2018	1801930-003a	No dilution
CLC C1-180117	1/17/2018	1801930-004a	No dilution



Table 2. Sample Information
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Sample ID	Sample Date	Lab Sample ID	Dilutions/Comments
CLC C2-180117	1/17/2018	1801930-005a	No dilution
CLC ES1-180117	1/17/2018	1801930-006a	No dilution
AS1-180117	1/17/2018	1801931-001a	No dilution
AS1-180117 DUP	1/17/2018	1801931-002a	No dilution/field duplicate
AS2-180117	1/17/2018	1801931-003a	No dilution
AS1-180215	2/15/2018	1802930-001a	No dilution
AS2-180215	2/15/2018	1802930-002a	No dilution
CLC 18-180215	2/15/2018	1802980-001A	No dilution
CLC 27-180215	2/15/2018	1802980-002A	No dilution
CLC IS1-180215	2/15/2018	1802980-003A	No dilution
CLC C1-180215	2/15/2018	1802980-004A	No dilution
CLC C2-180215	2/15/2018	1802980-005A	No dilution
CLC ES1-180215	2/15/2018	1802980-006A	No dilution
CLC ES1-180215 DUP	2/15/2018	1802980-007A	No dilution/field duplicate
CLC18-180322	3/22/2018	1803d08-001a	No dilution
CLC27-180322	3/22/2018	1803d08-002a	No dilution
CLCIS1-180322	3/22/2018	1803d08-003a	No dilution
CLCIS1-180322DUP	3/22/2018	1803d08-004a	No dilution/field duplicate
CLCC1-180322	3/22/2018	1803d08-005a	No dilution
CLCC2-180322	3/22/2018	1803d08-006a	No dilution
CLCES1-180322	3/22/2018	1803d08-007a	No dilution
AS1-180322	3/22/2018	1803d09-001a	No dilution
AS2-180322	3/22/2018	1803d09-002a	No dilution
CLC AS1-180424	4/24/2018	1804c39-001a	No dilution
CLC AS2-180424	4/24/2018	1804c39-002a	No dilution
CLC 18-180424	4/24/2018	1804c42-001a	No dilution
CLC 18-180424 DUP	4/24/2018	1804c42-002a	No dilution/field duplicate
CLC 27-180424	4/24/2018	1804c42-003a	No dilution
CLC IS1-180424	4/24/2018	1804c42-004a	No dilution
CLC C1-180424	4/24/2018	1804c42-005a	No dilution
CLC C2-180424	4/24/2018	1804c42-006a	No dilution
CLC ES1-180424	4/24/2018	1804c42-007a	No dilution
CLC AS1-180517	5/17/2018	1805a75-001a	No dilution
CLC AS2-180517	5/17/2018	1805a75-002a	No dilution
CLC 18-180517	5/17/2018	1805a77-001a	No dilution
CLC 27-180517	5/17/2018	1805a77-002a	No dilution
CLC 27-180517 Dup	5/17/2018	1805a77-003a	No dilution/field duplicate



