2021 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 ninth year of operation of the groundwater remedy at the GWP site, and addresses the requirements of Paragraphs 22, 30, and 34, and their subsections, of the statement of work (SOW) associated with the Consent Decree dated July 30, 2020 entered in the case titled *City of Las Cruces et al. v. United States of America et al* (Consent Decree) 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) by the U.S. Environmental Protection Agency (EPA) Region 6 *(Civ. No.17-00809-JCH-GBW (D.N.M))*.

The original modified administrative order addressing the RA (Docket No. 06-02-11) was issued in 2011, and only covered the construction phase of the RA. The subsequent Unilateral Administrative Order (UAO) issued in 2017 (CERCLA Docket No. 06-05-07) was an update to the original modified administrative order. The Consent Decree supersedes the most recent UAO. The O&M activities discussed in this report were completed under this Consent Decree and the updated site-specific plans approved in 2021.

1.1 Background

The GWP site is located in Las Cruces, New Mexico (Figure 1). In 1993, tetrachloroethene (PCE), a chlorinated solvent commonly used as a degreaser and 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 subsequently 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 (µg/L). In October 2001, PCE was detected in CLC 24 at a concentration of 1.60 µg/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 EPA maximum contaminant level (MCL) of 5 µg/L for PCE. PCE had been detected in four additional CLC municipal wells (CLC 19, 21, 24, and 27) at concentrations below the MCL. Each well with PCE detections was taken offline between 1996

and 2006 at times when PCE detections remained below the MCL, and no water with PCE concentrations above the MCL was ever delivered to customers. The maximum PCE concentration reported in the plume was 70 µg/L, detected in CLC 18 in 2012. 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. PCE detections at CLC 24 were later determined to not be associated with the GWP site (CH2MHill, 2006a).

The remedial investigation (RI) and feasibility study (FS) were performed by CH2M Hill under contract to the EPA (CH2MHill, 2006a and 2006b). The Proposed Plan was prepared in December 2006 and the record of decision (ROD) was issued by EPA on June 14, 2007 (U.S. EPA, 2007). These documents set forth the selected remedy for the GWP site, which is Enhanced Groundwater Extraction with Treatment (Remedial Alternative 4 from the FS). 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 construction 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 since August 2012. Figure 2 provides a map of the location of remediation system components. The remediation system consists of pumping contaminated groundwater from wells CLC 18 and CLC 27 to a centralized treatment facility at CLC 18. 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 less than 330 gpm (when both wells are running). 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 (defined as concentrations greater than the MCL of 5 µg/L) 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 Objective

The objective of this report is to summarize the 2021 progress that has been made in addressing groundwater contamination at the GWP site. As required in Paragraph 34 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 Consent Decree 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 22 and 30, 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 RAOs.

2. Progress Made Toward Meeting Remediation Goals

This section describes progress made toward achieving the RAOs as set forth in the ROD. During 2021, 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 requirements, the following tasks were completed:

- Groundwater extraction wells CLC 18 and CLC 27 were operated on a daily basis except for required maintenance. CLC 18 was operated at approximately 90 gpm for 8 hours a day Monday through Friday, from 8:00 a.m. to 4:00 p.m. until mid-August, and then for 6 to 8 hours per day, 4 to 6 times per month (based on monthly operation reports and meter readings). CLC 27 was operated between 221 and 239 gpm for 24 hours a day. The average pumping rate for 2021 was 228 gpm, which is within the recommended range (Appendix A, Table 4).
- The groundwater treatment system was operated on a 24-hour per day, 7-day a week (24/7) basis except for required maintenance.
- 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.
- Groundwater monitoring was conducted in December 2021 as described in Appendix C.

During this reporting period, the extraction and treatment system operated for more than 99 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 Consent Decree, the Consent Decree's 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 Consent Decree. The JSP has consistently operated the remediation system to extract PCE-contaminated water and treat it to concentrations below the MCL.

Uranium concentrations in CLC 18 and CLC 27 remain below the EPA MCL of 30 µg/L. Arsenic concentrations in CLC 18 and CLC 27 also remain 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 MCL of 5 µg/L for PCE. Arsenic is also known to leach from liners of FLUTe wells previously used at the site, and was previously detected at higher concentrations in the FLUTe wells (Cherry et al., 2007; DBS&A, 2019b). 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 (prevent human exposure to contaminated groundwater with PCE concentrations above the MCL of 5 µg/L), the JSP previously 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 (maintain capture of the PCE-contaminated groundwater plume above the MCL of 5 µg/L) 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 that remedial progress is being made (Appendices A and B). Figure 9 of Appendix A shows the December 2021 water level elevation contours for the Shallow Zone (previously referred to as the upper hydrogeologic zone, [UHZ]) overlaid on the accompanying PCE concentrations in the Shallow Zone. Figure 10 of Appendix A shows the December 2021 water level elevation contours for the Intermediate Zone overlaid on the corresponding PCE concentrations. Figure 11 of Appendix A shows the December 2021 water level elevation contours for the Deep Zone overlaid on the corresponding PCE

concentrations. These figures and additional numerical modeling discussed in Appendices A and B indicate that the area of groundwater containing PCE concentrations above the MCL is being captured by the pumping of CLC 27 and CLC 18 in each of these vertical zones. Progress toward restoring groundwater to beneficial use as a drinking water supply (RAO #3) continues through removal of PCE mass from the aquifer. As discussed in Section 3.1, approximately 13.3 pounds of PCE was removed from the GWP in 2021, bringing the total PCE mass removed from the GWP since system startup to approximately 115 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 well locations. LCU staff continued to perform remediation system process water and effluent air sampling per the current sampling and analysis plan (SAP) (DBS&A, 2021b) through 2021.

Remediation system sampling has included monitoring the extracted and treated groundwater for volatile organic compounds (VOCs) on a monthly basis and for metals once a year. 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 1 and 2 summarize the analytes that are being monitored.

Table 3 summarizes the frequency of remediation system sampling. Table 4 lists the alternative remediation system sampling locations. Table 5 summarizes the monthly volume pumped from CLC 18 and CLC 27 as reported to the OSE, as well as the monthly measured PCE concentration in each well. Appendix D summarizes daily volumes pumped and treated for each well. During the months of July, August, and September, a supervisory control and data acquisition (SCADA) error caused daily pumping totals to be recorded incorrectly for CLC 27 even though the well

was pumping continuously. For reporting purposes, the total volume from July, August, and September from CLC 27 was totaled and divided evenly between the three months, and an assumed daily average was calculated. Corrected columns for hours and total gallons are provided in Appendix D for those months.

Appendix E provides laboratory analytical reports for monthly remediation system sampling. To determine the mass removed each month, 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):

$$Raw\ Water\ PCE\ Mass - Finished\ Water\ PCE\ Mass = Mass\ Removed$$

The mass entering the system monthly is determined by calculating a weighted average to consider the pumping strategy at both CLC 18 and CLC 27:

$$Raw\ Water\ PCE\ Mass = \frac{Conc_{CLC18} * Vol_{CLC18} + Conc_{CLC27} * Vol_{CLC27}}{Vol_{CLC18} + Vol_{CLC27}}$$

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:

$$\begin{aligned} Finished\ Water\ PCE\ Mass &= Conc_{treated} * Vol_{treated} \\ &= Half\ the\ Detection\ Limit * Vol_{CLC18+CLC27} \end{aligned}$$

This method of mass removal calculation has been used in all previous annual reports. Table 6a summarizes the weighted concentration of PCE in the raw water before treatment. Table 6a also provides finished water PCE concentrations and monthly totals of the treated water volume. In 2021, 13.3 pounds of PCE was removed, bringing the total PCE mass removed to approximately 115 pounds since system startup (Table 6b). It should be noted that the raw volume and

finished volume measurements will not match due to time differences between manual readings for the OSE and automated SCADA system downloads, and timing differences between raw water extraction and treatment and demand-based storage and discharge. Therefore, for consistency, the volumes used were those measured at the wellheads. The mass removal calculations completed by John Shomaker & Associates, Inc. (JSAI) (Appendix B) may differ slightly from the mass removal calculation completed by DBS&A. As stated above, DBS&A accounts for the laboratory quantitation limit for PCE, and compiled total flow values may vary based on rounding and data collection intervals.

The combined weighted concentration of PCE entering the treatment system remained relatively constant throughout the reporting period, with a minimum concentration of 11.2 µg/L in February 2021 and a maximum concentration of 15.3 µg/L in December 2021 (Figure 5). CLC 18 PCE concentrations ranged from a maximum of 5.3 µg/L in May 2021 to a minimum of 3.9 µg/L in October 2021, with an average of 4.6 µg/L over the year. The average PCE concentration in CLC 27 was 13.4 µg/L, which is lower than the last annual report value of 15.0 µg/L. The maximum reported value in CLC 27 was 16.0 µg/L in December 2021. The minimum value was 12.0 µg/L in February 2021.

The treatment system is operating as designed and is effectively removing PCE; the finished water laboratory analytical results over the reporting period were all below the detection limit of 1.0 µg/L (Table 6a).

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 water PCE concentrations. 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 during the calendar year. The results of these calculations are summarized in Tables 7 and 8. The calculated emission rate for PCE is 6.1×10^{-3} tons per year (Table 8), well below limits, and the NPR designation is still valid. Confirmation air samples are collected to verify these results; PCE concentrations in air samples have consistently been below detection limits.

3.3 Summary of Operations

In 2021, the remediation system experienced only minor operational interruptions. The two extraction wells, CLC 18 and CLC 27, pumped a combined volume of 131,537,112 gallons of contaminated water. The daily volumes pumped, per well and combined, are tabulated in Appendix D; the total volume treated each month is provided in Table 6a.

Table 9 provides monthly runtimes and percent runtime for each of the two extraction wells. The system operated for 99.9 percent of the time during the reporting period. There were 4 days with shutdown times of at least one hour. Runtimes are based on 24/7 operation of CLC 27, although there were days when CLC 18 was pumping while CLC 27 was down. 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 while still pumping and treating water from CLC 27.

CLC 27 operated for 8,749 hours out of a possible 8,760 hours during the reporting period at an average rate of 228 gpm. CLC 18 operated for 2,169 hours during the year at a pumping rate of almost 90 gpm. Based on monthly maintenance memoranda from LCU staff and hours recorded by the SCADA system, the system was down for approximately 4 days. Scheduled periodic maintenance was performed on the treatment system and required shutting down the system.

3.4 Summary of Maintenance Records

Regular semiannual maintenance was performed on the treatment system in April and September 2021. There were no recorded unscheduled maintenance actions.

4. Groundwater Monitoring and Evaluation

In addition to the monthly CLC process water sampling, two rounds of groundwater sampling occurred during 2021: one in March/April 2021 and another in December 2021. The March/April monitoring event took the place of the 2020 annual monitoring event, which was delayed pending completion of the FLUTe well replacement project. The corresponding 2020 annual report of the March/April 2021 data collection was issued on June 29, 2021. The 2021 annual groundwater monitoring event, summarized in this report (including the sampling report in Appendix C), was conducted in December 2021.

During 2021, LCU staff continued to measure depth to groundwater in the appropriate wells on a monthly and quarterly schedule as prescribed in the SAP (DBS&A, 2021b), and continued to collect samples from the extraction wells and treatment system each month (Figures 5 and 6). The annual monitoring event (groundwater water quality sampling and water level measurement) for 2021 was completed in December 2021 in accordance with the SAP conditionally approved by EPA on March 21, 2021, and the final SAP was issued on April 26, 2021. Figures 7, 8, and 9 show the PCE plume delineations within the Shallow, Intermediate, and Deep monitoring zones. A report summarizing the activities and data collection of the annual monitoring event is provided as Appendix C. Monitor well elevations were provided by CLC in 2018 for all wells in the groundwater monitoring network. A survey of the newly installed monitor wells was completed in 2021, and used the same reference points to provide consistency between surveys. These two datasets were used in conjunction with the field-measured water levels to calculate the groundwater elevations presented in this report.

4.1 FLUTe Well Replacement

During the 2018 sampling event and subsequent testing, DBS&A identified that the liner integrity of the FLUTe wells at the site had been compromised (documented in Appendix F of DBS&A, 2019b). After discussions with EPA and NMED, a work plan describing a proposal to replace FLUTe wells with conventional discrete-interval monitor wells was submitted to EPA on March 13, 2020 (DBS&A, 2020). Following comments from EPA, a final work plan was submitted on May 18, 2020 and approved by EPA on May 22, 2020. A final construction package was approved by EPA on August 26, 2020. EPA approved an implementation schedule for FLUTe well replacement on December 18, 2020.

During 2021, four existing FLUTe well casings were retrofitted as single-point monitor wells (GWMW-01D, GWMW-08D, GWMW-09D2, and GWMW-10D), and one casing was abandoned (GWMW-03). Seven new single-point monitor wells were installed (GWMW-01S, GWMW-01I, GWMW-08S, GWMW-09S, GWMW-09D1, GWMW-10S, and GWMW-10I). A full description of the replacement project is provided in the as-built letter report submitted to EPA on June 29, 2021 (DBS&A, 2021c).

The original FLUTe well replacement design (DBS&A, 2020) was based on CH2MHill (2006a) FLUTe well as-built documents that misreported several FLUTe port elevations. During well video logging in the first phase of construction, discrepancies were identified and proposed adjustments to screen intervals and the Shallow/Intermediate/Deep hydrologic zone designations were proposed in a memorandum submitted to EPA on February 5, 2021 (DBS&A,

2021a). The requested changes were approved by EPA in a letter dated February 23, 2021 (U.S. EPA, 2021a). Site hydrologic zones are currently defined as follows:

- Shallow (S) wells: Screened interval elevations range from 3,800 to 3,850 feet above mean sea level (feet msl). This depth interval was formerly referred to as the upper hydrologic zone (UHZ).
- Intermediate (I) wells: Screened interval elevations range from 3,685 to 3,800 feet msl (formerly a component of the lower hydrologic zone [LHZ])
- Deep (D) wells: Screened interval elevation range from 3,475 to 3,685 feet msl (formerly a component of the lower hydrologic zone [LHZ])

These designations will be used in this report and its associated appendices, as well as in all future submittals.

4.2 Groundwater Hydrologic and Water Quality Evaluation

Plume definition has improved since completion of the FLUTe replacement project. A full description of changes in the plume in the Shallow, Intermediate, and Deep Zones is provided in Appendix A.

Splitting the LHZ into Intermediate and Deep Zones is a relatively new revision to the site reporting program that aids in delineating vertical differences below the clay layer that underlies portions of the Shallow Zone. The general shape and extent of the Intermediate Zone and Deep Zone plumes are consistent with the LHZ plume defined in previous years. Due to the depth intervals assigned to the S/I/D designations, the screened interval of well GWMW-15S lies within the Intermediate Zone, and this well is plotted on the Intermediate Zone map. GWMW-15I is classified as a Deep Zone well along with GWMW-15D. GWMW-15I is the only well in the GWMW-15 cluster with a PCE concentration above the MCL. Thus, the Intermediate Zone plume is not shown on Figure 8 extending to GWMW-15I. Sampling of inactive production wells CLC 19, CLC 20, and CLC 21 in December 2021 has improved delineation of the plume in the Intermediate and Deep Zones.

It should also be noted that GWMW-09 was shown in the 2018 annual report as outside the 5-µg/L isoconcentration contour due to detections below the MCL in each of the FLUTe sampling ports (DBS&A, 2019a). These data were rejected based on the suspicion of cross-contamination between the FLUTe sampling ports (Table 12). The well was not sampled in 2019. Based on sampling results from newly installed replacement wells GWMW-09D1 and

GWMW-09D2 in April and December 2021, this location lies within the 5-µg/L contour of the Deep Zone. These results are consistent with sampling completed in 2017, when PCE concentrations in lower ports of GWMW-09 were above the MCL.

JSAI has updated the groundwater model for the GWP site based on all data collected. The groundwater model updates and their results are summarized in Appendices A and B.

4.2.1 Groundwater Monitoring Program Evaluation

A groundwater monitoring program evaluation report is provided as Appendix A. The purpose of the 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 the vertical extent of the plume defined for each hydrogeologic zone (Figures 4, 5, and 6 of Appendix A), time-series graphs showing contaminant concentrations for each monitor and extraction well (Appendix D of Appendix A), and the horizontal extent of the PCE plume in each hydrogeologic zone (Figures 9, 10, and 11 of Appendix A).

4.2.2 Horizontal and Vertical Plume Evaluation

Table 10 lists sampling wells required by the SAP and the number of samples collected during this monitoring period, including wells requested by the EPA that are not included in the SAP. Table 11 summarizes sample results with detections from the December 2021 annual groundwater sampling event. Results for other evaluated compounds were below the detection limits. Historical PCE results are summarized in Table 12. Complete analytical reports, details regarding well conditions and samples collected, and field notes for the sampling event are included in the groundwater monitoring report (Appendix C).

Definition of the vertical and horizontal extents of the PCE plumes in the Shallow, Intermediate, and Deep Zones has improved with the completion of the FLUTe well replacement program. PCE is the primary contaminant of concern (COC) at the GWP site, and was detected at concentrations at or above the MCL of 5 µg/L in samples from wells CLC 27, GWMW-01I, GWMW-09D2, GWMW-10I, GWMW-15I, GWMW-16D, and MW-SF10. The maximum PCE detection was 23 µg/L in the sample from well GWMW-16D. Figures 7, 8, and 9 show PCE concentrations with Shallow, Intermediate, and Deep Zone plume delineations, respectively.

Although plume diagrams (Figures 7, 8, and 9) indicate areas of "dashing" where the outermost monitor wells exhibit concentrations greater than 5 µg/L, concentrations are relatively low at the perimeter wells, and the extent of the plume can be reasonably inferred using the existing well network and knowledge of groundwater flow directions.

4.2.2.1 Horizontal Delineation

The Shallow Zone PCE plume (PCE >5 µg/L) is similar in shape and extent to previous years, and remains generally well constrained by the current monitoring network except for the area cross-gradient and north of well MW-SF10 (Figure 7). A decrease in the PCE concentration at GWMW-10S led to the removal of a lobe of the plume that had been depicted extending toward that well.

Plume extent in the Intermediate Zone is constrained to the east by well GWMW-15S and to the southwest by GWMW-11I. There are no dedicated Intermediate Zone monitor wells located north or south of the inferred PCE plume (Figure 8). Production well CLC 21 and the Paz Park municipal well are located north of the impacted monitor wells, and are screened partially within the Intermediate Zone. PCE was not detected in well CLC 21 during the December 2021 monitoring event. PCE was not detected in 12 samples collected from the Paz Park well between 1998 and 2017.

The horizontal extent of the PCE plume in the Deep Zone is defined by wells GWMW-08D, GWMW-01D, GWMW-10D, GWMW-11D, CLC 19, and CLC 21 (Figure 9). Well GWMW-15D provides a vertical constraint on the depth of the PCE plume within the Deep Zone, although the horizontal extent remains undefined east of the GWMW-15 well cluster due to detection at GWMW-15I (classified as a Deep Zone well). However, groundwater flow is to the west, limiting any potential plume migration to the east (Appendix A). GWMW-10D and production wells CLC 21, Paz Park, and CLC 19 are located north and south of the inferred PCE plume as depicted on Figure 9, and are screened within the Deep Zone. Results from well GWMW-10D continue to provide delineation of the southeastern extent of the plume in the Deep Zone. PCE was not detected in wells CLC 19 or CLC 21 during the December 2021 monitoring event, consistent with historical analytical results from these wells. PCE was not detected in the 12 samples collected from the Paz Park well between 1998 and 2017.

4.2.2.2 Vertical Delineation

Installation of the new FLUTe replacement wells has improved delineation of the base of the impacted aquifer in certain locations, including at well nests GWMW-01, GWMW-10, and

GWMW-15 (Appendix A, Figures 4, 5, and 6). However, in the area of the highest PCE concentrations, north of production well CLC 27, the deepest monitor wells (GWMW-16D and GWMW-09D2) contain PCE concentrations above the MCL. The depth of the impacted aquifer in this area is therefore not defined by the data. Although the PCE plume in the Intermediate and Deep Zones is not fully constrained, the hydraulic gradients throughout this area are directed toward extraction well CLC 27 (Appendix A, Appendix B). It is possible that PCE in deep monitor well GWMW-09D2 was introduced to this aquifer zone via the previously compromised FLUTe well liner that has been removed (see Section 4.1).

4.2.2.3 Other Constituents

TCE and vinyl chloride were the only PCE degradation products detected in groundwater at the GWP site. Analytical results for cis-1,2-DCE and trans-1,2-DCE were below reporting limits for all samples collected during the December 2021 monitoring event. TCE was detected in GWMW-16D at a concentration of 1.3 µg/L in 2021, below the 5 µg/L MCL for TCE. Vinyl chloride was detected in GWMW-01D at a concentration of 1.5 µg/L and in GWMW-10D at a concentration of 1.1 µg/L. Both detected concentrations are below the MCL of 2 µg/L. This is the second detection of vinyl chloride in a sample from a site well; vinyl chloride was previously detected in well GWMW-01D in April 2021 at a concentration of 2.7 µg/L. The JSP will continue to assess results from this location under the long-term monitoring program.