Table 2. Sample Information
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Sample ID	Sample Date	Lab Sample ID	Dilutions/Comments
CLC IS1-180517	5/17/2018	1805a77-004a	No dilution
CLC C1-180517	5/17/2018	1805a77-005a	No dilution
CLC C2-180517	5/17/2018	1805a77-006a	No dilution
CLC ES1-180517	5/17/2018	1805a77-007a	No dilution
CLC18-180614	6/14/2018	1806A41-001a	No dilution
CLC27-180614	6/14/2018	1806A41-002a	No dilution
CLCIS1-180614	6/14/2018	1806A41-003a	No dilution
CLCC1-180614	6/14/2018	1806A41-004a	No dilution
CLCC1-180614-Dupe	6/14/2018	1806A41-005a	No dilution/field duplicate
CLCC2-180614	6/14/2018	1806A41-006a	No dilution
CLCES1-180614	6/14/2018	1806A41-007a	No dilution
CLCAS1-180614	6/14/2018	1806a42-001a	No dilution
CLCAS2-180614	6/14/2018	1806a42-002a	No dilution
CLC 18-180712	7/12/2018	1807703-001a	No dilution
CLC 27-180712	7/12/2018	1807703-002a	No dilution
CLC IS1-180712	7/12/2018	1807703-003a	No dilution
CLC C1-180712	7/12/2018	1807703-004a	No dilution
CLC C2-180712	7/12/2018	1807703-005a	No dilution
CLC C2-180712Dup	7/12/2018	1807703-006a	No dilution/field duplicate
CLC ES1-180712	7/12/2018	1807703-007a	No dilution
CLC AS1- 180712	7/12/2018	1807782-001a	No dilution
CLC AS2- 180712	7/12/2018	1807782-002a	No dilution
CLC18-180815	8/15/2018	1808a83-001a	No dilution
CLC27-180815	8/15/2018	1808a83-002a	No dilution
CLCIS1-180815	8/15/2018	1808a83-003a	No dilution
CLCC1-180815	8/15/2018	1808a83-004a	No dilution
CLCC2-180815	8/15/2018	1808a83-005a	No dilution
CLCES1-180815	8/15/2018	1808a83-006a	No dilution
Trip Blank	8/15/2018	1808a83-007a	No dilution
AS1-180815	8/15/2018	1808a84-001a	No dilution
AS2-180218	8/15/2018	1808a84-002a	No dilution
AS2-180815 Dup	8/15/2018	1808a84-003a	No dilution/field duplicate
CLC AS1 180926	9/26/2018	1809g80-001a	No dilution
CLC AS1 180926 DUP	9/26/2018	1809g80-002a	No dilution/field duplicate
CLC AS2 180926	9/26/2018	1809g80-003a	No dilution
CLC 18- 180926	9/26/2018	1809g83-001a	No dilution
CLC 27- 180926	9/26/2018	1809g83-002a	No dilution



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Sample ID	Sample Date	Lab Sample ID	Dilutions/Comments
CLC IS1- 180926	9/26/2018	1809g83-003a	No dilution
CLC C1- 180926	9/26/2018	1809g83-004a	No dilution
CLC C2- 180926	9/26/2018	1809g83-005a	No dilution
CLC ES1- 180926	9/26/2018	1809g83-006a	No dilution
CLC AS1 181025	10/25/2018	1810d57-001a	No dilution
CLC AS2 181025	10/25/2018	1810d57-002a	No dilution
CLC 18-181025	10/25/2018	1810d96-001a	No dilution
CLC 27-181025	10/25/2018	1810d96-002a	No dilution
CLC IS1-181025	10/25/2018	1810d96-003a	No dilution
CLC C1-181025	10/25/2018	1810d96-004a	No dilution
CLC C2-181025	10/25/2018	1810d96-005a	No dilution
CLC ES1-181025	10/25/2018	1810d96-006a	No dilution
CLC ES1-181025 DUP	10/25/2018	1810d96-007a	No dilution/field duplicate
CLC AS1- 181120	11/20/2018	1811b37-001a	No dilution
CLC AS2- 181120	11/20/2018	1811b37-002a	No dilution
CLC18-181120	11/20/2018	1811b42-001a	No dilution
CLC27-181120	11/20/2018	1811b42-002a	No dilution
CLCIS1-181120	11/20/2018	1811b42-003a	No dilution
CLCIS1-181120 Dup	11/20/2018	1811b42-004a	No dilution/field duplicate
CLCC1-181120	11/20/2018	1811b42-005a	No dilution
CLCC2-181120	11/20/2018	1811b42-006a	No dilution
CLCES1-181120	11/20/2018	1811b42-007a	No dilution
CLC 18-181219	12/19/2018	1812b62-001a	No dilution
CLC 18-181219 Dup	12/19/2018	1812b62-002a	No dilution/field duplicate
CLC IS1-181219	12/19/2018	1812b62-003a	No dilution
CLC 27-181219	12/19/2018	1812b62-004a	No dilution
CLC C1-181219	12/19/2018	1812b62-005a	No dilution
CLC C2-181219	12/19/2018	1812b62-006a	No dilution
CLC ES1-181219	12/19/2018	1812b62-007a	No dilution
CLC AS1-181219	12/19/2018	1812b84-001a	No dilution
CLC AS2-181219	12/19/2018	1812b84-002a	No dilution
GWMW-11-S	12/21/2018	1812d43-001a	No dilution
GWMW-11-I	12/21/2018	1812d43-002a	No dilution
FB181221	12/21/2018	1812d43-003a	No dilution
GWMW-11-D	12/21/2018	1812d43-004a	No dilution
GWMW-16-S	12/21/2018	1812d43-005a	No dilution
GWMW-16-D	12/21/2018	1812d43-006a	No dilution