Fuel hydrocarbons continue to be detected in a limited number of samples:

- Benzene was detected in samples from wells GWMW-01D, GWMW-08D, GWMW-09D2, and GWMW-10D. Benzene concentrations exceeded the MCL in samples from Deep Zone monitor wells GWMW-01D (49 µg/L) and GWMW-10D (5.1 µg/L). Benzene has historically been detected at concentrations below the MCL in previous FLUTe well samples. A remediation goal was not established for benzene at the GWP site, as petroleum hydrocarbons are not associated with the CERCLA release and fall under the purview of the New Mexico Petroleum Storage Tank regulations (20.5 NMAC).
- Toluene and naphthalene were also detected at low concentrations in the sample from well GWMW-01D (toluene is known to leach from FLUTe liners) (DBS&A, 2019b). All concentrations are below the applicable MCLs.
- The fuel additive methyl tertiary-butyl ether (MTBE) was detected low concentrations in wells CLC 21 (1.8 µg/L) and GWMW-10S (1.2 µg/L) below the New Mexico Water Quality Control Commission (NMWQCC) standard.

Benzene and other petroleum hydrocarbon concentrations will continue to be monitored as part of the long-term monitoring program. Benzene and toluene concentrations are below levels considered relevant for enhancing PCE degradation by reductive dechlorination (e.g., Wiedemeier et al. [1998] provide a minimum total benzene, toluene, ethylbenzene, and xylenes [BTEX] concentration of 100 µg/L for enhancing reductive dechlorination).

The disinfection byproduct bromodichloromethane was detected at a low concentration in the sample from well GWMW-08S (2.8 µg/L), as well as one of the two equipment rinsate blank samples (Appendix C, Attachment C-3a). Historically, disinfection byproducts have been detected sporadically in groundwater samples and equipment blanks; these detections most likely result from cleaning of the sampling equipment.

4.2.3 Hydraulic Gradients

Based on water levels and current hydrologic conditions, hydraulic gradients remain similar to those observed during the previous monitoring event in April 2021, and have not significantly changed since 2019. Better quantification of the groundwater gradients associated with the discrete hydrologic zones has been provided by the new FLUTe replacement wells. In general, groundwater flow directions are well-defined in the GWP area by the existing monitoring network in the Shallow, Intermediate, and Deep Zones.

As stated in Section 3, groundwater elevations in regional wells were measured monthly and quarterly according to the SAP, and measurement of groundwater elevations of the GWP site's monitor wells occurred in December 2021 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 reporting period for the two extraction wells.

As in previous years, the overall regional horizontal hydraulic gradient is fairly flat, with local gradients generally directed toward active extraction wells (Figure 8 of Appendix A). Groundwater flow in the Shallow Zone in the GWP vicinity is primarily eastward, with a localized cone of depression evident around extraction well CLC 18. Horizontal gradients in the Intermediate and Deep Zones are generally southward toward a depression formed around CLC 27. Based on water level contours provided by JSAI, the PCE plume in the Intermediate and Deep Zones lies entirely within the capture zone of extraction well CLC 27.

The Shallow Zone is bounded by a basal clay layer across a significant portion of the plume area west of well cluster GWMW-10 and monitor well MW-SF10, as depicted in Figure 3 of

Appendix A. Where this layer is present, the hydraulic head difference between the Shallow Zone and underlying aquifer zones is approximately 5 to 7 feet, and a downward vertical hydraulic head gradient is present between the Shallow Zone and the underlying Intermediate and Deep Zones (Appendix A). PCE in Shallow Zone groundwater not captured at CLC 18 is believed to move eastward before infiltrating vertically where the clay later is not present, in the vicinity of the GWMW-09 well cluster.

4.3 Optimization Assessment

JSAI completed an assessment of the groundwater extraction well network performance (Appendix B) 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, the current remediation system configuration is adequate. JSAI's evaluation indicates the following:

- Due to declining PCE concentrations at CLC 18, reducing the runtime of CLC 18 to 6 hours per day 1 day per week is recommended.
- CLC 27 pumping continues to efficiently remove PCE. It is recommended that CLC 27 continue to pump at a rate between 225 and 240 gpm. In order to consistently achieve these pumping rates, the pump in CLC 27 is scheduled for replacement by the end of 2022.
- New extraction wells are not required at this time.
- Continued cessation of municipal pumping at CLC 61 (March 2019) to minimize the potential for vertical and southern movement of the plume has resulted in an increase in water level elevation on the southern side of the plume, strengthening the CLC 27 capture zone to the south.

These points are discussed in greater detail in Appendix B.

5. Permitting and Regulatory Activities

The SOW requires an annual meeting to discuss the results of the previous year's annual report. Additionally, EPA prepares Five Year Review (FYR) reports, the second of which was issued in August 2021 (U.S. EPA, 2021b). The 2021 FYR report concluded that the remedy in place is effective at extracting and treating contaminated groundwater, and found the remedy to be protective in the short term. The report specified additional actions to be taken for the remedy

to remain protective in the long term, including continued groundwater monitoring, remediation system optimization, and assessment of the vapor intrusion exposure pathway.

Due to COVID-related travel restrictions, a review meeting was not held in 2021, although several conference calls were held with the JSP, EPA, and NMED to discuss details of the FLUTe well replacement, comments and revisions to the 2020 annual report (DBS&A, 2021d), and the FYR report (U.S. EPA, 2021b). Significant actions initiated based on these events include the following:

- In response to comments provided by NMED and EPA on the 2020 annual report, report sections and figures describing the horizontal and vertical delineation of the PCE plume have been revised and expanded to include additional resolution provided by the FLUTe well retrofit and replacement.
- At the request of EPA, wells CLC 19, CLC 20, and CLC 21 were added to the 2021 sampling program to improve delineation of the PCE plume in the Intermediate and Deep Zones and assess the need for additional monitor wells.
- Following recommendations presented in the 2021 FYR report and subsequent meetings with EPA and NMED on May 4 and June 24, 2022 and e-mail on August 15, 2022, JSP will conduct a soil vapor survey including concurrent exterior, sub-slab, and residential indoor air assessments in February 2023 during the heating season. A revised work plan was submitted to EPA on August 24, 2022, and a revised SAP will be submitted to EPA before calendar year 2023.

In accordance with the institutional control implementation and assurance plan (ICIAP) (DBS&A, 2018a), 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 provided in Appendix F.

6. Difficulties Encountered

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

6.1 Wells Dry During Sampling

During the annual groundwater sampling event, monitor well MW-5 was dry or contained inadequate volume to sample; therefore, groundwater level measurements and/or samples could not be collected. It was expected that this well 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 this well for one additional reporting period. If no sample is able to be collected after the 2022 reporting period, the JSP will propose that this monitor well be removed from the groundwater monitoring plan.

6.2 Sampling Techniques

The 2020 sampling event demonstrated that Hydrasleeve is an effective sampling method at the GWP site (DBS&A, 2021d). Table A-1 of the SAP contains directions for the sampling method required for each well. Only wells CLC 19, CLC 20, and CLC 21 were sampled using the low-flow methodology and a bladder pump.

As detailed in Appendix C, CLC 21 contained over 1 foot of food-grade oil on top of the groundwater, causing difficulty with decontamination of equipment. The visual and olfactory characteristics of the oil do not indicate that it is petroleum-based. Procedures will be added to the SAP to remove the oil prior to the next annual sampling event. Sample results are not expected to be affected by presence of the oil.

6.3 SCADA System

The following SCADA reporting issues are noted for both CLC 27 and CLC18 during the second half of 2021:

- Daily extraction volumes were not properly recorded by the SCADA system for CLC 27 during July, August, and September 2021. The total extracted volume for this time period

was recorded from the manual totalizer reading, and is consistent with the prescribed well operation schedule. An average pumping rate for the three-month period was calculated based on runtime and the total extracted volume. The daily influent and effluent volumes at the treatment system were properly reported, and were consistent with continuous operation of well CLC 27. Totalizer meter readings have been used for extraction volume and mass removal calculations in the months when the SCADA issues occurred.

- Beginning in October 2021, the SCADA daily runtime reports from well CLC 18 were also not consistent with the monthly totalizer data. The impact of using SCADA data as opposed to monthly totalizer data on the overall mass removal calculation is negligible, but future reports will use manual totalizer readings for mass removal calculations until SCADA issues are resolved.
- JSAI and DBS&A will work with LCU to resolve SCADA reporting issues.

7. Data Validation and Verification

Prior to the groundwater sampling event, the JSP's Quality Assurance Manager (QAM) met with the sampling team to review standard operating procedures and sampling methodology, and to verify that preparation was completed. During the December 2021 groundwater sampling, a designated representative of the QAM performed an audit of groundwater sampling tasks completed by the sampling team. The QAM representative observed and documented compliance between the methods prescribed in the SAP and the methods used by the sampling team.

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, 2018b). 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 G. The data validation report confirms that the air and water samples collected as part of the system monitoring and the 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.

8. Conclusions

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

- Through the end of 2021, a total of 1,151,001,204 gallons of groundwater has been extracted from the dissolved-phase plume at the GWP site.
- A total of 115 pounds of PCE has been removed from the extracted groundwater, including approximately 13.3 pounds removed in 2021.
- COCs have not been detected in the treated groundwater that has been returned to the public water supply distribution system at Griggs Reservoir.
- Hydrasleeve continues to be an effective sampling method at the GWP site.
- Groundwater elevation monitoring and groundwater modeling indicate that the area of groundwater containing detections of PCE in the Shallow, Intermediate, and Deep Zones can be captured by remediation wells CLC 18 and CLC 27.

8.1 Status of Deliverables Required by the Consent Decree

As required by the previous consent decree, the pre-achievement O&M plan (including all appended plans) was revised in October 2018. The plan and all appendices were approved by EPA in a letter dated November 19, 2018. After the Consent Decree was finalized in July 2020, the O&M plan was reviewed to determine if any updates were required to remain in compliance with the most recent SOW; none were identified and the plan was not updated. As required by the SOW (Paragraph 22.f), all plans associated with the pre-achievement O&M plan were reviewed during preparation of this annual report. The SAP was revised in April 2021 following completion of the FLUTe well replacement program. The health and safety plan (HASP) was updated in August 2021 to reflect changes to COVID-19 related guidance.

The 2020 annual report was submitted to EPA on June 29, 2021 (DBS&A, 2021d). Comments from EPA were received on October 26, 2021. The final report was issued on April 27, 2022 after addressing EPA comments. EPA has approved the 2020 annual report, as documented in an approval letter dated September 9, 2022.

The SOW requires an annual meeting to discuss the annual report; several conference calls were held with the JSP, EPA, and NMED to fulfill this requirement. No in-person meetings occurred due to COVID-19 related travel restrictions.

8.2 Summary of Completed and Planned Work

The following work has been completed to achieve effective O&M of the remedy:

- The pumping strategy was modified in August 2021 per JSAI's recommendations in the 2020 annual report to enhance capture of the PCE groundwater plume. CLC 27 pumped at an average of 228 gpm 24 hours a day, 7 days a week. CLC 18 pumped at approximately 90 gpm for 6 to 8 hours a day, 4 to 6 days per month (for an annual average of 19.1 gpm, including the period of continuous operation prior to August 2021).
- The monitor well network was sampled in accordance with the requirements in the 2020 Consent Decree (effective July 30, 2020) and the 2021 SAP, along with sampling of additional wells requested by the EPA during comments regarding the 2020 annual report.
- The JSP QAM's representative 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 FLUTe well replacement project was completed in March 2021.

8.3 Recommendations

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

- Continue to schedule future sampling to occur prior to the coldest season in Las Cruces (December–February) to avoid sampling difficulties and freezing conditions.
- Continue to monitor PCE mass removal rate at CLC 27 to determine the effect of the 2020 increase in pumping.
- Continue to monitor PCE mass removal rate at CLC 18 to determine the effect of the 2021 decrease in pumping.
- Develop a methodology ranking the importance of data points for defining the water level elevation contours for the Shallow, Intermediate, and Deep Zones.

- Operate CLC 18 1 day a week for up to 8 hours per day at an average rate of 90 gpm, per JSAI's recommendation in Appendix B (to achieve an average including on and off periods of approximately 4.25 gpm).
- Operate CLC 27 between 225 and 240 gpm, per JSAI's recommendation in Appendix B.
- In order to achieve the recommended pumping rates in CLC 27, the well pump should be replaced and the well screen should be inspected. This work is scheduled to be completed by the end of 2022.

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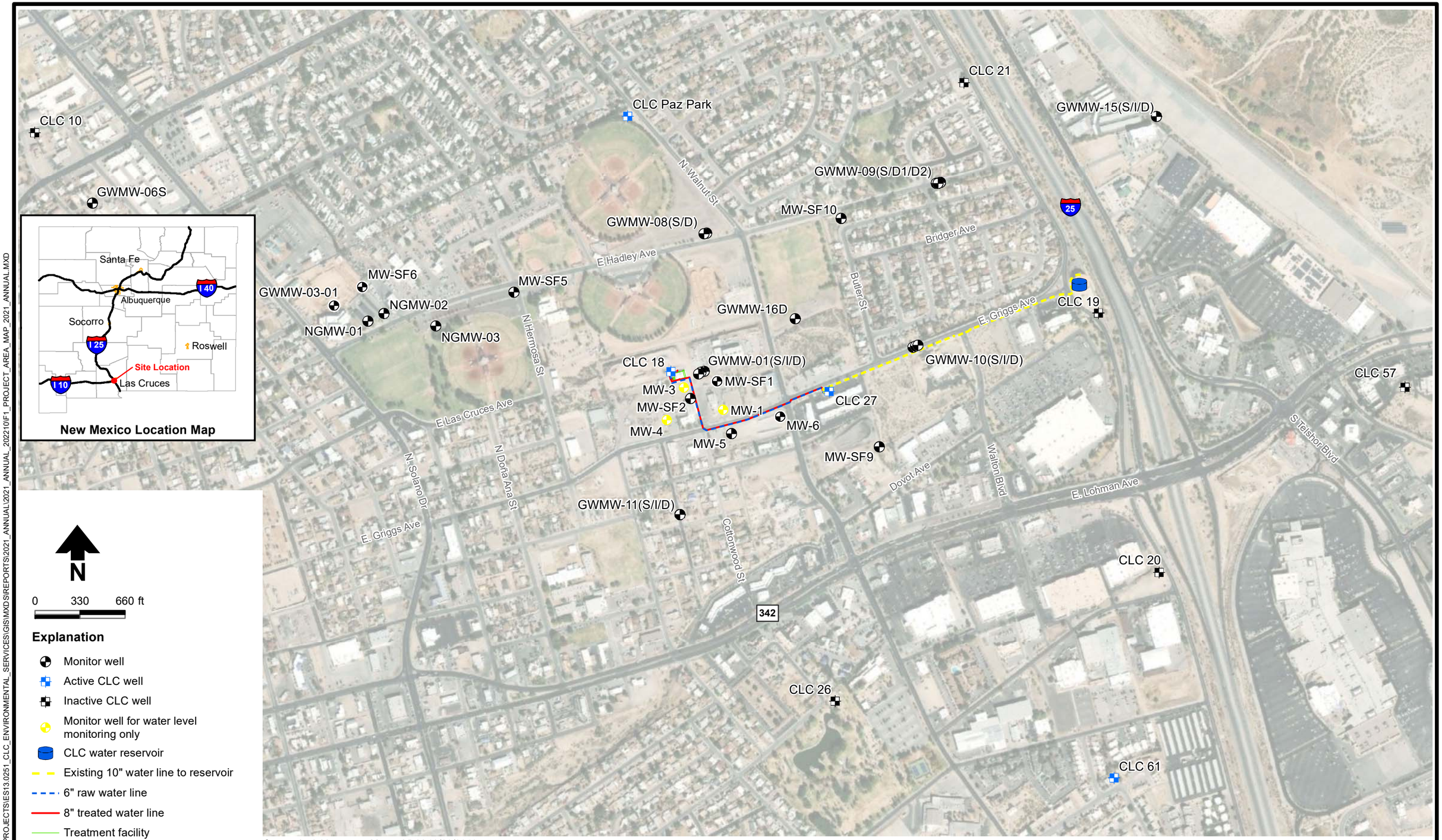
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Figures



Explanation

- Monitor well
- Active CLC well
- Inactive CLC well
- Monitor well for water level monitoring only
- CLC water reservoir
- Existing 10" water line to reservoir
- 6" raw water line
- 8" treated water line
- Treatment facility

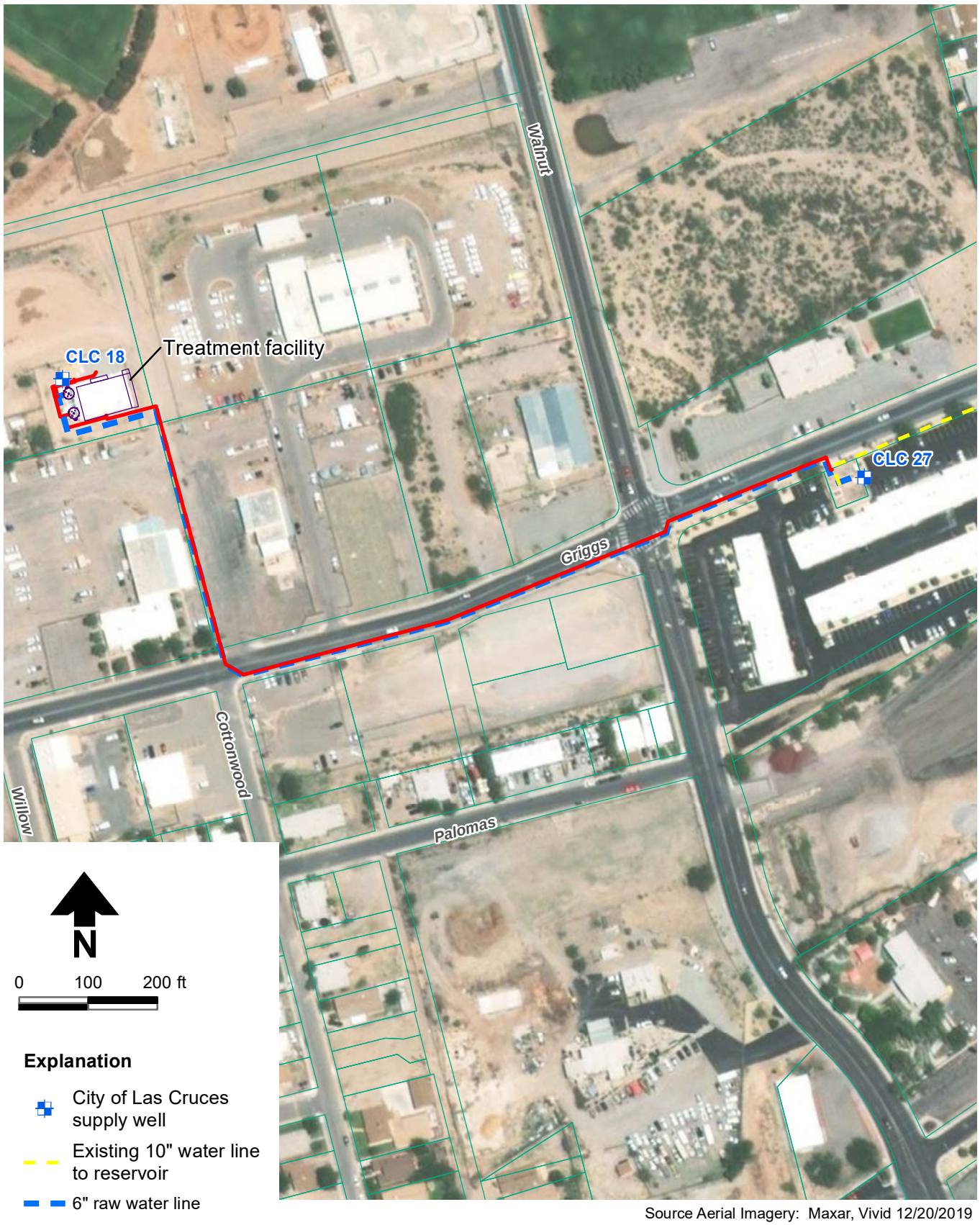
Source Aerial Imagery: Maxar, Vivid 12/20/2019

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

Figure 1

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Source Aerial Imagery: Maxar, Vivid 12/20/2019

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

Figure 2

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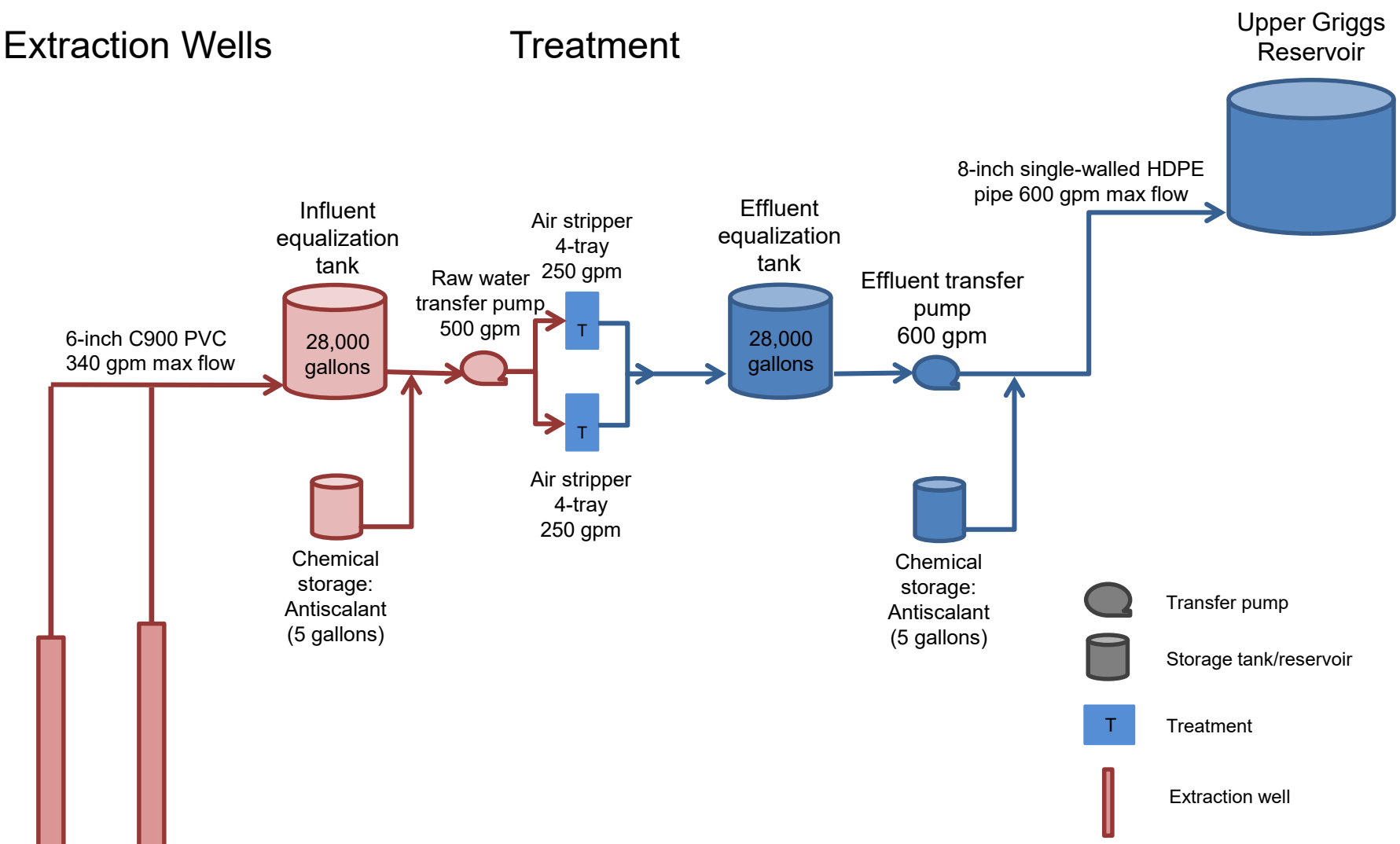
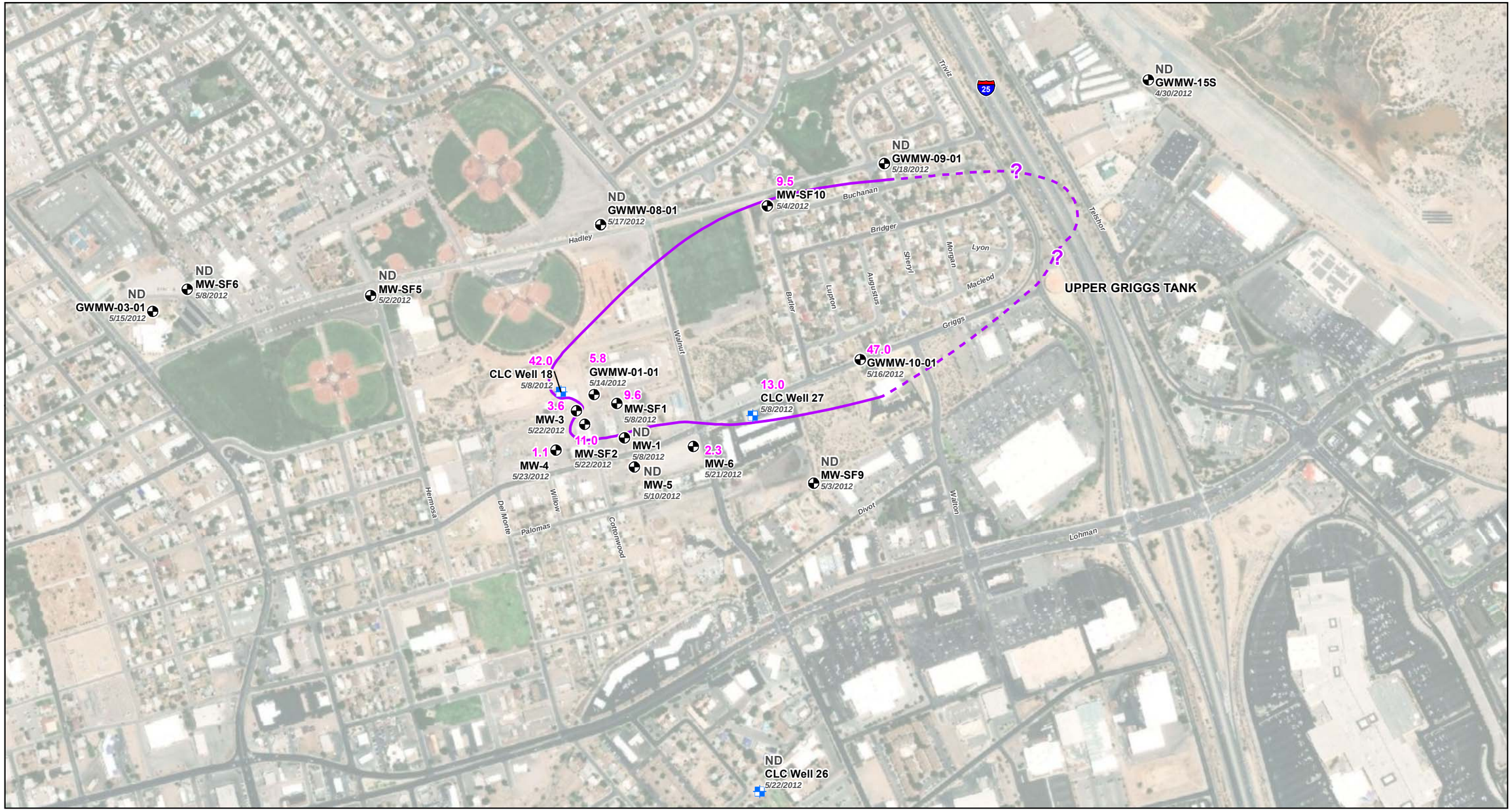


Figure 3

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



Explanation

- Monitor well
- CLC supply well
- 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 GWMW wells (Port 1).

Source Aerial Imagery: Maxar, Vivid 2021 composite

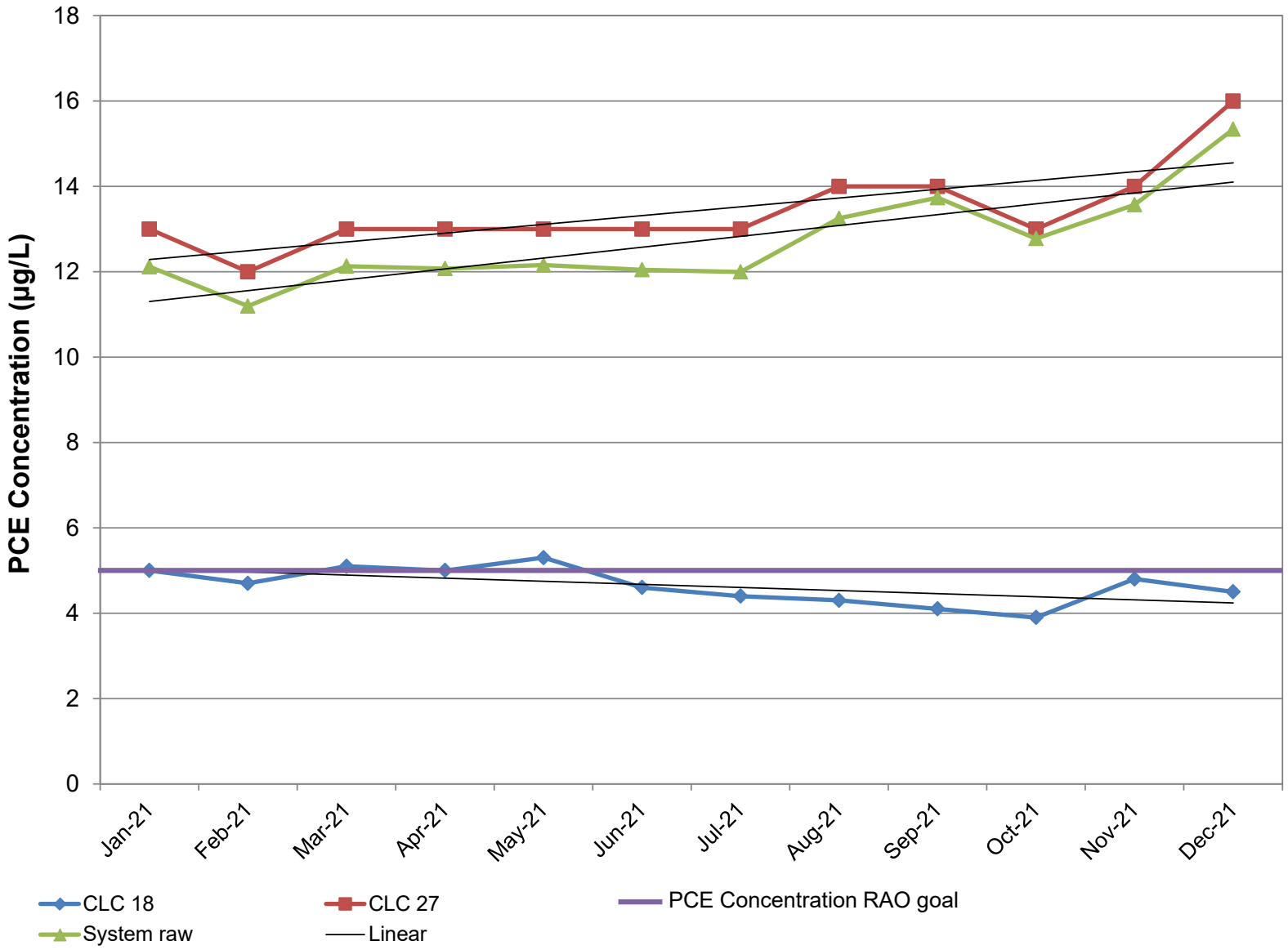
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GRIGGS-WALNUT GROUND WATER PLUME SITE
REMEDIAL ACTION
PCE in Groundwater, May 2012

Figure 4

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Note: The PCE remedial action objective (RAO) goal is for concentrations to be ≤5 µg/L for drinking water.

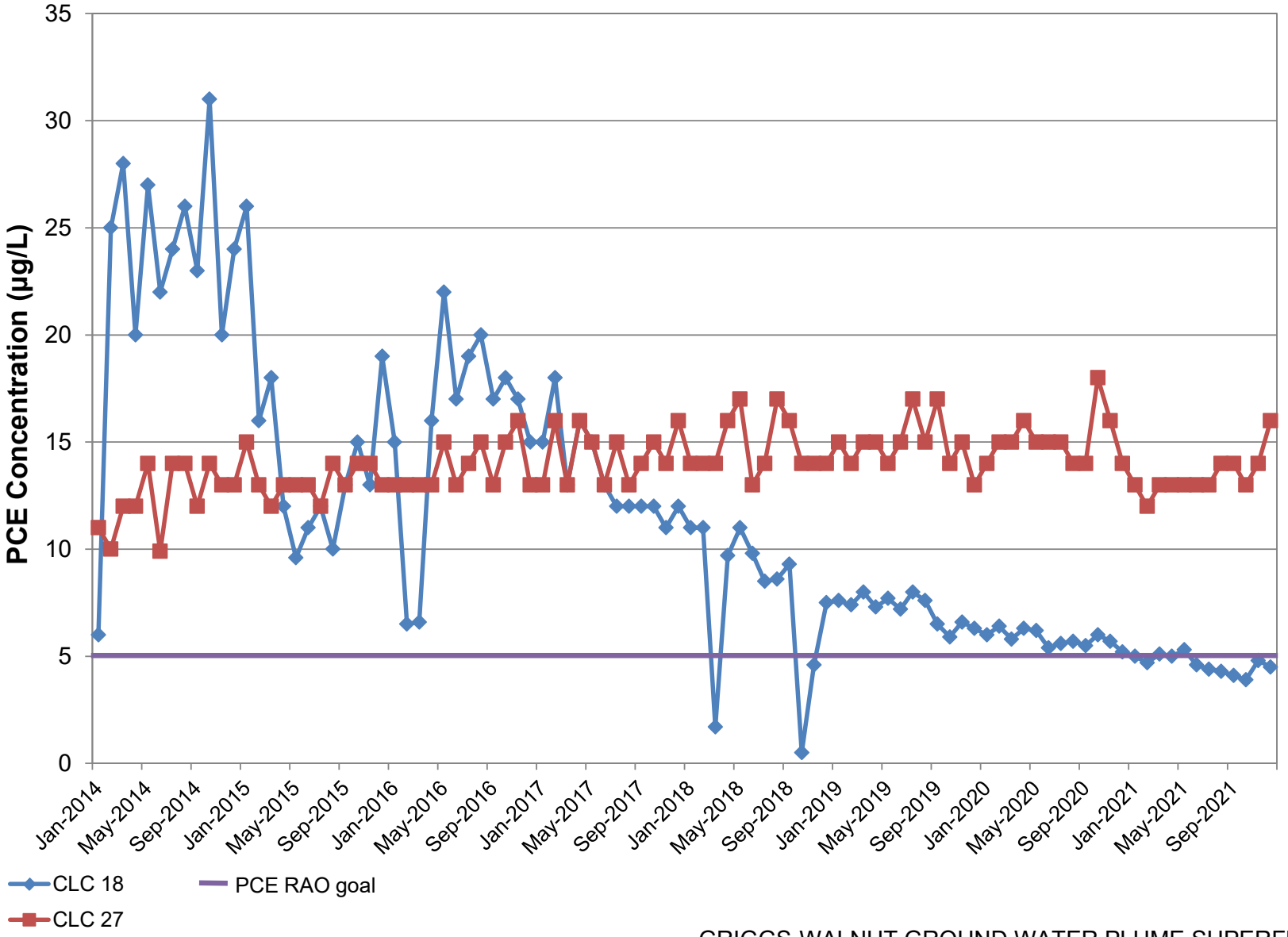
Figure 5

GRIGGS-WALNUT GROUND WATER PLUME SUPERFUND SITE
REMEDIAL ACTION

Remediation System PCE Concentration

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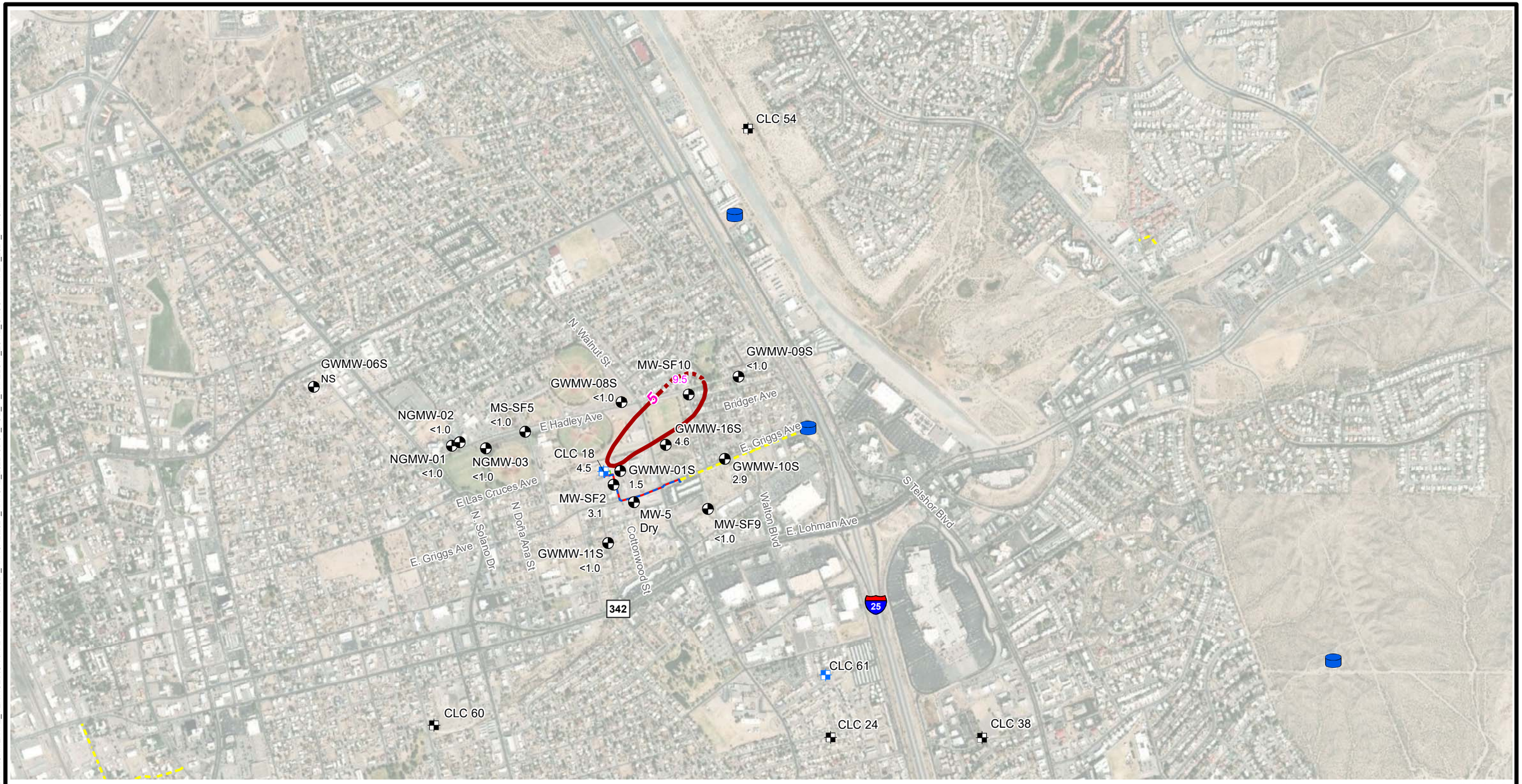
Note: The PCE remedial action objective (RAO) goal is for concentrations to be ≤5 µg/L for drinking water.

GRIGGS-WALNUT GROUND WATER PLUME SUPERFUND SITE
REMEDIAL ACTION

Monthly PCE Concentration in CLC 18 and CLC 27
January 2014–December 2021

Figure 6

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Source Aerial Imagery: Maxar, Vivid 12/20/2019

Explanation

- Monitor well
- Active CLC well
- Inactive CLC well
- NS = Not Sampled
- Existing 10" water line to reservoir
- 6" raw water line
- 8" treated water line
- City of Las Cruces water reservoir

N

0 700 1400 ft

Explanation

9.5 Concentration is above the Regulatory Maximum Limit of 5 µg/L

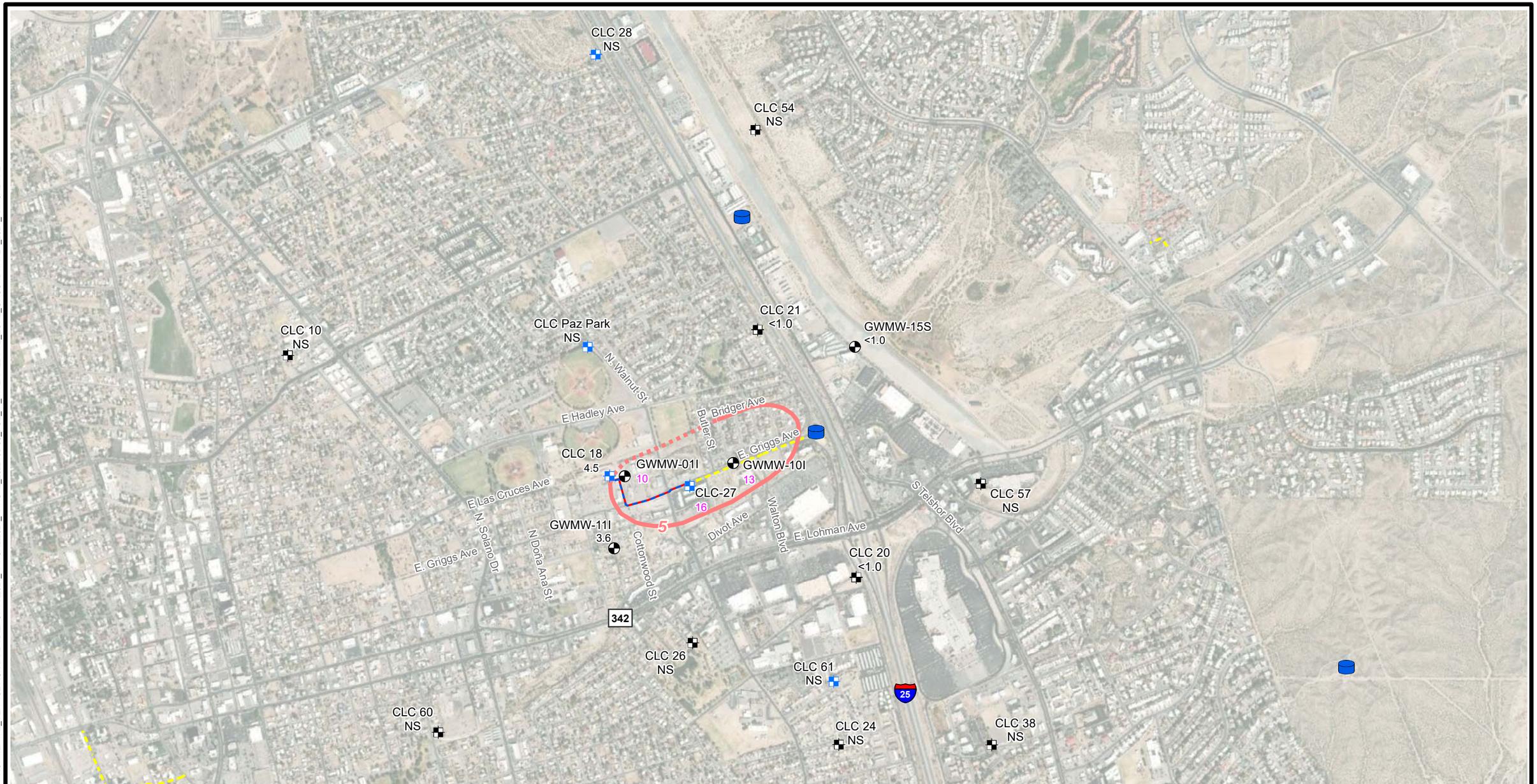
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GRIGGS-WALNUT GROUND WATER PLUME SITE
REMEDIAL ACTION