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Sample ID	Sample Date	Lab Sample ID	Dilutions/Comments
Trip Blank	12/21/2018	1812d43-007a	No dilution
GWMW-15 S	12/24/2018	1812e08-001a	No dilution
GWMW-15 I	12/24/2018	1812e08-002a	No dilution
GWMW-15 D	12/24/2018	1812e08-003a	No dilution
MWSF9	12/24/2018	1812e08-004a	No dilution
MWSF9- Dup	12/24/2018	1812e08-005a	No dilution/field duplicate
FB182412	12/24/2018	1812e08-006a	No dilution
MWSF10	12/24/2018	1812e08-007a	No dilution
EB182412	12/24/2018	1812e08-008a	No dilution
Trip Blank	12/24/2018	1812e08-009a	No dilution
CLC 18	12/26/2018	1812e10-005a	No dilution
CLC 27	12/26/2018	1812e10-006a	No dilution
FB182612	12/26/2018	1812e10-007a	No dilution
Trip Blank	12/26/2018	1812e10-008a	No dilution
CLC26	12/27/2018	1812e66-001a	No dilution
FB182712	12/27/2018	1812e66-002a	No dilution
Trip Blank	12/27/2018	1812e66-003a	No dilution
CLC AS1-190103	1/3/2019	1901123-001a	No dilution
CLC AS2-190103	1/3/2019	1901123-002a	No dilution
CLC 18-190103	1/3/2019	1901130-001a	No dilution
CLC 27-190103	1/3/2019	1901130-002a	No dilution
CLC 27-190103 Dup	1/3/2019	1901130-003a	No dilution/field duplicate
CLC IS1-190103	1/3/2019	1901130-004a	No dilution
CLC C1-190103	1/3/2019	1901130-005a	No dilution
CLC C2-190103	1/3/2019	1901130-006a	No dilution
CLC ES1-190103	1/3/2019	1901130-007a	No dilution
GWMW-08-03	1/4/2019	1901166-001a	No dilution
GWMW-08-04	1/4/2019	1901166-002a	No dilution
GWMW-08-05	1/4/2019	1901166-003a	No dilution
GWMW-08-06	1/4/2019	1901166-004a	No dilution
GWMW-08-07	1/4/2019	1901166-005a	No dilution
FB 190401	1/4/2019	1901166-006a	No dilution
Trip Blank	1/4/2019	1901166-007a	No dilution
GWMW10-01	1/7/2019	1901263-001a	No dilution
GWMW10-02	1/7/2019	1901263-002a	No dilution
GWMW10-03	1/7/2019	1901263-003a	No dilution
GWMW10-04	1/7/2019	1901263-004a	No dilution



Table 2. Sample Information
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Sample ID	Sample Date	Lab Sample ID	Dilutions/Comments
GWMW10-05	1/7/2019	1901263-005a	No dilution
GWMW10-06	1/7/2019	1901263-006a	No dilution
GWMW10-07	1/7/2019	1901263-007a	No dilution
GWMW10-02Dup	1/7/2019	1901263-008a	No dilution/field duplicate
FB190701	1/7/2019	1901263-009a	No dilution
Trip Blank	1/7/2019	1901263-010a	No dilution
FB190801	1/8/2019	1901395-001a	No dilution
GWMW03-01	1/8/2019	1901395-002a	No dilution
GWMW03-02	1/8/2019	1901395-003a	No dilution
GWMW03-03	1/8/2019	1901395-004a	No dilution
Trip Blank	1/8/2019	1901395-005a	No dilution
GWMW09-01	1/9/2019	1901396-001a	No dilution
GWMW09-02	1/9/2019	1901396-002a	No dilution
GWMW09-02 DUP	1/9/2019	1901396-003a	No dilution/field duplicate
GWMW09-03	1/9/2019	1901396-004a	No dilution
GWMW09-04	1/9/2019	1901396-005a	No dilution
GWMW09-05	1/9/2019	1901396-006a	No dilution
GWMW09-06	1/9/2019	1901396-007a	No dilution
GWMW09-07	1/9/2019	1901396-008a	No dilution
FB190901	1/9/2019	1901396-009a	No dilution
Trip Blank	1/9/2019	1901396-010a	No dilution
GWMW01-01	1/11/2019	1901481-001a	No dilution
GWMW01-02	1/11/2019	1901481-002a	No dilution
GWMW01-03	1/11/2019	1901481-003a	No dilution
GWMW01-04	1/11/2019	1901481-004a	No dilution
GWMW01-05	1/11/2019	1901481-005a	No dilution
GWMW01-05 DUP	1/11/2019	1901481-006a	No dilution/field duplicate
GWMW01-06	1/11/2019	1901481-007a	No dilution
GWMW01-07	1/11/2019	1901481-008a	No dilution
Field Blank 191101	1/11/2019	1901481-009a	No dilution
Trip Blank	1/11/2019	1901481-010a	No dilution
GWMW06-01	1/12/2019	1901567-001a	No dilution
GWMW06-02	1/12/2019	1901567-002a	No dilution
FB191201	1/12/2019	1901567-003a	No dilution
Trip Blank	1/12/2019	1901567-004a	No dilution
NGMW01-01	1/29/2019	1901b17-001a	No dilution
NGMW01-02	1/29/2019	1901b17-002a	No dilution