PCE in Shallow Zone Groundwater Wells, December 2021

Figure 7

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Source Aerial Imagery: Maxar, Vivid 12/20/2019

N

0 700 1400 ft

Explanation

- Monitor well
- Active CLC well
- Inactive CLC well
- NS = Not Sampled
- Existing 10" water line to reservoir
- 6" raw water line
- 8" treated water line
- City of Las Cruces water reservoir

Note: GWMW-15S is screened in the Intermediate Zone

Explanation

13 Concentration is above the Regulatory Maximum Limit of 5 µg/L

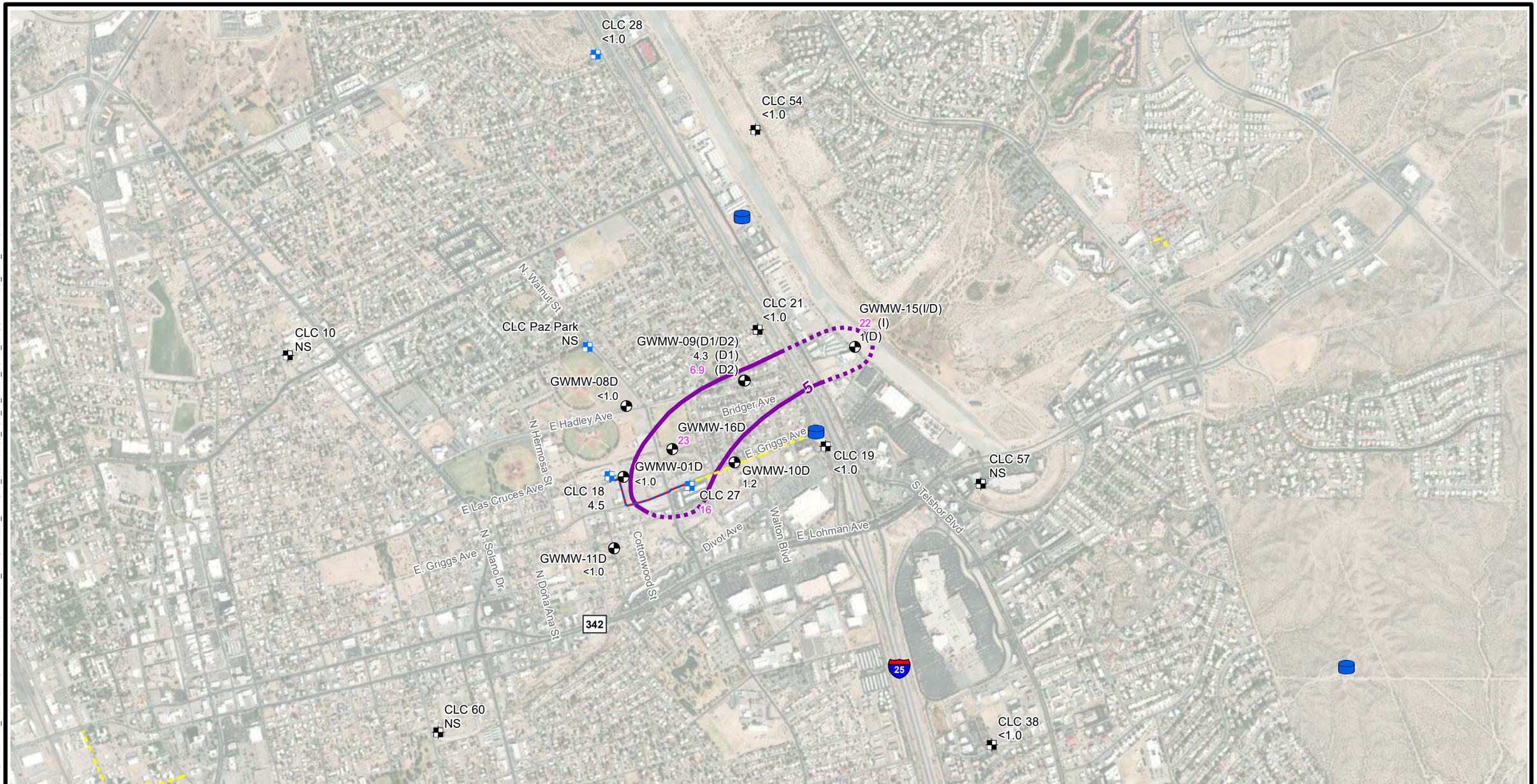
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GRIGGS-WALNUT GROUND WATER PLUME SITE
REMEDIAL ACTION

PCE in Intermediate Zone Groundwater Wells, December 2021

Figure 8

\\SS6ABQ\DATA\PROJECTS\ES13.0251_CLC_ENVIRONMENTAL_SERVICES\GIS\MXD\SR\REPORTS\2021_ANNUAL\2021_ANNUAL_20221OF08_PCE_IN_INTERMEDIATE_ZONE_GROUNDWATER_2021_ANNUAL.MXD



Source Aerial Imagery: Maxar, Vivid 12/20/2019

Explanation

- Monitor well
- Active CLC well
- Inactive CLC well
- NS = Not Sampled
- Existing 10" water line to reservoir
- 6" raw water line
- 8" treated water line
- City of Las Cruces water reservoir

Notes:
1. CLC 18 screen is in deep zone, however thick gravel envelope allows for commingling of shallow and intermediate zones
2. GWMW-15I is screened in the Deep Zone

Explanation

23 Concentration is above the Regulatory Maximum Limit of 5 µg/L

N

0 700 1400 ft

DBS&A
Daniel B. Stephens & Associates, Inc.
10/24/2022 JN DB21.1359

GRIGGS-WALNUT GROUND WATER PLUME SITE
REMEDIAL ACTION

PCE in Deep Zone Groundwater Wells, December 2021

Figure 9

\\SS6ABQ\DATA\PROJECTS\ES13.0251_CLC_ENVIRONMENTAL_SERVICES\GIS\MXD\SIREPORTS\2021_ANNUAL\2021_ANNUAL_202210F09_PCE_IN_DEEP_ZONE_GROUNDWATER_2021_ANNUAL.MXD

Tables

Table 1. 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 2. Groundwater Analytical Methodologies and Screening Levels

Analyte Class	Analytical Method	Concentration (µg/L)			
		Method Detection Limit [a]	Hall Environmental PQL	EPA MCL	NMWQCC Standard [b]
Benzene	8260B	0.062	1.0	5	5
PCE	8260B	0.13	1.0	5	5
TCE	8260B	0.11	1.0	5	5
1,1-DCE	8260B	0.081	1.0	7	7
cis-1,2-DCE	8260B	0.20	1.0	70	70
trans-1,2-DCE	8260B	0.18	1.0	100	100
MTBE	8260B	0.24	1.0	6.2 [c]	NA
Vinyl chloride	8260B	0.18	1.0	2	2
Arsenic	200.8, ICPMS	0.5	1.0	10	10 [d]
Arsenic speciation	E1632	2	2.0	10	10 [d]
Uranium	200.8, ICPMS	0.5	1.0	30	30 [d]

[a] Method detection limit does not imply reporting limit.
[b] Standards are from 20.6.2.3103 NMAC, effective December 2018.
[c] EPA Region 6 medium-specific screening level (MSSL)
[d] 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 = Tetrachloroethene
TCE = Trichloroethene
DCE = Dichloroethene
NA = Not applicable
PQL = Practical quantitation limit

Table 3. 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.
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 treated water	Groundwater	C1	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.
C-2 treated water	Groundwater	C2	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.
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 4. Alternative Remediation System Sampling Locations

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

Table 5. 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 2021	1,317,093	5.0	10,623,910	13.0
February 2021	1,190,154	4.7	9,602,521	12.0
March 2021	1,315,693	5.1	10,652,144	13.0
April 2021	1,333,420	5.0	10,187,850	13.0
May 2021	1,293,248	5.3	10,508,868	13.0
June 2021	1,250,331	4.6	9,758,422	13.0
July 2021	1,292,710	4.4	9,900,457 [a]	13.0
August 2021	816,300	4.3	9,900,457 [a]	14.0
September 2021	267,478	4.1	9,581,087 [a]	14.0
October 2021	249,855	3.9	10,019,276	13.0
November 2021	469,301	4.8	9,585,548	14.0
December 2021	597,828	4.5	9,823,161	16.0
Total	11,393,411		120,143,700	

[a] Due to CLC 27 SCADA recording errors during July, August, and September, the daily total volumes for this period were calculated using the manual totalizer reading of 29,382,000 gallons recorded on September 30, 2021, divided by 92 days (the number of days since the totalizer was reset on July 1). The monthly total is based on the number of days in each month during this period.

PCE = Tetrachloroethene
µg/L = Micrograms per liter

Table 6a. PCE Mass Removed

Month	Weighted PCE Concentration (µg/L)		Volume Treated (gallons)	Mass of PCE Removed (pounds)
	Raw	Finished [a]		
January 2021	12.1	ND	11,941,003	1.2
February 2021	11.2	ND	10,792,675	1.0
March 2021	12.1	ND	11,967,837	1.2
April 2021	12.1	ND	11,521,270	1.1
May 2021	12.2	ND	11,802,116	1.1
June 2021	12.0	ND	11,008,753	1.1
July 2021	12.0	ND	11,193,167 [b]	1.1
August 2021	13.3	ND	10,716,757 [b]	1.1
September 2021	13.7	ND	9,848,565 [b]	1.1
October 2021	12.8	ND	10,269,131	1.1
November 2021	13.6	ND	10,054,849	1.1
December 2021	15.3	ND	10,420,989	1.3
Total			131,537,112	13.3

[a] For mass removal calculations, non-detect results (<1 µg/L) are assumed to be one-half of the detection limit.

[b] Due to CLC 27 SCADA recording errors during July, August, and September, the daily total volumes for this period were calculated using the manual totalizer reading of 29,382,000 gallons recorded on September 30, 2021, divided by 92 days (the number of days since the totalizer was reset on July 1). The monthly total is based on the number of days in each month during this period.

PCE = Tetrachloroethene
µg/L = Micrograms per liter
ND = Not detected

Table 6b. Total PCE Removed, 2013-2021

Year	Pounds
2013	8.86
2014	10.25
2015	16
2016	11.1
2017	11.0
2018	13.5
2019	15.2
2020	15.8
2021	13.3
Total	115.0

Table 7. Calculated Air Emissions, 2021

Month	Calculated PCE Air Emissions (lb/hr)	Calculated PCE Indoor Air Concentration (µg/m^3)
January 2021	0.002	0.0005
February 2021	0.001	0.0005
March 2021	0.002	0.0005
April 2021	0.002	0.0005
May 2021	0.002	0.0005
June 2021	0.001	0.0005
July 2021	0.001	0.0005
August 2021	0.002	0.0005
September 2021	0.002	0.0005
October 2021	0.001	0.0005
November 2021	0.002	0.0005
December 2021	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 = Tetrachloroethene
lb/hr = Pounds per hour

Table 8. Calculated PCE Air Emissions, 2013–2021

Year	Calculated PCE Air Emissions (tons per year)
2013	4.76×10^{-3}
2014	5.93×10^{-3}
2015	5.45×10^{-3}
2016	5.54×10^{-3}
2017	5.52×10^{-3}
2018	6.74×10^{-3}
2019	7.59×10^{-3}
2020	7.91×10^{-3}
2021	6.10×10^{-3}

PCE = Tetrachloroethene

Table 9. Monthly Runtime

Month	Total Runtime (hours)	Percent Runtime
January 2021	744	100.0%
February 2021	670	99.7%
March 2021	744	100.0%
April 2021	716	99.4%
May 2021	744	100.0%
June 2021	715	99.3%
July 2021 [a]	744	100.0%
August 2021 [a]	744	100.0%
September 2021 [a]	720	100.0%
October 2021	744	100.0%
November 2021	720	100.0%
December 2021	744	100.0%
Total	8,749	99.9%

Note: Runtimes are based on the operation of CLC 27 (essentially 24/7). 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.

[a] Due to SCADA recording errors during July, August, and September, CLC 27 reported partial runtimes during this period. Manual totalizer readings indicate that the pump was running continuously, and total runtime hours have been corrected, as shown in Appendix D.

Table 10. Groundwater Monitoring Program Monitor Well Network
Page 1 of 2

Sample Location [a] (Well ID)	No. of Samples Collected	Hydrogeologic Zone	Required Number of Samples	Notes
CLC 18	1	Shallow/ Intermediate/ Deep [b]	1	Sample collected represents the Shallow Zone (see Appendix A).
CLC 19	1	Deep	0	Not currently included in the SAP; requested by EPA in comments regarding the 2020 annual report.
CLC 20	2	Intermediate/ Deep	0	Not currently included in the SAP; requested by EPA in comments regarding the 2020 annual report. Number of samples includes duplicate.
CLC 21	1	Intermediate/ Deep	0	Not currently included in the SAP; requested by EPA in comments regarding the 2020 annual report.
CLC 27	1	Deep	1	
GWMW-01S	1	Shallow	1	
GWMW-01I	1	Intermediate	1	
GWMW-01D	1	Deep	1	
GWMW-08S	1	Shallow	1	
GWMW-08D	1	Deep	1	
GWMW-09S	1	Shallow	1	
GWMW-09D1	1	Deep	1	
GWMW-09D2	1	Deep	1	
GWMW-10S	2	Shallow	1	Number of samples includes duplicate.
GWMW-10I	1	Intermediate	1	
GWMW-10D	1	Deep	1	
GWMW-11S	1	Shallow	1	
GWMW-11I	1	Intermediate	1	
GWMW-11D	2	Deep	1	Number of samples includes duplicate.
GWMW-15S	1	Intermediate	1	

[a] Well designation indicates that the well is screened in the following corresponding zones (except where noted):
S = Shallow
I = Intermediate
D= Deep

[b] Well screen is in Deep Zone; however, thick gravel envelope allows for comingling of Shallow and Intermediate Zones.

Table 10. Groundwater Monitoring Program Monitor Well Network
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Sample Location [a] (Well ID)	No. of Samples Collected	Hydrogeologic Zone	Required Number of Samples	Notes
GWMW-15I	1	Deep	1	
GWMW-15D	1	Deep	1	
GWMW-16S	1	Shallow	1	
GWMW-16D	1	Deep	1	
MW-5	0	Shallow	1	Dry
MW-SF2	1	Shallow	1	
MW-SF5	1	Shallow	1	
MW-SF9	1	Shallow	1	
MW-SF10	1	Shallow	1	
NGMW-01	1	Shallow	1	
NGMW-02	1	Shallow	1	
NGMW-03	2	Shallow	1	Number of samples includes duplicate.

[a] Well designation indicates that the well is screened in the following corresponding zones (except where noted):
S = Shallow
I = Intermediate
D= Deep

[b] Well screen is in Deep Zone; however, thick gravel envelope allows for comingling of Shallow and Intermediate Zones.

Table 11. Groundwater Analytical Results, December 2021
Page 1 of 2

Sample Location (Well ID)	Well Designation	Sampling Method	Concentration (µg/L)													
			Benzene	Ethylbenzene	Toluene	MTBE	Naphthalene	PCE	TCE	Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	Bromodi-chloromethane	Chloroform	Arsenic	Uranium
		EPA MCL	*5*	*700*	*1,000*	*6.2* [a]	*NS*	*5*	*5*	*2*	*70*	*100*	*80* [b]	*80* [b]	*10*	*30*
		NMWQCC Standard [c]	*5*	*700*	*1,000*	*100*	*30* [d]	*5*	*5*	*2*	*70*	*100*	*80*	*100*	*10*	*30*
CLC 18	S/I/D [e]	Grab	<1.0	<1.0	<1.0	<1.0	<2.0	4.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.7	22
CLC 19	D	Low Flow	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
CLC 20	I/D	Low Flow	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
CLC 20 (Dup)	I/D	Low Flow	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
CLC 21	I/D	Low Flow	<1.0	<1.0	<1.0	1.8	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
CLC 27	D	Grab	<1.0	<1.0	<1.0	<1.0	<2.0	**16**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.5	20
GWMW-01S	S	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<2.0	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-01I	I	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<2.0	**10**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-01D	D	Hydrasleeve	**49**	<1.0	**5.7**	<1.0	2.8	<1.0	<1.0	1.5	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-08S	S	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.8	1.1	—	—
GWMW-08D	D	Hydrasleeve	4.8	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-09S	S	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-09D1	D	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<2.0	4.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-09D2	D	Hydrasleeve	2.3	<1.0	<1.0	<1.0	<2.0	**6.9**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-10S	S	Hydrasleeve	<1.0	<1.0	<1.0	1.2	<2.0	2.9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-10S (Dup)	S	Hydrasleeve	<1.0	<1.0	<1.0	1.2	<2.0	2.7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-10I	I	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<2.0	**13**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-10D	D	Hydrasleeve	**5.1**	<1.0	<1.0	<1.0	<2.0	1.2	<1.0	1.1	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-11S	S	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-11I	I	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<2.0	3.6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-11D	D	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-11D (Dup)	D	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-15S	I	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-15I	D	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<2.0	**22**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-15D	D	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<2.0	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-16S	S	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<2.0	4.6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-16D	D	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<2.0	**23**	1.3	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
MW-5	S	— [f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-SF2	S	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<2.0	3.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
MW-SF5	S	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—

Notes are provided at the end of the table.

Table 11. Groundwater Analytical Results, December 2021
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Sample Location (Well ID)	Well Designation	Sampling Method	Concentration (µg/L)													
			Benzene	Ethylbenzene	Toluene	MTBE	Naphthalene	PCE	TCE	Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	Bromodi-chloromethane	Chloroform	Arsenic	Uranium
		EPA MCL	*5*	*700*	*1,000*	*6.2*[a]	*NS*	*5*	*5*	*2*	*70*	*100*	*80*[b]	*80*[b]	*10*	*30*
		NMWQCC Standard[c]	*5*	*700*	*1,000*	*100*	*30*[d]	*5*	*5*	*2*	*70*	*100*	*80*	*100*	*10*	*30*
MW-SF9	S	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
MW-SF10	S	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<2.0	**9.5**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
NGMW-01	S	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
NGMW-02	S	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
NGMW-03	S	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
NGMW-03 (Dup)	S	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—

Bold indicates that value exceeds the applicable U.S. Environmental Protection Agency (EPA) maximum contaminant level (MCL) or New Mexico Water Quality Control Commission (NMWQCC) standard.
Note: This table only includes detected analytes. Results for all other analytes were below laboratory reporting limits.

[a] EPA Region 6 medium-specific screening level (MSSL).

[b] Provided MCL is for total trihalomethanes, which include bromodichloromethane and chloroform.

[c] Standards from 20.6.2.3103 NMAC, effective December 2018.

[d] Standard for total naphthalene plus monomethylnaphthalenes.

[e] Well CLC 18 screen is in Deep Zone; however, thick gravel envelope allows for comingling of Shallow and Intermediate Zones.

[f] Well was dry.

µg/L = Micrograms per liter
NS = No applicable standard
S = Shallow Zone
I = Intermediate Zone
D = Deep Zone
— = Not sampled

Table 12. PCE Results for Annual Groundwater Sampling, 2012–2021
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Well	PCE Concentration (µg/L)								
	2012	2013	2014	2015	2016	2018	2019	2020 [a]	2021
CLC Paz Park Well	<1.0	<1.0	<1.0	<1.0	<1.0	—	— [b]	—	—
CLC 18	**56**	2.7	**6**	**13**	**15**	1.4	**6.6** [c]	**5.1**	4.5
CLC 19	—	—	—	—	—	—	—	—	<1.0
CLC 20	—	<1.0	<1.0	<1.0	<1.0	—	<1.0	—	<1.0
CLC 21	—	—	—	—	—	—	—	—	<1.0
CLC 26	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—
CLC 27	**13**	**14**	**11**	**14**	**13**	**13**	**13** [c]	**13**	**16**
CLC 57	—	<1.0	<1.0	<1.0	<1.0	—	<1.0	—	—
CLC 61	—	—	—	—	—	—	<1.0	—	—
GWMW-01S	—	—	—	—	—	—	—	1.8	1.5
GWMW-01I	—	—	—	—	—	—	—	**20** [d]	**10**
GWMW-01D	—	—	—	—	—	—	—	1.6	<1.0
GWMW-01-01	**5.8**	**11**	1.3	3.8	**9.8**	5 Rf	— [e]	—	—
GWMW-01-02	<1.0	<1.0	<1.0	<1.0	—	5.3 Rf	— [e]	—	—
GWMW-01-03	2.7	3.2	2	1.6	**7**	4.3 Rf	— [e]	—	—
GWMW-01-04	<1.0	<1.0	<1.0	<1.0	<1.0	3.7 Rf	— [e]	—	—
GWMW-01-05	3.2	<1.0	<1.0	<1.0	<1.0	2.3 Rf	— [e]	—	—
GWMW-01-06	**11**	**14**	**8**	2.4	4.7	<1.0 Rf	— [e]	—	—
GWMW-01-07	3.2	3.6	2.3	<1.0	<1.0	<1.0 Rf	— [e]	—	—
GWMW-03-01	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 Rf	— [e]	—	—
GWMW-03-02	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 Rf	— [e]	—	—
GWMW-03-03	<1.0	<1.0	<1.0	<1.0	—	<1.0 Rf	— [e]	—	—
GWMW-03-04	—	<1.0	<1.0	—	—	—	— [e]	—	—
GWMW-03-05	<1.0	<1.0	<1.0	—	<1.0	—	— [e]	—	—
GWMW-03-06	<1.0	<1.0	<1.0	<1.0	<1.0	—	— [e]	—	—
GWMW-06S	—	—	—	—	—	—	—	2.0	—
GWMW-06-01	—	—	—	—	—	<1.0 Rf	— [e]	—	—
GWMW-06-02	—	—	—	—	—	<1.0 Rf	— [e]	—	—
GWMW-08S	—	—	—	—	—	—	—	<1.0	<1.0
GWMW-08D	—	—	—	—	—	—	—	<1.0	<1.0
GWMW-08-03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 Rf	— [e]	—	—
GWMW-08-04	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 Rf	— [e]	—	—

Notes are provided at the end of the table.

Table 12. PCE Results for Annual Groundwater Sampling, 2012–2021
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Well	PCE Concentration (µg/L)								
	2012	2013	2014	2015	2016	2018	2019	2020 [a]	2021
GWMW-08-05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 Rf	— [e]	—	—
GWMW-08-06	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 Rf	— [e]	—	—
GWMW-08-07	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 Rf	— [e]	—	—
GWMW-09S	—	—	—	—	—	—	—	<1.0	<1.0
GWMW-09D1	—	—	—	—	—	—	—	**5.7**	4.3
GWMW-09D2	—	—	—	—	—	—	—	**12**	**6.9**
GWMW-09-01	<1.0	<1.00	<1.0	<1.0	<1.0	<1.0 Rf	— [e]	—	—
GWMW-09-02	1.3	**<20**	<1.0	<1.0	**13**	<1.0 Rf	— [e]	—	—
GWMW-09-03	<1.0	<1.00	1	**5.1**	**9.2**	<1.0 Rf	— [e]	—	—
GWMW-09-04	1.2	<1.0	**7.9**	**11**	**19**	<1.0 Rf	— [e]	—	—
GWMW-09-05	1.7	<1.00	1.5	**16**	<1.0	1.6 Rf	— [e]	—	—
GWMW-09-06	<1.0	<1.00	<1.0	<1.0	<1.0	2 Rf	— [e]	—	—
GWMW-09-07	<1.0	<1.00	<1.0	<1.0	**5.1**	<1.0 Rf	— [e]	—	—
GWMW-10S	—	—	—	—	—	—	—	3.9	2.9
GWMW-10I	—	—	—	—	—	—	—	**26**	**13**
GWMW-10D	—	—	—	—	—	—	—	1.6	1.2
GWMW-10-01	**47**	<1.0	**26**	1.2	**17**	8.3 Rf	— [e]	—	—
GWMW-10-02	**14**	**7.1**	**11**	4.4	**18**	12 Rf	— [e]	—	—
GWMW-10-03	**45**	**42**	**25**	1.8	**16**	11 Rf	— [e]	—	—
GWMW-10-04	4.5	3.7	1.3	1.2	**13**	11 Rf	— [e]	—	—
GWMW-10-05	<1.0	<1.0	<1.0	<1.0	**9**	10 Rf	— [e]	—	—
GWMW-10-06	<1.0	<1.0	<1.0	<1.0	**7.3**	9.6 Rf	— [e]	—	—
GWMW-10-07	<1.0	<1.0	<1.0	4.2	**7.5**	**9.5**	— [e]	—	—
GWMW-11S	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
GWMW-11I	<1.0	<1.0	<1.0	2	1.8	4.3	3.3	2.8	3.6
GWMW-11D	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
GWMW-15S	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
GWMW-15I	2.3	<1.0	1.1	**6.1**	**5.6**	**19**	**17**	**9.2**	**22**
GWMW-15D	<1.0	<1.0	<1.0	<1.0	<1.0	1.1	<1.0	<1.0	<1.0
GWMW-16S	—	—	—	1.6	4.9	**5.1**	**8.7**	2.5	4.6
GWMW-16D	—	—	—	3.1	**5.0**	**16**	**15**	**21**	**23**
MW-1	<1.00	<5	<1.0	2.1	2.9	—	— [f]	—	—

Notes are provided at the end of the table.

Table 12. PCE Results for Annual Groundwater Sampling, 2012–2021
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Well	PCE Concentration (µg/L)								
	2012	2013	2014	2015	2016	2018	2019	2020 [a]	2021
MW-3	3.6	2.4	<1.0	—	—	—	— [f]	—	—
MW-4	1.1	4.2	1.6	—	—	—	— [f]	—	—
MW-5	<1.0	<1.0	<1.0	—	—	—	— (dry)	— (dry)	Dry
MW-6	2.3	—	—	—	—	—	— [b]	—	—
MW-SF1	**9.6**	—	—	—	—	—	— [b]	—	—
MW-SF2	**11**	**7.5**	—	—	—	—	3.3 (dry)	3.8	3.1
MW-SF4	—	—	<1.0	—	—	—	— [b]	—	—
MW-SF5	<1.0	<1.0	<1.0	1.1	1.1	—	<1.0	<1.0	<1.0
MW-SF6	<1.0	<1.0	<1.0	<1.0	<1.0	—	— [b]	—	—
MW-SF9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-SF10	**9.5**	**12**	—	**23**	**21**	**16**	**11**	**12**	**9.5**
NGMW-01	—	—	—	—	—	—	—	<1.0	<1.0
NGMW-01-01	—	—	—	—	—	<1.0	— [b]	—	—
NGMW-01-02	—	—	—	—	—	<1.0	— [b]	—	—
NGMW-01-03	—	—	—	—	—	<1.0	— [b]	—	—
NGMW-01-04	—	—	—	—	—	<1.0	— [b]	—	—
NGMW-01-05	—	—	—	—	—	<1.0	— [b]	—	—
NGMW-01-06	—	—	—	—	—	<1.0	— [b]	—	—
NGMW-01-07	—	—	—	—	—	<1.0	— [b]	—	—
NGMW-02	—	—	—	—	—	—	—	<1.0	<1.0
NGMW-02-01	—	—	—	—	—	<1.0	— [b]	—	—
NGMW-02-02	—	—	—	—	—	<1.0	— [b]	—	—
NGMW-02-03	—	—	—	—	—	<1.0	— [b]	—	—
NGMW-02-04	—	—	—	—	—	<1.0	— [b]	—	—
NGMW-02-05	—	—	—	—	—	<1.0	— [b]	—	—
NGMW-02-06	—	—	—	—	—	<1.0	— [b]	—	—
NGMW-02-07	—	—	—	—	—	<1.0	— [b]	—	—
NGMW-03	—	—	—	—	—	—	<1.0 [g]	<1.0	<1.0
NGMW-03-01	—	—	—	—	—	<1.0	— [b]	—	—
NGMW-03-02	—	—	—	—	—	<1.0	— [b]	—	—
NGMW-03-03	—	—	—	—	—	<1.0	— [b]	—	—
NGMW-03-04	—	—	—	—	—	<1.0	— [b]	—	—

Notes are provided at the end of the table.

Table 12. PCE Results for Annual Groundwater Sampling, 2012–2021
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Well	PCE Concentration (µg/L)								
	2012	2013	2014	2015	2016	2018	2019	2020 [a]	2021
NGMW-03-05	—	—	—	—	—	<1.0	— [b]	—	—
NGMW-03-06	—	—	—	—	—	<1.0	— [b]	—	—
NGMW-03-07	—	—	—	—	—	<1.0	— [b]	—	—
NGMW-03-08	—	—	—	—	—	<1.0	— [b]	—	—

Bold indicates that value exceeds the applicable U.S. Environmental Protection Agency (EPA) maximum contaminant level (MCL) or New Mexico Water Quality Control Commission (NMWQCC) standard of 5 micrograms per liter (µg/L).

[a] Due to replacement of FLUTe wells, 2020 annual groundwater sampling was conducted in March/April 2021.

[b] Not included for annual sampling in the sampling and analysis plan (SAP).

[c] Sample collected as part of monthly system sampling.

[d] Two primary samples were collected during the 2020 sampling event. Posted PCE value is the higher of the two results.

[e] FLUTe well not sampled due to loss of liner integrity.

[f] Not sampled because the SAP indicates that well is included for water level monitoring only

[g] SAP specifies collection of one sample from NGMW-03, but does not specify which interval. A grab sample was collected from near the top of screen.

PCE = Tetrachloroethene
— = Not sampled
Rf = Rejected, the data are unusable. FLUTe well liner lacks integrity.

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	Per Table 2
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

DBS&A
Daniel B. Stephens & Associates, Inc.

CALENDAR YEAR 2021
GROUNDWATER PROGRAM EVALUATION REPORT
GRIGGS AND WALNUT GROUNDWATER PLUME SUPERFUND SITE
LAS CRUCES, NEW MEXICO

prepared for

City of Las Cruces NEW MEXICO

DONA ANA COUNTY NEW MEXICO

JUNE 2022

REVISED OCTOBER 2022

JSAI

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CALENDAR YEAR 2021
GROUNDWATER PROGRAM EVALUATION REPORT
GRIGGS AND WALNUT GROUNDWATER PLUME SUPERFUND SITE, LAS CRUCES, NEW MEXICO

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June 29, 2022
Revised October 2022

CALENDAR YEAR 2021 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 (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.

Calendar year 2021 data sources from the monitoring program include water-level data, water-quality data, groundwater-pumping data, and extraction well operational data. The FLUTe wells were replaced during the winter of 2020-21 and sampled during March and April 2021. March and April 2021 data were presented in the Calendar year 2020 report (JSAI, 2022, 2nd revision). December 2021 data are presented in this report.

The two distinct hydrogeologic zones, the Upper Hydrogeologic Zone (UHZ) and the Lower Hydrogeologic Zone (LHZ), are primarily differentiated by the intervening clay zone and water-level elevations measured in nested monitoring wells screened at different depths. An expanded zone definition is now used at the Site to include three zones: "Shallow" which is generally the UHZ, "Intermediate" which is the upper portion of the LHZ, and "Deep" the lower portion of the LHZ. The Shallow Zone (UHZ) and Intermediate and Deep Zones LHZ are not hydraulically connected across the Site where the clay zone is present, but the Shallow Zone and the Intermediate and Deep Zones are hydraulically connected across the Site where the clay zone is discontinuous or absent. The geologic model revised by JSAI (2019) defines the clay layer extent, and better explains the observed horizontal and vertical groundwater flow mechanisms, PCE plume distribution, and PCE plume capture by extraction wells in the Shallow Zone and the Intermediate and Deep Zones (see Figs. 2 through 6). Results from the FLUTe well replacement program in 2021 confirmed the current Site Conceptual Model.

When considering the Site monitoring network and Las Cruces Utilities (LCU) regional monitoring network, it is evident that adequate water-level data are being collected to evaluate groundwater flow direction in the Shallow (Fig. 9), Intermediate (Fig. 10), and Deep (Fig. 11) zones. The hydraulic gradient across the Site is fairly gradual, as defined by the 10-ft contours between the 3,840- and 3,830-ft water-level elevation contours (Fig. 8). The hydraulic gradient steepens within the cone of depression caused by pumping extraction well CLC 27.

Discontinued pumping from CLC 61 in March 2019 reversed the effect of past pumping on vertical hydraulic gradients and potential plume migration to the south. Pumping from CLC 27 has restored better plume capture to the south, as illustrated by the Deep zone water-level elevation contours on Figure 11.

The Site telescope mesh refinement (TMR) groundwater flow model (JSAI, 2017) was updated with data collected from 2017 through 2021 and satisfactorily calibrated. Findings indicate when CLC 61 stopped pumping in March 2019, it decreased the rate of downward vertical groundwater flow where the clay layer is absent, particularly in the area of GWMW-15, CLC 19, CLC 20, and CLC 24.

The replacement of the FLUTe wells with conventional monitoring wells has allowed for better definition of the vertical and horizontal extent of the Shallow Zone PCE plume by the Groundwater Monitoring network. Three PCE plume maps were constructed for the Shallow, Intermediate, and Deep Zones respectively (Figs. 9, 10, and 11). The Shallow Zone at CLC 18 is nearly completely removed, and the Intermediate and Deep Zone PCE plume in the LHZ has significantly decreased in size. The concentration of elevated PCE concentrations in the Intermediate and Deep Zones decreases with respect to depth from the Intermediate to the Deep Zone at GWMW-01 and GWMW-10.

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 *Calendar Year 2021 Optimization Assessment Report Griggs and Walnut Groundwater Plume Superfund Site, Las Cruces, New Mexico*).

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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.

Figure 4. Hydrogeologic cross-section A-A' with December 2021 PCE concentrations, Griggs and Walnut Site, Las Cruces, New Mexico.

Figure 5. Hydrogeologic cross-section B-B' with December 2021 PCE concentrations, Griggs and Walnut Site, Las Cruces, New Mexico.

Figure 6. Hydrogeologic cross-section C-C' with December 2021 PCE concentrations, Griggs and Walnut Site, Las Cruces, New Mexico.

Figure 7. Bar graph of annual pumping from wells in the Griggs and Walnut Site area, Las Cruces, New Mexico.

Figure 8. Aerial photograph showing December 2021 regional water-level elevation contours, City of Las Cruces, New Mexico.

Figure 9. Aerial photograph showing December 2021 water-level elevation contours and PCE concentrations for the Shallow Hydrogeologic Zone, Griggs and Walnut Site, Las Cruces, New Mexico.

Figure 10. Aerial photograph showing December 2021 water-level elevation contours and PCE concentrations for the Intermediate Hydrogeologic Zone, Griggs and Walnut Site, Las Cruces, New Mexico.

Figure 11. Aerial photograph showing December 2021 water-level elevation contours and PCE concentrations for the Deep Hydrogeologic Zone, Griggs and Walnut Site, Las Cruces, New Mexico.

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Figure 13. Topographic map showing telescope mesh refinement (TMR) 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.

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(follow illustrations)

Appendix A. 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

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ABBREVIATIONS/ACRONYMS

ac-ft/yr	acre-feet per year
CLC	City of Las Cruces
D	Deep Zone
DBS&A	Daniel B. Stephens & Associates, Inc.
EPA	Environmental Protection Agency
ft bgl	feet below ground level
GHB	general head boundaries
gpm	gallons per minute
gpm/ft	gallons per minute per feet
I	Intermediate Zone
JSAI	John Shomaker & Associates, Inc.
JSP	Joint Superfund Project
LCU	Las Cruces Utilities
LHZ	Lower Hydrogeologic Zone (Intermediate and Deep Zones)
kg	kilograms
ME	mean error
NMED	New Mexico Environment Department
NMOSE	New Mexico Office of the State Engineer
PCE	tetrachloroethene
Q/s	specific capacity
RMSE	root-mean-squared error
ROD	Record of Decision
S	Shallow Zone
SCM	Site Conceptual Model
SOW	Statement of Work
TMR	telescope mesh refinement
UHZ	Upper Hydrogeologic Zone (Shallow Zone)
µg/L	micrograms per liter

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.

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 operating during September 2012, and it has been operated almost continuously for the last 9 years.

As defined in the EPA 2020 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.

Due to the failure of the liners in several FLUTe wells (DBS&A, 2021), a replacement well program was implemented in the Fall of 2020 so data representative of site conditions can be obtained. The replacement well program is summarized in Table 1. The replacement program involved installation of conventional shallow and intermediate-depth monitoring wells, and conversion of each of the original multi-port FLUTe wells into a conventional deep monitoring well.

Table 1. Summary of FLUTe well replacement program

original FLUTe well	port ID	depth of screen interval (ft bgl)	new monitoring well replacement of FLUTe well	depth of screen interval (ft bgl)
GWMW-01	1	210 - 220	GWMW-01S	210 - 230
	2	270 - 280		
	3	330 - 340	GWMW-01I	330 - 340
	4	420 - 430		
	5	460 - 470	GWMW-01D	550 - 560
	6	515 - 525		
	7	550 - 560		
GWMW-06	1	100 - 110	GWMW-06S	100 - 110
	2	165 - 175		
GWMW-08	1	190 - 200	GWMW-08S	190 - 210
	2	255 - 265		
	3	305 - 315		
	4	380 - 390		
	5	430 - 440		
	6	490 - 500	GWMW-08D	490 - 500
	7	535 - 545		
GWMW-09	1	240 - 250	GWMW-09S	210 - 230
	2	295 - 305		
	3	355 - 365		
	4	410 - 420	GWMW-09D1	410 - 420
	5	480 - 490	GWMW-09D2	550 - 560
	6	550 - 560		
	7	630 - 640		
GWMW-10	1	250 - 260	GWMW-10S	236 - 256
	2	320 - 330		
	3	370 - 380	GWMW-10I	370 - 380
	4	440 - 450		
	5	505 - 515		
	6	560 - 570	GWMW-10D	550 - 560
	7	620 - 630		

ft bgl - feet below ground level
S,I,D - designate shallow, intermediate, and deep

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 DBS&A. 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 Site Conceptual Model

The EPA RI/FS and JSAI (2006) Site Conceptual Model included an Upper Hydrogeologic Zone (UHZ) and a Lower Hydrologic Zone (LHZ). The LHZ was further divided into Upper and Lower units (Upper LHZ and Lower LHZ). The two distinct hydrogeologic zones, the UHZ and the LHZ, are primarily differentiated by a clay layer, and by water-level elevations measured in nested monitoring wells screened at different depths. The clay layer is known to impede vertical movement of groundwater and facilitate lateral movement of groundwater at the water table in the UHZ.

Top and bottom elevations 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. Lithologic log analysis from the new conventional monitoring wells did not lead to any change in the dimensions or thickness of the clay layer.

The groundwater program evaluation analysis uses the current definitions of the Site conceptual model hydrogeologic zones and corresponding elevations (DBS&A, 2021), which are as follows:

- Shallow Zone wells: screened interval range 3,800 to 3,850 feet above mean sea level (ft amsl), formerly referred to as the Upper Hydrogeologic Zone (UHZ)
- Intermediate Zone wells: screened interval elevation rage 3,685 to 3,800 ft amsl, formerly referred to as the Upper portion of the Lower Hydrogeologic Zone (LHZ)
- Deep Zone wells: screened interval elevation range 3,475 to 3,685 ft amsl, formerly referred to as the Lower portion of the LHZ

The UHZ (Shallow) and LHZ (Intermediate and Deep) are not hydraulically connected across the Site where the clay zone is present, but the UHZ (Shallow) and LHZ (Intermediate and Deep) are hydraulically connected across the Site where the clay zone is discontinuous or absent. The geologic model revised by JSAI (2019) defines the clay layer extent, and better explains the observed horizontal and vertical groundwater flow mechanisms, the PCE plume distribution, and the PCE plume capture by extraction wells in the UHZ (Shallow) and LHZ (Intermediate and Deep) (see Figs. 2 through 6). Results from the FLUTe well replacement program confirmed the current Site Conceptual Model.

Cross-sections presented as Figures 4, 5, and 6 show that the thickness and extent of the low-permeability silt and clay beds that divide the Shallow Zone from the Intermediate Zone have influenced the lateral and vertical distribution of PCE in groundwater. At CLC 18, the clay layer separating the Shallow and Intermediate Zones creates a hydraulic barrier to vertical flow (Figs. 4, 5, and 6). East of GWMW-16(S,D), the clay layer transitions to silt and sand, allowing for vertical groundwater flow from the Shallow to the Intermediate and Deep Zones under downward head-gradient conditions, which may be influenced by regional pumping. The clay layer dividing the Shallow from the Intermediate Zone is shaped like a bowl with CLC 18 near the low point (Fig. 2).

2.2 Groundwater-Level Data

Currently, there are two types of groundwater-level data collected at the Site: 1) from conventional monitoring wells, and 2) from CLC water-supply wells (both active and inactive). As discussed above, the multi-port FLUTe wells have been replaced with conventional monitoring wells. FLUTe well GWMW-03 has been plugged.

As identified in earlier annual evaluations by JSAI (2017), the measuring-point elevations for many of the wells used to develop groundwater-elevation contours for the Site were previously estimated from topographic data and therefore are subject to error. Given the relatively gradual hydraulic gradient across the Site, it was imperative that all measuring points were surveyed. The JSP had most of the groundwater-level measuring locations re-surveyed in 2018. New surveyed measuring points have been established for the conventional monitoring wells that replaced the multiport FLUTe wells. 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, GWMW-16(S,D), 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 and listed in Table 2. The GWMW paired wells (GWMW-01, GWMW-08, GWMW-09, GWMW-10, GWMW-11, GWMW-15, and GWMW-16) help define the horizontal and vertical extent of the PCE plume, and the vertical head difference between the Shallow, Intermediate, and Deep Zones. For GWMW paired wells in the monitoring network, the Shallow Zone typically is completed above the confining clay layer (where present), and the Intermediate and Deep Zones are below the clay layer (where present).