Table 2. Sample Information
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Sample ID	Sample Date	Lab Sample ID	Dilutions/Comments
NGMW01-03	1/29/2019	1901b17-003a	No dilution
NGMW01-04	1/29/2019	1901b17-004a	No dilution
NGMW01-05	1/29/2019	1901b17-005a	No dilution
NGMW01-06	1/29/2019	1901b17-006a	No dilution
NGMW01-06 DUP	1/29/2019	1901b17-007a	No dilution/field duplicate
NGMW01-07	1/29/2019	1901b17-008a	No dilution
NGMW01-08	1/29/2019	1901b17-009a	No dilution
NGMW01-09	1/29/2019	1901b17-010a	No dilution
NGMW01-10	1/29/2019	1901b17-011a	No dilution
FB192901	1/29/2019	1901b17-012a	No dilution
Trip Blank	1/29/2019	1901b17-013a	No dilution
NGMW-02-01	1/30/2019	1901b56-001a	No dilution
NGMW-02-02	1/30/2019	1901b56-002a	No dilution
NGMW-02-03	1/30/2019	1901b56-003a	No dilution
NGMW-02-04	1/30/2019	1901b56-004a	No dilution
NGMW-02-05	1/30/2019	1901b56-005a	No dilution
NGMW-02-06	1/30/2019	1901b56-006a	No dilution
NGMW-02-06 Dup	1/30/2019	1901b56-007a	No dilution/field duplicate
NGMW-02-07	1/30/2019	1901b56-008a	No dilution
NGMW-02-08	1/30/2019	1901b56-009a	No dilution
NGMW-02-09	1/30/2019	1901b56-010a	No dilution
FB193001	1/30/2019	1901b56-011a	No dilution
NGMW-03-01	1/30/2019	1901b56-012a	No dilution
NGMW-03-02	1/30/2019	1901b56-013a	No dilution
NGMW-03-03	1/30/2019	1901b56-014a	No dilution
NGMW-03-04	1/30/2019	1901b56-015a	No dilution
NGMW-03-05	1/30/2019	1901b56-016a	No dilution
NGMW-03-06	1/30/2019	1901b56-017a	No dilution
NGMW-03-07	1/30/2019	1901b56-018a	No dilution
NGMW-03-07 Dup	1/30/2019	1901b56-019a	No dilution/field duplicate
NGMW-03-08	1/30/2019	1901b56-020a	No dilution
Trip Blank	1/30/2019	1901b56-021a	No dilution



Table 3. Quality Control Validation Checklist

Requirement	Reported?		Performance Acceptable?		Data Qualified
	Yes	No	Yes	No	
Holding time	X		X		
Detection limit	X		X		
Blanks					
Laboratory method blanks	X		X		
Equipment blanks	X			X	X
Trip blanks	X			X	X
Laboratory control sample (LCS) %R	X		X		
LCS duplicate %R and RPD	X		X		
Matrix spike (MS) %R	X		X		
MS duplicate %R and RPD	X		X		
Surrogate recoveries	X		X		
Field/laboratory duplicate	X			X	X
Results quantitation	X		X		
Field testing/literature review	X			X	X