For the winter 2021 monitoring event, there were 20 monitoring wells used to monitor the UHZ (Shallow); however, several have gone dry (MW-1, MW-3, MW-4, and MW-5) as the UHZ (Shallow) is dewatered. Two wells (CLC 18 and CLC 54) monitor the Shallow, Intermediate, and Deep Zones (Table 2). There are approximately 28 wells used to monitor the LHZ with 4 Intermediate Zone wells, 17 Deep Zone wells, and 5 Intermediate and Deep Zone wells (Table 2). Paired conventional monitoring wells are primarily used for developing the Site groundwater-level elevation contours. 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 City 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 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. JSAI performs an annual QA/QC analysis of LCU- collected water-level data. LCU groundwater-level data help define the regional ground-water-level elevation contours surrounding the Site. A summary of the winter 2021 groundwater-level data is provided in Table 3, and selected hydrographs are presented in Appendix B.

Table 2. Summary of Site monitoring network

well**	northing (NMSP NAD 83, ft)	easting (NMSP NAD 83, ft)	surveyed measuring point elevation (ft amsl)	screen interval (ft)	type of well	hydro-geologic zone	monitoring data
CLC 10	480,788.00	1,478,435.00	3,939.42	281 - 381	inactive	D	LCU wl
CLC 18	479,033.01	1,483,114.82	4,039.59	380 - 516.5	extraction	S/I/D*	wl, wq
CLC 19	479,464.64	1,486,241.12	4,064.77	402 - 675	inactive	D	LCU wl
CLC 20	477,570.53	1,486,690.77	4,074.51	380 - 673	inactive	I/D	wl, wq
CLC 21	481,161.95	1,485,245.75	4,075.25	366 - 612	inactive	I/D	LCU wl
CLC 24	475,131.30	1,486,440.09	4,041.01	381 - 591	inactive	D	LCU wl
CLC 26	476,624.54	1,484,299.63	4,014.15	410 - 700	standby	D	wl, wq
CLC 27	478,884.10	1,484,258.63	4,057.12	455 - 524	extraction	D	wl, wq
CLC 28	485,134.00	1,482,913.00	4,062.65	421 - 738	active	D	LCU wl
CLC 38	475,113.92	1,488,619.25	4,103.31	320 - 780	inactive	I/D	LCU wl
CLC 54	484,049.79	1,485,225.99	4,111.23	272 - 480	inactive	S/I/D	LCU wl
CLC 57	478,920.91	1,488,486.58	4,132.14	408 - 516	inactive	I/D	wl, wq
CLC 60	475,323.34	1,480,636.27	3,942.35	350 - 690	inactive	D	LCU wl
CLC 61	476,052.51	1,486,352.59	4,041.37	600 - 1,050	inactive	D	LCU wl
GWMW-01S	479,037.04	1,483,354.28	4,038.69	210 - 230	monitoring	S	wl, wq
GWMW-01I	479,031.28	1,483,330.09	4,038.96	330 - 340	monitoring	I	wl, wq
GWMW-01D	479,017.94	1,483,311.09	4.038.29	550 - 560	monitoring	D	wl, wq
GWMW-06S	480,268.97	1,478,869.86	3,946.78	100 - 110	monitoring	S	wl, wq
GWMW-08S	480,048.70	1,483,371.14	4,020.09	190 - 210	monitoring	S	wl, wq
GWMW-08D	480,044.88	1,483,351.73	4,019.85	490 - 500	monitoring	D	wl, wq
GWMW-09S	480,421.60	1,485,085.00	4,051.10	210 - 230	monitoring	S	wl, wq
GWMW-09D1	480,413.76	1,485,054.43	4,050.79	410 - 420	monitoring	D	wl, wq
GWMW-09D2	480,413.19	1,485,068.27	4,051.11	550 - 560	monitoring	D	wl, wq
GWMW-10S	479,213.78	1,484,883.41	4,063.84	236 - 256	monitoring	S	wl, wq
GWMW-10I	479,221.57	1,484,902.26	4,063.95	370 - 380	monitoring	I	wl, wq
GWMW-10D	479,228.62	1,484,920.89	4,064.60	550 - 560	monitoring	D	wl, wq
GWMW-11S	477,982.10	1,483,180.70	4,022.72	190 - 205	monitoring	S	wl, wq
GWMW-11I	477,982.40	1,483,180.50	4,022.74	299 - 314	monitoring	I	wl, wq
GWMW-11D	477,982.50	1,483,180.80	4,022.67	525 - 540	monitoring	D	wl, wq
GWMW-15S	480,920.00	1,486,661.60	4,081.03	289 - 304	monitoring	I	wl, wq
GWMW-15I	480,920.10	1,486,661.20	4,081.06	460 - 475	monitoring	D	wl, wq
GWMW-15D	480,919.90	1,486,661.20	4,081.03	581 - 596	monitoring	D	wl, wq
GWMW-16S	479,474.88	1,484,021.82	4,033.07	185 - 205	monitoring	S	wl, wq
GWMW-16D	479,469.58	1,484,002.31	4,032.73	350 - 370	monitoring	D	wl, wq
MW-1	478,754.90	1,483,492.60	4,037.14	187 - 197	monitoring	S	dry
MW-3	478,919.20	1,483,203.60	4,034.56	180 - 190	monitoring	S	dry
MW-4	478,681.50	1,483,079.60	4,031.59	175 - 185	monitoring	S	dry
MW-5	478,579.70	1,483,553.90	4,036.24	182 - 192	monitoring	S	dry
MW-SF2	478,837.80	1,483,252.90	4,035.71	184 - 199	monitoring	S	wl, wq
MW-SF5	479,614.90	1,481,960.00	3,995.63	138 - 153	monitoring	S	wl, wq
MW-SF9	478,481.90	1,484,636.70	4,032.35	188 - 203	monitoring	S	wl, wq
MW-SF10	480,157.00	1,484,357.30	4,038.66	194 - 204	monitoring	S	wl, wq
Paz Park	480,910.66	1,482,797.07	4,012.60	260 - 370	irrigation	I/D	LCU wl
NGMW-01	479,405.24	1,480,889.09	3,975.48	115 - 165	monitoring	S	wl, wq
NGMW-02	479,459.44	1,481,007.09	3,980.79	115 - 165	monitoring	S	wl, wq
NGMW-03	479,368.81	1,481,387.33	3,985.11	115 - 165	monitoring	S	wl, wq

* screen is in Deep Zone, however, thick gravel envelope allows for comingling of Shallow and Intermediate Zones
** City well screen intervals and depth based on most current records from Las Cruces Utilities
S, I, D - Shallow, Intermediate, and Deep Zones wl - water level LCU - Las Cruces Utilities
ft amsl - feet above mean sea level wq - water quality nm - not measured

Table 3. Summary of Spring 2021 and Winter 2021 water-level data from the monitoring network

well	type well	hydrogeologic zone	Spring 2021 measurement date	Spring 2021 depth to water (ft bmp)	Spring 2021 water-level elevation (ft amsl)	Winter 2021 measurement date	Winter 2021 depth to water (ft bmp)	Winter 2021 water-level elevation (ft amsl)	water-level change April – Dec 2021 (ft) positive = decline; negative = rise
CLC 10	inactive	D	4/28/2021	95.60	3,843.82	12/7/2021	96.10	3,843.32	0.50
CLC 18	extraction	S/I/D	4/2/2021	212.73	3,836.86	12/27/2021	210.10	3,838.49	-2.63
CLC 19	inactive	D	1/12/2021	225.00	3,839.77	12/14/2021	226.30	3,838.47	1.30
CLC 20	inactive	I/D	4/4/2021	237.90	3,836.61	12/14/2021	237.73	3,836.78	-0.17
CLC 21	inactive	I/D	4/6/2021	236.8	3,838.45	12/14/2021	237.20	3,838.05	0.40
CLC 24	inactive	D	1/25/2021	207.71	3,833.30	12/8/2021	204.60	3,836.41	-3.11
CLC 26	standby	D	3/30/2021	177.22	3,836.93	12/6/2021	177.63	3,836.52	0.41
CLC 27	extraction	D	4/2/2021	274.12	3,783.00	12/27/2021	271.56	3,765.56	-2.56
CLC 28	active	D	4/12/2021	226.00	3,835.65	12/29/2021	272.20	3,790.45	46.20
CLC 38	inactive	I/D	4/20/2021	265.00	3,836.89	12/20/2021	265.30	3,838.01	0.30
CLC 54	inactive	S/I/D	4/13/2021	269.60	3,841.63	12/21/2021	269.10	3,842.13	-0.50
CLC 57	inactive	I/D	4/13/2021	293.20	3,838.94	12/21/2021	292.40	3,839.74	-0.80
CLC 60	inactive	D	4/28/2021	114.80	3,827.55	12/7/2021	106.40	3,835.95	-8.40
CLC 61	inactive	D	4/16/2021	205.00	3,836.37	12/6/2021	205.80	3,835.57	0.80
GWMW-01S	MW	S	4/1/2021	194.45	3,844.24	12/13/2021	194.84	3,843.85	0.39
GWMW-01I	MW	I	4/1/2021	201.81	3,837.15	12/13/2021	201.65	3,837.31	-0.16
GWMW-01D	MW	D	4/1/2021	202.06	3,836.23	12/13/2021	201.48	3,836.81	-0.58
GWMW-06S	MW	S	3/31/2021	96.13	3,850.65	12/15/2021	96.68	3,850.10	0.55
GWMW-08S	MW	S	3/31/2021	174.70	3,845.39	12/13/2021	175.17	3,844.92	0.47
GWMW-08D	MW	D	3/31/2021	181.31	3,838.54	12/13/2021	181.67	3,838.18	0.36
GWMW-09S	MW	S	4/1/2021	209.26	3,841.84	12/15/2021	209.55	3,841.55	0.29
GWMW-09D1	MW	D	4/1/2021	211.45	3,839.34	12/15/2021	211.91	3,838.88	0.46
GWMW-09D2	MW	D	4/1/2021	211.50	3,839.61	12/15/2021	212.56	3,838.55	1.06
GWMW-10S	MW	S	4/2/2021	222.26	3,841.58	12/15/2021	222.63	3,841.21	0.37
GWMW-10I	MW	I	4/2/2021	226.70	3,837.25	12/15/2021	226.85	3,837.10	0.15
GWMW-10D	MW	D	4/2/2021	227.78	3,836.82	12/15/2021	228.03	3,836.57	0.25
GWMW-11S	MW	S	3/31/2021	178.49	3,844.23	12/13/2021	179.11	3,843.61	0.62
GWMW-11I	MW	I	3/31/2021	185.62	3,837.12	12/13/2021	185.53	3,837.21	-0.09
GWMW-11D	MW	D	3/31/2021	186.12	3,836.55	12/13/2021	185.74	3,836.93	-0.38
GWMW-15S	MW	I	4/1/2021	240.28	3,840.75	12/13/2021	241.36	3,839.67	1.08
GWMW-15I	MW	D	4/1/2021	240.72	3,840.34	12/13/2021	241.85	3,839.21	1.13
GWMW-15D	MW	D	4/1/2021	240.71	3,840.32	12/13/2021	241.82	3,839.21	1.11
GWMW-16S	MW	S	4/2/2021	189.38	3,843.35	12/14/2021	189.87	3,843.20	0.49
GWMW-16D	MW	D	4/2/2021	195.21	3,837.86	12/14/2021	194.55	3,838.18	-0.66
MW-1	MW	S	4/1/2021	dry	dry	12/14/2021	193.85	3,543.29	dry
MW-3	MW	S	4/1/2021	dry	dry	12/14/2021	dry	dry	dry
MW-4	MW	S	4/1/2021	dry	dry	12/14/2021	dry	dry	dry
MW-5	MW	S	4/1/2021	dry	dry	12/14/2021	dry	dry	dry
MW-SF2	MW	S	4/2/2021	191.51	3,844.20	12/14/2021	192.18	3,843.53	0.67
MW-SF5	MW	S	3/31/2021	149.05	3,846.58	12/13/2021	149.43	3,846.20	0.38
MW-SF9	MW	S	3/31/2021	190.40	3,841.95	12/14/2021	191.33	3,841.02	0.93
MW-SF10	MW	S	3/31/2021	194.97	3,843.69	12/13/2021	195.71	3,842.95	0.74
Paz Park	irrigation	I/D	4/3/2021	174.0	3,838.60	12/29/2021	175.90	3,836.70	1.90
NGMW-01	MW	S	3/31/2021	127.73	3,847.75	12/13/2021	128.10	3,847.38	0.37
NGMW-02	MW	S	3/31/2021	133.02	3,847.77	12/13/2021	133.43	3,847.36	0.41
NGMW-03	MW	S	3/31/2021	137.83	3,847.28	12/13/2021	138.21	3,846.90	0.38

S, I, D - Shallow, Intermediate, and Deep Zones
nm - not measured
MW - monitoring well
ft amsl - feet above mean sea level
ft bmp - feet below measuring point

2.3 Pumping Data

The New Mexico Office of the State Engineer (NMOSE) requires metered monthly pumping data 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, municipal well CLC 28, located to the north of the Site, was actively pumping during 2021. Average monthly and annual pumping rates for 2019, 2020, and 2021 are summarized in Table 4. Site-area pumping data from 1958 to current are presented in Appendix C.

Prior to March 2018, the designed pumping schedule for CLC 18 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. Both of these schedules lead to an average of 30 gpm for optimum UHZ (Shallow) plume extraction. The average monthly CLC 18 pumping rate of 29 gpm was maintained until August 17th, 2021. From August 17th to end of 2021, CLC 18 was pumped approximately 6 to 8 hours a day for four to six days per month (see change in average monthly pump rates in Table 4). This change in pumping was to implement the JSAI (2021) recommended reduction in pumping from CLC 18.

CLC 27 was pumped almost continuously for the last several years; the rate slightly increased each year (Table 4). The pump was replaced in the first week of March 2018 and the average monthly pumping rate increased from about 150 gpm to 220 gpm. The pumping rate was increased to 237 gpm in 2020. CLC 27 primarily extracts the Intermediate and Deep Zones PCE plume, and extracts the Shallow PCE plume where the clay layer is thin and more permeable. CLC 61 and Paz Park irrigation well were not pumped during 2021 (Table 4).

2.4 Monitoring Network Water-Quality Data

All 2021 Site monitoring network groundwater-quality data were collected by DBS&A (2022). The primary constituent of concern for the Site is PCE. Field measurements of specific conductance have been used to understand the capture of the Shallow Zone PCE plume at CLC 18. FLUTe well replacement was completed by March 2021. A summary of the Site monitoring network and detected PCE concentrations is presented as Table 5. Time-series graphs of PCE concentration are presented in Appendix D.

Table 4. Summary of 2019, 2020, and 2021 pumping for the Griggs and Walnut Site area

month	CLC 18 average (gpm) [1]			CLC 27 average (gpm)[1, 2]			Paz Park average (gpm) [1]			CLC 61 average (gpm) [1]		
	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021
Jan	28.8	29.4	28.3	222	235	238	0	0.4	0	1,060	0	0
Feb	28.4	30.4	27.2	225	248	229	2.1	0	0	1,179	0	0
Mar	29.8	29.7	28.2	216	237	239	10.4	0	0	467	0	0
Apr	29.3	29.5	29.7	227	234	236	39.4	0	0	0	0	0
May	29.6	29.3	27.5	228	238	236	43.7	0	0	0	0	0
Jun	28.6	29.2	27.6	226	237	226	33.3	0	0	0	0	0
Jul	29.4	28.2	27.3	226	235	222	0	0	0	0	0	0
Aug	29	28.3	16.6	220	235	222	0	0	0	0	0	0
Sep	28.6	28.9	4.2	224	237	222	0	0	0	0	0	0
Oct	27.7	28.9	3.6	239	235	225	0	0	0	0	0	0
Nov	28.4	29.2	4.4	236	233	222	0	0	0	0	0	0
Dec	28.3	29.3	4.3	238	238	221	0	0	0	0	0	0
annual	28.8	29.2	19.1	227	237	228	10.7	0.03	0	226	0	0

gpm - gallons per minute

1 Pumping data is based on monthly totalizer readings as reported to the New Mexico Office of the State Engineer.

2 CLC 27 monthly average pumping rates for July, August, and September 2021 were based on the average for the time-period

Table 5. Summary of monitoring well network and PCE concentration data

sample location [1]	depth of screen interval (ft bgl)	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)	2018 PCE (µg/L)	2019 PCE (µg/L)	Apr 2021 PCE (µg/L)	Dec 2021 PCE (µg/L)
CLC 18	380 – 516.5	extraction	S/I/D	**35**	**48**	**42**	**13**	**15**	**7.6**	**6.6**	**5.0**	4.5
CLC 19	402 – 675	supply	D	**2.0**	---	---	---	---	---	---	---	<1.0
CLC 20*	380 – 673	supply	I/D	---	---	2.3	<1.0	< 1.0	NR	< 1.0	< 1.0	<1.0
CLC 21	366 - 612	supply	I/D	3.7	---	---	---	---	---	---	---	<1.0
CLC 26	410 – 700	supply	D	---	---	<1.0	<1.0	< 1.0	---	< 1.0	< 1.0	---
CLC 27	455 – 524	extraction	D	---	**11**	**5.8**	**14**	**13**	**15**	**13**	**13.0**	**16.0**
CLC 57*	408 – 516	supply	I/D	---	---	<1.0	<1.0	< 1.0	NR	<1.0	< 1.0	---
GWMW-01S (P1)	210 – 230	monitoring	S	**5.3**	---	**5.8**	3.8	**9.8**	**5.0**Rf	---	1.8	1.5
GWMW-01I (P3)	330 – 340	monitoring	I	1	---	2.7	1.6	**7**	4.3Rf	---	**17.5 ****	**10.0**
GWMW-01D (P7)	550 – 560	monitoring	D	2.1	---	3.2	<1.0	< 1.0	<1.0Rf	---	1.6	<1.0
GWMW-06S (P1)	100 – 110	monitoring	S	**10**					<1.0Rf	---	2.0	---
GWMW-08S (P1)	190 – 210	monitoring	S	---	---	---	---	---	---	---	< 1.0	<1.0
GWMW-08D (P6)	490 – 500	monitoring	D	<0.5	---	<1.0	<1.0	< 1.0	<1.0Rf	---	< 1.0	<1.0
GWMW-09S (P1)	210 – 230	monitoring	S	0.6	<1.0	<1.0	<1.0	<1.0	<1.0	---	<1.0	<1.0
GWMW-09D1 (P4)	410 – 420	monitoring	D	**16**	**29**	1.2	**11**	**9.2**	<1.0Rf	---	**5.7**	4.3
GWMW-09D2 (P6)	550 – 560	monitoring	D	0.2	<1.0	<1.0	<1.0	<1.0	2.0Rf	---	**12.0**	**6.9**
GWMW-10S (P1)	236 – 256	monitoring	S	3.2	**31.0**	**47.0**	1.2	**5.1**	**8.3Rf**	---	3.9	2.9
GWMW-10I (P3)	370 – 380	monitoring	I	**16.0**	**46.0**	**45.0**	1.8	**16.0**	**11.0Rf**	---	**26.0**	**13.0**
GWMW-10D (P6)	550 – 560	monitoring	D	0.4	<1.0	<1.0	<1.0	**7.3**	**9.6Rf**	---	1.6	1.2
GWMW-11S	190 – 205	monitoring	S	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
GWMW-11I	299 – 314	monitoring	I	<0.5	<1.0	<1.0	2	1.8	4.3	3.3	2.8	3.6
GWMW-11D	525 – 540	monitoring	D	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
GWMW-15S	289 – 304	monitoring	I	**18**	2.6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
GWMW-15I	460 – 475	monitoring	D	<0.5	<1.0	2.6	**6.1**	**5.6**	**19**	**17**	**9.2**	**22.0**
GWMW-15D	581 – 596	monitoring	D	<0.5	<1.0	<1.0	<1.0	<1.0	1.1	<1.0	<1.0	1.0
GWMW-16S	185 – 205	monitoring	S	---	---	---	1.6	4.9	**5.1**	**8.7**	2.5	4.6
GWMW-16D	350 – 370	monitoring	D	---	---	---	3.1	**5.0**	**16.0**	**15.0**	**21.0**	**23.0**
MW-1*	187 – 197	monitoring	S	0.2	---	<5.0	2.1	2.9	---	---	dry	---
MW-3*	180 – 190	monitoring	S	**6.4**	---	2.4	---	---	---	---	dry	---
MW-4*	175 – 185	monitoring	S	1	---	4.2	---	---	---	---	dry	---
MW-5	182 – 192	monitoring	S	0.5	---	<1.0	---	---	---	---	dry	---
MW-SF2	184 – 199	monitoring	S	**8.3**	---	**7.4**	---	---	---	3.3	3.8	3.1
MW-SF5	138 – 153	monitoring	S	1.7	---	<1.0	1.1	<1.0	---	<1.0	<1.0	<1.0
MW-SF9	188 – 203	monitoring	S	<0.5	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-SF10	194 – 204	monitoring	S	**17**	---	**10**	**23**	**21**	**16**	**11**	**12.0**	**9.5**
NGMW-01	115 – 165	monitoring	S	---	---	---	---	---	<1.0	---	<1.0	<1.0
NGMW-02	115 – 165	monitoring	S	---	---	---	---	---	<1.0	---	<1.0	<1.0
NGMW-03	115 – 165	monitoring	S	---	---	---	---	---	<1.0	<1.0	<1.0	<1.0

[1] (P#) corresponding FLUTe well port prior to replacement in 2020
* water-level data only Statement of Work (SOW), table 1
** average of two sample results; during the sampling event see DBSA (2021)
S, I, D - Shallow, Intermediate, and Deep Zones

RI/FS - EPA Remedial Investigation and Feasibility Study
PCE - tetrachloroethene
R - PCE results rejected, shown for information only
bold values are equal to or above the MCL of 5 µg/L for PCE

ft amsl - feet above mean sea level
ft bgl - feet below ground level
µg/L - micrograms per liter

Past analyses have used general chemistry and specific-conductance data compiled from the monitoring network to examine the correlation between elevated specific conductance and PCE concentrations (JSAI, 2019). The correlation between specific conductance and PCE has previously been used as one basis for estimating PCE concentrations and mass removal from CLC 18 (JSAI, 2013; JSAI, 2016; JSAI, 2019). 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 µS/cm do not have detectable PCE concentrations (JSAI, 2019). The primary conclusion is that groundwater with elevated specific conductance represents water originating from the Shallow Zone, and groundwater with relatively low specific conductance (< 800 µS/cm) is representative of Deep Zone not impacted by the PCE plume.

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. Since 2018, CLC 18 specific-conductance data have been collected every 15 minutes. CLC 18 and CLC 27 also have flow meters and water-level transducers that are connected to the LCU SCADA system. Pumping and non-pumping groundwater-level data were collected on 15-minute intervals, and were verified by monthly hand-measured water levels.

3.0 HYDROGEOLOGIC ANALYSIS

Some modifications to the original Site Conceptual Model (SCM) developed by EPA for the RI/FS were made by JSAI (2019). 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 distinct Site hydrogeologic zones, the Shallow, Intermediate and Deep, are primarily differentiated by the clay zone and groundwater elevations measured in nested monitoring wells screened at different depths. The Shallow, Intermediate, and Deep are not hydraulically connected across the Site where the clay zone is present; however, the Shallow, Intermediate, and Deep are hydraulically connected across the Site where the clay zone is absent (see Table 6). It was previously assumed the UHZ (shallow) and LHZ (Intermediate and Deep) were hydraulically connected across the Site, but in varying degrees of hydraulic communication (EPA, 2006).

The SCM are illustrated by clay layer elevation and thickness contours (Figs. 2 and 3) and hydrogeologic cross-sections (Figs. 4, 5, and 6). Figure 2 shows the elevation of the top of the clay layer and the clay-layer depression at CLC 18. A preferential flow path is defined as the depression in the top of clay layer (3,790-ft elevation contour) trending from CLC 18 to MW-SF10 (Fig. 2). Areas in which the top of the clay layer is relatively high likely limit groundwater flow in the Shallow Zone, particularly where the top of the clay is near the water table.

The thickness and extent of the low-permeability silt and clay beds that divide the Shallow from the Intermediate and Deep Zones have influenced the lateral and vertical distribution of PCE in groundwater (Fig. 4). At CLC 18, the clay layer separating the Shallow and Intermediate 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 Shallow to the Deep Zone under downward head-gradient conditions influenced by pumping from CLC 27 and other regional municipal wells completed in the Deep Zone. Head differences between the Shallow and Deep Zones are summarized in Table 6.

Table 6. Summary of head difference between Shallow and Deep Hydrogeologic Zones measured in well pairs

well	hydrogeologic zone	Dec 2021 water-level elevation (ft amsl)	head difference [1] (ft)
GWMW-01S	Shallow [2]	3,843.85	7.04
GWMW-01D	Deep	3,836.81	
GWMW-08S	Shallow [2]	3,844.92	6.74
GWMW-08D	Deep	3,838.18	
GWMW-09S	Shallow [2]	3,841.55	3.00
GWMW-09D2	Deep	3,838.55	
GWMW-10S	Shallow [2]	3,841.21	4.64
GWMW-10D	Deep	3,836.57	
GWMW-11S	Shallow [2]	3,843.61	6.68
GWMW-11D	Deep	3,836.93	
GWMW-15S	Intermediate [3]	3,839.67	0.46
GWMW-15D	Deep	3,839.21	
GWMW-16S	Shallow [2]	3,843.20	5.02
GWMW-16D	Intermediate/Deep	3,838.18	

[1] Positive number indicates a higher head in the Shallow Zone than the Deep Zones.
[2] Clay layer between Shallow and Deep Hydrogeologic Zone is present but thin and permeable.
[3] Clay layer between Shallow and Deep Hydrogeologic Zone is not present.
ft amsl - feet above mean sea level

3.2 Groundwater Flow

Groundwater flow has been predominantly west to east across the Site since PCE was first detected (JSAI, 2006). Eastward groundwater flow in all aquifer zones was previously established, at least in part, by a cone of depression caused 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. Groundwater flow on the east side of this groundwater trough has been to the west toward the pumping center. Figure 7 presents a bar graph of annual CLC pumping since 1958. Regional groundwater-elevation contours for December 2021 are shown in Figure 8.

3.2.1 Horizontal Flow Direction

Regional groundwater-elevation contours, and arrows showing direction of flow, based on December 2021 data, are presented on Figure 8. The hydraulic gradient across the regional vicinity of the Site remains fairly gentle (0.003 to 0.0004 ft/ft), as defined by the 3,840- and 3,830-ft water-level elevation contours (Fig. 8), with local flow directed to active supply and extraction wells.

Winter 2021 groundwater-level elevation contours for the UHZ (Shallow Zone) at the Site are presented on Figure 9. Groundwater flow in the Shallow Zone at the Site is generally toward the east with a localized cone of depression induced by extraction at CLC 18.

Winter 2021 groundwater-level elevation contours for the Intermediate and Deep Zones at the Site are presented on Figures 10 and 11. Groundwater flow in the Intermediate and Deep Zones is toward the cone of depression formed by extraction at CLC 27. Groundwater flow at GWMW-15 is to the southwest toward CLC 27 (Fig. 10). Regional groundwater-elevation contours (Fig. 8) also show westbound direction of flow at GWMW-15.

3.2.2 Vertical Head Gradient

The head difference between the Shallow and Deep Zones is 3 to 7 ft where the clay layer is present, and less where the clay layer is thin or absent (Table 6). Time-series data showing head differences for paired wells can be referenced from the Hydrographs in Appendix B. GWMW-15(S,I,D) has the smallest head difference with respect to depth, and GWMW-01(S,I,D) has the largest head difference at the Site (Table 6).

The vertical downward head gradient is the primary mechanism that allows drainage through the gravel pack and capture of the Shallow Zone at extraction well CLC 18 (Fig. 4). The lack of vertical head gradient near GWMW-15 indicates there is no impedance of groundwater flow between the Shallow, Intermediate, and Deep Zones, thereby allowing extraction well CLC 27 to capture the PCE plume in all zones.

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 was not apparent from groundwater-level elevation contouring analysis (JSAI, 2019). The groundwater-level effects of CLC 61 pumping became more

apparent, however, through more-detailed monitoring of water-level trends from CLC 19, CLC 20, CLC 24, and CLC 26 over the past few years (see Table 3 and Appendix B), where drawdown (water-level decline) and recovery (water-level rise) cycles in Site wells are easily correlated with CLC 61 pumping. Since start-up in 2012, CLC 61 pumping was the only significant pumping in the Site area other than pumping from CLC 18 and CLC 27 (Fig. 7). CLC 61 has not been pumped since March 2019 (Table 4). CLC 28, located north of the Site, is actively pumped (Figs. 7 and 8), but current and past water-level contouring indicates CLC 28 pumping does not significantly influence the Site.

3.3 Water-Level Trends

Hydrographs are presented in Appendix B. Non-pumping water levels have been declining at extraction wells CLC 18 and CLC 27 with an average decline rate of 1.1 feet per year (ft/yr) (Figs. B1 and B2). Hydrographs for inactive municipal wells within and surrounding the Site are presented as Figures B3 through B14. The average rate of water-level decline ranges from 0.2 to 0.5 ft/yr for the areas surrounding the extraction well pumping.

Hydrographs comparing water-level measurements from the FLUTe well ports and the FLUTe replacement wells are presented as Figures B15 through B19. Measured water levels from the conventional replacement monitoring wells are more reliable, and show fewer erratic trends than the former FLUTe wells. Hydrographs for GWMW-11, GWMW-15, and GWMW-16 illustrate the maintained head difference between the Shallow and Deep (see Figs. B20 through B22).

During 2020, transducers were installed in GWMW-16(S,D). A hydrograph of GWMW-16(S,D) hourly transducer data for December 2020 is presented as Figure B25. GWMW-16(S) responses to CLC 18 daily pumping cycles can be observed at GWMW-16(S). Longer term 2021 water-level trends for GWMW-16(S,D) show seasonal variation (Figs. B26 and B27).

3.4 Geochemical Characteristics

A correlation was previously made between specific conductance and PCE concentrations at CLC 18 (JSAI, 2013). In the past, continuous monitoring of specific conductance at CLC 18 has been used to optimize capture of the Shallow Zone PCE plume (see JSAI companion report titled *Calendar Year 2021 Optimization Assessment Report Griggs and Walnut Groundwater Plume Superfund Site, Las Cruces, New Mexico*).

Specific conductance and PCE data were compiled for the 2019 and 2021 monitoring events from the Site monitoring network and CLC 18 to track the relationship between the two parameters. As shown on Figure 12, there is a wide range of specific conductance values from the monitoring network (390 to 2,140 µS/cm). At the Site monitoring wells, low specific conductance (<1,000 µS/cm) correlates with non-detectable PCE, and elevated specific conductance can be associated with both non-detectable PCE and detectable PCE concentrations. CLC 18 PCE concentrations have been decreasing (Table 5); however, specific conductance concentrations representative of the Shallow Zone have remained the same (as expected). As the Shallow Zone 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 1,700 µS/cm, PCE concentrations from 2021 were approximately 3 to 5 µg/L, as compared with concentrations greater than 20 µg/L for years prior to 2014.

3.5 PCE Plume

Since remedial-system start-up in 2012, the Site PCE plume has been decreasing in size and concentration (see Table 5 and graphs in Appendix D). Prior to system start-up, PCE concentrations were commonly above 20 µg/L, and many of the 2021 results were below 20 µg/L. Notable decreases in PCE concentrations during the winter 2021 sampling event were observed at GWMW-11(I) and GWMW-16(S) (Table 5).

Winter 2021 PCE concentrations are shown with the groundwater-elevation contours on Figures 9, 10, and 11 for the Shallow, Intermediate, and Deep Zones. The extent of the PCE plume displayed on Figures 9, 10, and 11 is well constrained by the new monitoring network.

3.5.1 Horizontal Extent

The estimated PCE plume horizontal extent above the clay layer in the Shallow Zone is confined to an area between CLC 18 and MW-SF10 (Fig. 9). Monitoring wells MW-SF-2, MW-SF10, GWMW-9(S), GWMW-10(S), and GWMW-16(S) define the Shallow Zone PCE extent. The extent of PCE in the Shallow Zone seems constrained by the preferential flow path defined by the top of the clay layer. PCE concentrations at extraction well CLC 18 and in Shallow monitoring wells (the MW and MW-SF series) have significantly decreased over time (see graphs in Appendix D), indicating the Shallow Zone plume is decreasing in both concentration and size.

The horizontal extent of the plume in the Intermediate and Deep Zones is currently defined by monitoring wells GWMW-09(D1,D2), GWMW-11(I,D), GWMW-16(D), and GWMW-15(I,D). The highest concentrations observed in the Intermediate Zone are at GWMW-01(I), and GWMW-10(I) (Fig. 10). At those locations, the PCE plume decreases in concentration with respect to depth between the Intermediate and Deep Zones (see Figs. 5, 6, 10, 11). It is still difficult to determine from the available data if the PCE concentrations at GWMW-15(I) are part of, or isolated from, the primary plume mass in the Intermediate and Deep Zones.

3.5.2 Vertical Extent

The estimated vertical extent of the PCE plume in the Shallow Zone is controlled by the clay layer where it is present. Due to the observed downward gradient, the Shallow Zone PCE plume vertically migrates to the Intermediate and Deep Zones where the clay layer is absent (Fig. 4). Downward head differences vary across the plume area (Table 6). Head differences during December 2021 were observed to vary from 7.04 feet at GWMW-01 to 0.46 feet at GWMW-15. The vertical extent in the Deep Zone is not fully defined where PCE above the standard is present in the deepest deep-zone monitoring point (i.e., GWMW-09D2).

An indicator of the vertical movement of the plume due to the downward gradient is the observed changes in PCE concentration over the last few years at GWMW-15(S) and GWMW-15(I). The PCE concentration detected in GWMW-15(S) was 18 µg/L in 2005, but below 5 µg/L by 2009. The PCE concentration at GWMW-15(I) was below 5 µg/L in 2005, but increased to 19 µg/L (a similar level to the highest concentration observed at GWMW-15(S) by January 2019 (see Fig. D8 in Appendix D). Therefore, assuming one-dimensional vertical transport, similar PCE concentrations migrated 156 feet vertically from GWMW-15S to GWMW-15I over a period of approximately 13 years. This equates to a rate of vertical plume movement from GWMW-15(S) to 15(I) of approximately 12 ft/yr or 0.03 ft/day (156 ft in 13 years).

The vertical plume movement can also be estimated by dividing the vertical groundwater velocity by the retardation factor of PCE (Fetter, 2001). This approach yields an average linear velocity for PCE transported in groundwater by advection and does not consider dispersion. Vertical groundwater velocity between GWMW-15(S) and GMMW-15(I) can be calculated by Darcy's Law (e.g., Fetter, 2001):

$$v = (K \bullet i) / ne$$

where K = Hydraulic conductivity (L/T)

I = Hydraulic gradient (unitless)

ne = Effective porosity (unitless)

The average linear vertical velocity is 0.1 ft/day based on a hydraulic conductivity of 10 ft/day, a vertical groundwater gradient of 0.003 ft/ft (0.46 ft head difference in December 2021 divided by 156 ft) and an effective porosity of 0.3 (estimated). The retardation factor of PCE is estimated to be 2.63 based on a PCE organic carbon partition coefficient of 263 mL/g (Cohen and Mercer, 1993), a fraction of organic carbon of 0.001 (assumed, see U.S. EPA, 2000), an aquifer sediment bulk density of 1.86 (assumed), and a porosity of 0.3 (assumed), using the following equation:

$R = . 1 + (pb * f_{oc} * K_{oc})/n$ (Fetter, 2001)

where R = Retardation factor for chemical (unitless)

pb = aquifer sediment bulk density (grams per milliliter)

f_{oc} = fraction organic carbon (unitless)

K_{ow} = organic carbon partition coefficient (milliliters per gram)

n = porosity

The vertical velocity of PCE is therefore calculated to be 0.04 ft/day (0.1 ft/day divided by retardation factor of 2.63) based on the head differences between GWMW-15(S) and GWMW-15(I) measured in December 2021. The vertical velocity calculated using Darcy's Law and an estimate of the retardation factor of PCE compares well to the vertical plume movement estimated from the time series data at GWMW-15(S) and 15(I).

For December 2021 the observed hydraulic head in GWMW-15(D) was the same as GWMW-15(I) (3,839.21 ft amsl) and therefore no vertical gradient is present. This is consistent with the lack of PCE concentrations observed at GWMW-15(D). Winter 2021 PCE concentrations remain non-detect at GWMW-15(D) (Table 5), which indicates the plume has not migrated to this location consistent with the absence of a vertical gradient.

GWMW-01(S,I,D) records indicate the plume is present only in the Intermediate zone, however the PCE concentration at GWMW-01(I) has significantly decreased since the Spring 2021 sampling event.

3.6 Site Conceptual Model Summary

The revised geologic model by JSAI (2019) has identified preferential flow pathways on top of the clay layer (Fig. 2) that explain the movement of the Shallow Zone PCE plume toward extraction well CLC 18 and MW-SF10. The Shallow Zone PCE plume is nearly removed around CLC 18 and the remaining plume is within the capture zone of CLC 27.

Eastward groundwater flow was established by municipal pumping that began in the 1960s (Fig. 7). The PCE plume at CLC 18 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, may have caused the eastward migration of the PCE plume to GWMW-15; however, given the distribution of higher PCE concentrations at GWMW-16(D) and GWMW-15(I) with lower PCE concentration in between at GWMW-09 and GWMW-10(I) it is possible the observed PCE concentrations at GWMW-09(D) and GWMW-15(S,I) are related to separate sources that have commingled into one plume.

The vertical extent of the PCE plume in the Shallow Zone is controlled by the clay layer; however, due to the downward gradient, the Shallow Zone PCE plume vertically migrates to the Intermediate and Deep Zones where the clay layer is absent. CLC 18 captures the PCE in the Shallow Zone above the clay layer, where CLC 27 captures the PCE plume in the Shallow Zone where the clay layer is absent and in the Intermediate and Deep Zones.

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 simulating pumping outside of the plume area. Beginning with the original model, the Site Telescope Mesh refinement (TMR) model was constructed (JSAI, 2017). The area of the Telescope Mesh Refinement is shown on Figure 13. The main objective of the TMR model was to simulate the local hydraulic influences of the clay layer on plume capture that could not be resolved 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 from 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 2021. 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 for 2021 includes CLC 18 from Layer 1, CLC 27 from Layer 3. Transient groundwater-flow simulations included the time period from May 2012 to June 2034. Future transient groundwater-flow simulations were expanded to 2034 to accommodate the 14-year period from the revised SOW effective date of June 30, 2020.

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. Model-simulated heads also match reasonably well to CLC 18 and CLC 27 static water levels but do not match their pumping water levels. This is due to well efficiency and the pumping water level inside of the wellbore being below the aquifer water level. The model computes a water level across the entire model cell area and not a water level inside of the wellbore.

A total of 66 available data points was used to compare measured water levels at calibration targets in both zones. The histogram on Figure 15 shows that 80% (53 out of 66) of the absolute residual values are less than 2 ft and that 100% (66 out of 66) are less than 5 ft. Calibration statistics are summarized in Table 7.

The model has layer elevations that range from land surface to over 1,300 feet below and has calibration points throughout. The model shows an acceptable correlation between observed and simulated water levels ($r^2 = 0.90$) with a normalized RMSE of 10.1 percent. The normalized 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 %—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 7. Summary of model calibration statistics for historical transient simulation 2012 to 2021

statistics of calibration targets	result
number of targets	66
range in observed head	14.37
mean observed head	3,841.1
maximum residual (ft)	4.1
minimum residual (ft)	-1.8
RMSE (ft)	1.45
standard deviation of residual error (ft)	1.3
bias (mean error in ft)	0.57
normalized RMSE	0.101
R-squared	0.90

RMSE - root-mean-squared error

Vertical-head gradients in the observed water levels were compared to the model simulated head differences for 2021 data (Table 8). The model provides a reasonable match to observed head differences across the site. Given that the model statistics indicate a good calibration and that the measuring points are scattered both vertically and horizontally across the domain, it can be concluded that the modeled system is well represented in both dimensions.

Table 8. Summary of observed and model simulated head difference between Shallow and Deep Hydrogeologic Zones

well	hydrogeologic zone	Dec 2021 water-level elevation (ft amsl)	Dec 2021 simulated water-level (ft amsl)	head difference (ft)	model simulated head difference (ft)
GWMW-01S	Shallow	3,843.85	3,842.20	7.04	6.10
GWMW-01D	Deep	3,836.81	3,836.10		
GWMW-08S	Shallow	3,844.92	3,842.70	6.74	4.50
GWMW-08D	Deep	3,838.18	3,838.20		
GWMW-09S	Shallow	3,841.55	3,841.60	3.00	2.70
GWMW-09D	Deep	3,838.55	3,838.90		
GWMW-10S	Shallow	3,841.21	3,841.20	4.64	7.90
GWMW-10D	Deep	3,836.57	3,833.30		
GWMW-11S	Shallow	3,843.61	3,842.50	6.68	5.10
GWMW-11D	Deep	3,836.93	3,837.40		
GWMW-15S	Intermediate	3,839.67	3,840.90	0.46	0.90
GWMW-15D	Deep	3,839.21	3,840.00		
GWMW-16S	Shallow	3,843.20	3,841.80	5.02	8.70
GWMW-16D	Intermediate/Deep	3,838.18	3,833.10		

The model simulates a higher head difference than observed at GWMW-10 and GWMW-16, which is partly due to the vertical difference between model layer elevation and screen interval elevations. Currently there are only two monitoring event from the new monitoring well network. Additional time-series data from the new monitoring network will be used to improve model calibration.

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, 2020) 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 are performed monthly by LCU; however, most City wells have transducers with daily data collection. Groundwater-quality data are collected annually from the monitoring network.

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 a robust dataset for determining groundwater flow direction in the Shallow Zone and in the Intermediate and Deep Zones on a regional and local scale; water-level interpretation has significantly improved with replacement of the FLUTe well. Time-series water-level data are critical for calibration of the model used to assess remedial progress and effectiveness of the monitoring network. There are adequate groundwater-level data for defining the groundwater flow direction as shown on Figures 9, 10, and 11, and by the hydrographs in Appendix B.