%R = Percent recovery

RPD = Relative percent difference



Table 4. Detections in the Equipment Blank

Sample ID	Concentration (µg/L)			
	Chloroform	Bromodichloromethane	Bromoform	Dibromochloromethane
EB182412	2	2.8	2.5	3.5

Table 5. Detections in the Field Blanks

Sample ID	Sample Date	Analyte	Concentration (µg/L)
FB181221	12/21/2018	Bromodichloromethane	1.0
FB182612	12/26/2018	Bromodichloromethane	1.0
		Chloroform	1.0
FB182712	12/27/2018	Chloroform	1.0
FB190201	1/2/2019	Bromodichloromethane	1.0
		Chloroform	1.0
FB190301	1/3/2019	Chloroform	1.0
FB190401	1/4/2019	Bromodichloromethane	1.0
		Chloroform	1.1
FB190801	1/8/2019	Acetone	3.3
		Bromodichloromethane	0.9
		Chloroform	0.9
		Dibromochloromethane	0.4
FB191201	1/12/2019	Acetone	4.5
		Bromodichloromethane	0.6
		2-Butanone	4.2
		Chloroform	0.6
		Dibromochloromethane	0.3



Table 6a. Results for Analytes Detected in FB190801

Sample ID	Date Collected	Concentration (µg/L)			
		Acetone	Bromodichloro-methane	Chloroform	Dibromochloro-methane
FB190801	1/8/2019	3.3	0.88	0.91	0.35
GWMW03-01	1/8/2019	5.2	ND	ND	ND
GWMW03-02	1/8/2019	15	ND	ND	ND
GWMW03-03	1/8/2019	5.2	ND	ND	ND

ND = Not detected at or above reporting limit

Table 6b. Results for Analytes Detected in FB191201

Sample ID	Date Collected	Concentration (µg/L)				
		Acetone	Bromodichloro-methane	2-Butanone	Chloroform	Dibromochloro-methane
FB191201	1/12/2019	4.5	0.62	4.2	0.56	0.28
GWMW06-1	1/12/2019	29	ND	7.8	ND	ND
GWMW06-2	1/12/2019	8.5	ND	6.4	ND	ND

ND = Not detected at or above reporting limit

Table 7. Detections in the Trip Blanks

Sample ID	Sample Date	Analyte	Concentration (µg/L)
Trip Blank	12/27/2018	Acetone	10.0
Trip Blank	1/12/2019	Acetone	3.4
		2-Butanone	3.3



Table 8. RPD Results for All Duplicate Samples

Duplicate Sample ID	Maximum RPD (%)
CLC ES1-180215 DUP	59.5
CLC 18-180424 DUP	23.5
CLCES1-170719Dup	19.4
CLCPaz-170104D	16.4
AS2-180815 Dup	14.3
CLC18-170223 Dup	11.8
IS1-170130 DUP	9.4
CLCIS1-181120 Dup	8.7
CLC27-170322DUP	8.0
MWSF5-170103D	6.3
NGMW-02-06 Dup	6.1
GWMW10-02-170113 DUP	5.7
GWMW09-02 DUP	4.7
CLC IS1-170815DUP	3.2
GWMW16-D-170125D	2.9
CLC 18-181219 Dup	2.7
NGMW-03-07 Dup	0.0
GWMW01-05 DUP	0.0
CLC 27-190103 Dup	0.0
CLC 27-180517 Dup	0.0
CLC27_171011 Dup	0.0
CLC 18-170920DUP	0.0
GWMW15-I-170126 D	0.0
CLC AS1 180926 DUP	0.0
CLC ES1-181025 DUP	0.0
CLC C1-171116 Dupe	0.0
CLC C2-171220 DUP	0.0
AS1-180117 DUP	0.0
CLCIS1-180322DUP	0.0
CLC C1-170425 DUP	0.0
CLCC2-170518DUP	0.0
AS1-170623 Dup	0.0



Table 9. RPD Results for CLC ES1-180215

Sample ID	Concentration ($\mu\text{g/L}$)			
	Chloroform	Bromodichloro- methane	Bromoform	Dibromochloro- methane
CLC ES1-180215	2.4	4	3.1	4.3
CLC ES1-180215 DUP	1.3	3.1	3.9	4.4
<i>RPD (%)</i>	<i>59</i>	<i>25</i>	<i>23</i>	<i>2.3</i>