5.2 Defining Extent of PCE Plume

The PCE plume in the Shallow Zone is better defined by the modified monitoring network. The Shallow Zone plume extent is inferred north of MW-SF10, but is bracketed to the east by GWMW-09(S) and to the west by GWMW-08(S). The Shallow Zone PCE plume is adequately defined given the west-to-east groundwater flow direction (Fig. 9). Additional monitoring points are not recommended at this time to characterize the plume or define the extent of the Shallow Zone PCE plume.

The PCE plume extent in the Intermediate Zone (Fig. 10) is inferred on the north and south. Data from CLC 20, CLC 21, and CLC 57 help constrain the Intermediate Zone plume extent. The extent of elevated PCE concentrations in the Intermediate Zone between GWMW-01(I) and GWMW-10(I) is reasonably well defined (Fig. 10). The known extent of the Intermediate Zone PCE plume is centered on extraction well CLC 27 and within the area of capture.

The extent of elevated PCE concentrations in the Deep Zone 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. 11). The extent of the PCE plume downgradient and southeast of GWMW-16(D) is well defined by the monitoring network, as shown on Figure 11. Model simulations indicated the Deep Zone PCE plume is more readily captured and extracted by CLC 27 pumping, and the current dataset validates the model results.

6.0 SUMMARY OF FINDINGS

The three hydrogeologic zones, Shallow, Intermediate, and Deep, are primarily differentiated by the presence or absence of the clay zone, and water-level elevations measured in nested monitoring wells screened at different depths. The Shallow Zone is not hydraulically connected across the Site to the Intermediate or Deep Zones where the clay zone is present, and but the Shallow, Intermediate, and Deep Zones are hydraulically connected across the Site where the clay zone is absent. It was previously thought the Shallow, Intermediate, and Deep Zones were hydraulically connected across the Site, but in varying degree of hydraulic communication (EPA, 2006). The revised geologic model by JSAI (2019) defined the clay layer extent, which better explains the observed horizontal and vertical groundwater flow mechanisms, PCE plume distribution, and PCE plume capture by extraction wells (see Figs. 2 through 11).

When considering the current Site monitoring network and LCU regional monitoring network, it is evident that adequate groundwater-level data are collected to evaluate groundwater flow direction in the Shallow Zone (Fig. 9), Intermediate Zone (Fig. 10), and Deep Zone (Fig. 11). The hydraulic gradient across the Site is fairly gentle, as defined by the 3,840- and 3,830-ft water-level elevation contours (Fig. 8), with a cone of depression shown at CLC 27.

Given the relatively gentle hydraulic gradient, the re-surveying of measuring point elevations in early 2019 (Table 2; Appendix A) provides better confidence in the water-level elevation contouring efforts; for example, 1-ft water-level contour intervals are now possible for creating Figures 9, 10, and 11.

The Site Telescope Mesh Refinement (TMR) model (JSAI, 2017) was updated with data collected from 2017 to 2021 and satisfactorily calibrated. Pumping from CLC 61 was also added to the model calibration and simulations by JSAI (JSAI, 2019). 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.

The vertical and horizontal extent of the Shallow Zone PCE plume is defined by the revised groundwater monitoring network as a result of the FLUTe well replacement program. The Intermediate and Deep Zone PCE plume is defined down-gradient and southeast of GWMW-10; groundwater in this area is toward extraction well CLC 27 (see Fig. 11). Model simulations indicated the cessation of pumping from CLC 61 caused the water level of the southern edge of the Deep Zone PCE plume to rebound so that it is more readily captured and extracted by CLC 27 pumping.

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 2021 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. Maintain CLC 27 average pumping rate between 225 and 240 gpm.

2. Consider further reduction of pumping from CLC 18, such as one pumping cycle per week. Discontinue pumping from CLC 18 if PCE concentrations continue to be below 5 µg/L for six consecutive months and no upward trend is observed.

3. Data from the revised monitoring network are adequate for evaluating remedial progress. To better evaluate water-level data, it is recommended to develop a methodology ranking the importance of data points for defining the water-level elevation contours for the Shallow, Intermediate, and Deep Zones.

8.0 REFERENCES

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ILLUSTRATIONS

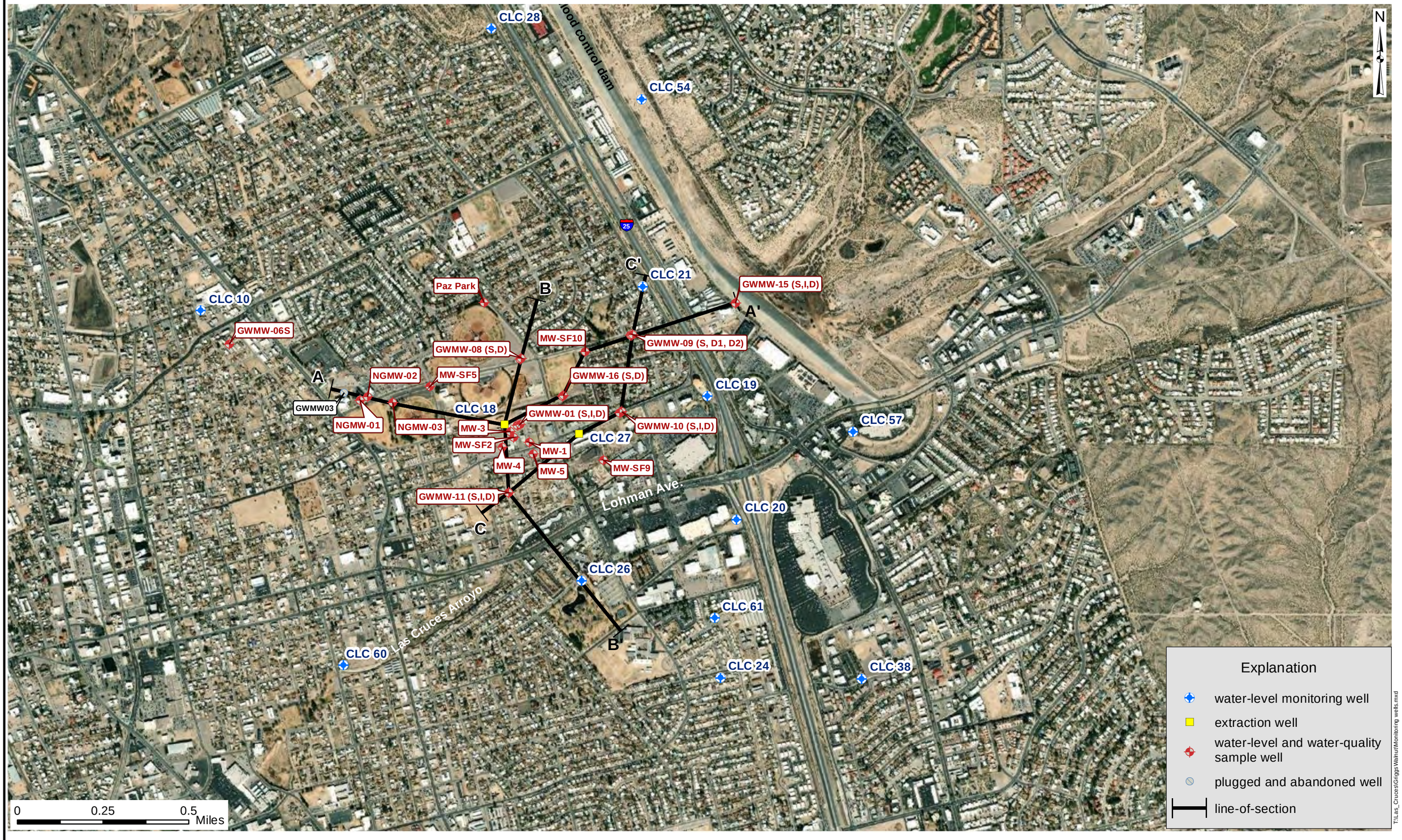


Figure 1. Aerial photograph of the Griggs and Walnut Site showing monitoring network, City of Las Cruces, New Mexico.

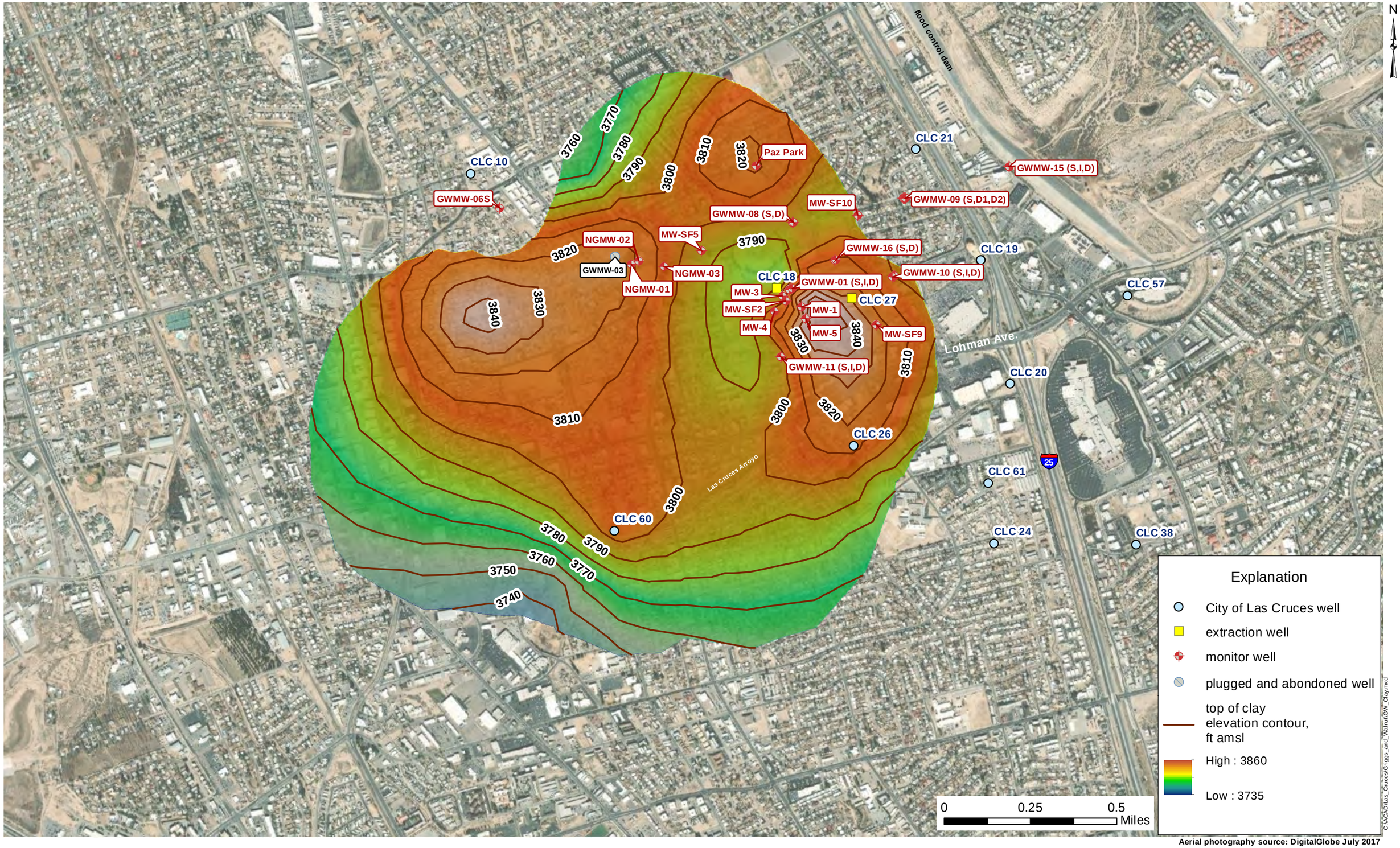


Figure 2. Aerial photograph of the Griggs and Walnut Site showing top of clay layer elevation contours and clay layer extent, Las Cruces, New Mexico.

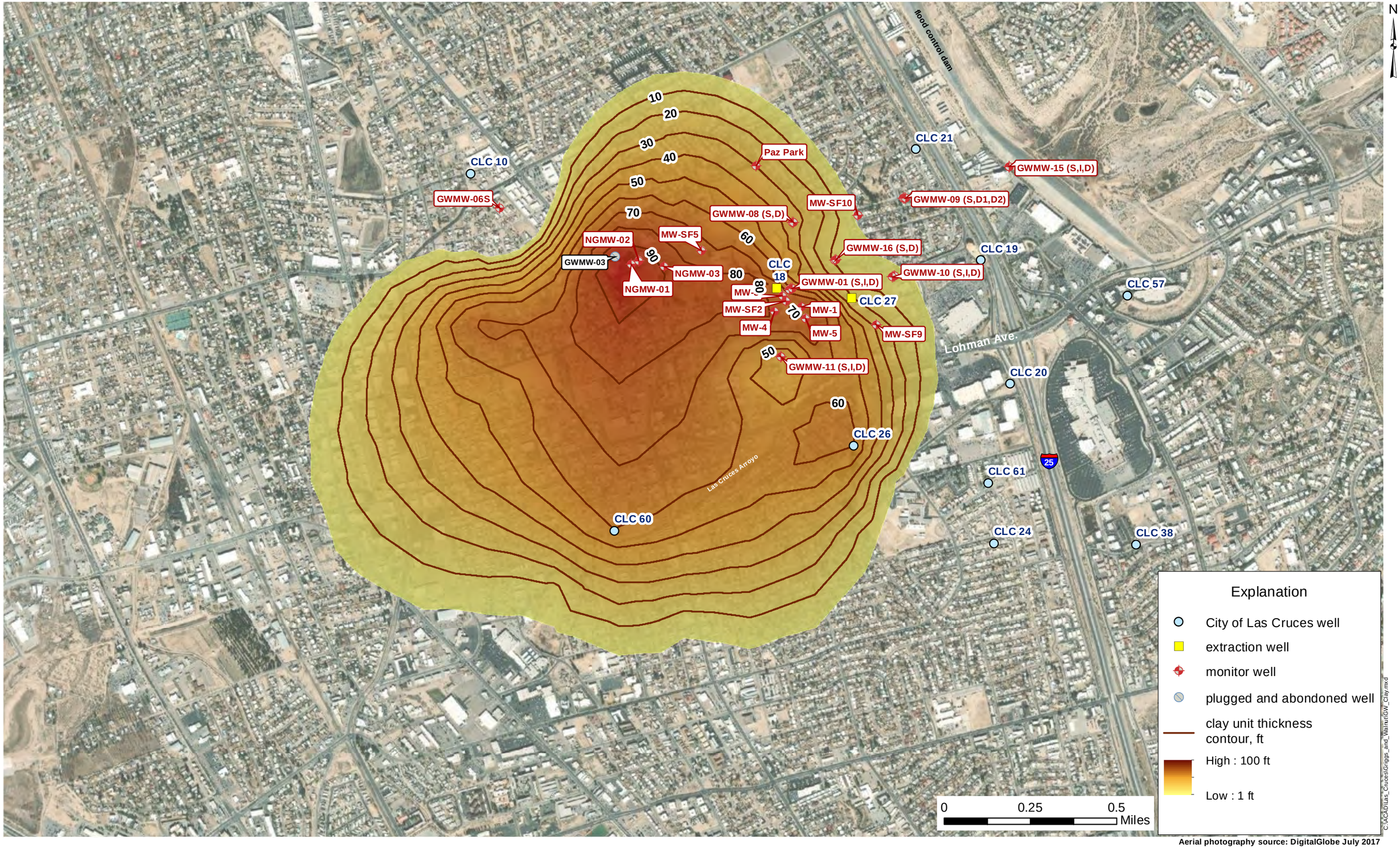


Figure 3. Aerial photograph of the Griggs and Walnut Site showing clay layer extent and thickness contours, Las Cruces, New Mexico.

A

WEST

A'

EAST

GWMW-03 (plugged and abandoned)

NGMW-03

irrigation returns from park area

CLC 18

(bend in section)

GWMW-01(S,I,D) (projected)

GWMW-16(S,D)

(bend in section)

MW-SF10

(bend in section)

GWMW-09(S,DI,D2)

(bend in section)

GWMW-15(S,I,D)

vadose zone

zone of horizontal migration in Shallow Zone

zone of vertical migration in Shallow Zone

[Hydrogeologic Zones]

[SHALLOW]

[INTERMEDIATE]

[DEEP]

elevation, feet above mean sea level

4,100

4,000

3,900

3,800

3,700

3,600

3,500

3,400

<1.0

4.5

1.5

4.6

9.5

<1.0

<1.0

draining of PCE plume in Hydrogeologic Zone 1 into extraction well CLC 18

?

?

?

380'

10

23.0

4.3

22

TD 516.5'

<1.0

6.9

<1.0

plugged back screen section

TD 580'

TD 570'

TD 620'

approximate extent of PCE plume in 2005

TD 564'

TD 632'

modified from JSAI, 2006 and 2016

EXPLANATION

predominantly sand, silt, and clay

predominantly sand and gravel**

PCE concentrations >5 µg/L (Dec. 2021)

approximate water table

dashed where inferred

screen section

direction of flow

4.5 PCE concentration, µg/L (Dec. 2021)

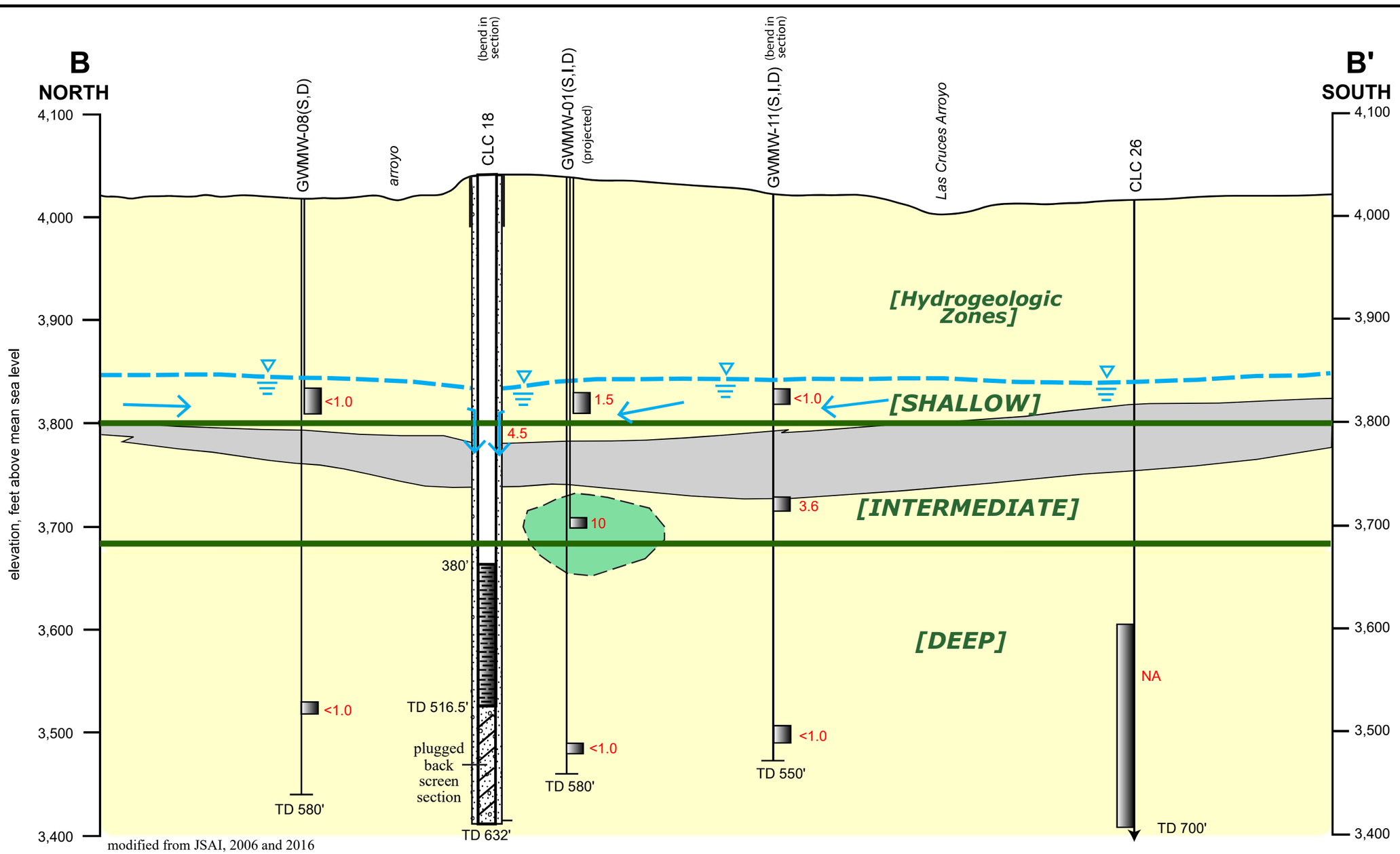
(S,I,D) Shallow, Intermediate, and Deep Zone

(wells not to horizontal scale)

0 500 1,000 ft

horizontal scale

Figure 4. Hydrogeologic cross-section A-A' with December 2021 PCE concentrations, Griggs and Walnut Site, 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 (Dec. 2021)
- approximate water table
- dashed where inferred
- screen section
- direction of flow
- 3.6 PCE concentration, µg/L (Dec. 2021)
- (S,I,D) Shallow, Intermediate, and Deep Zone

(wells not to horizontal scale)

0 500 1,000 feet

horizontal scale

Figure 5. Hydrogeologic cross-section B-B' with December 2021 PCE concentrations, Griggs and Walnut Site, Las Cruces, New Mexico.

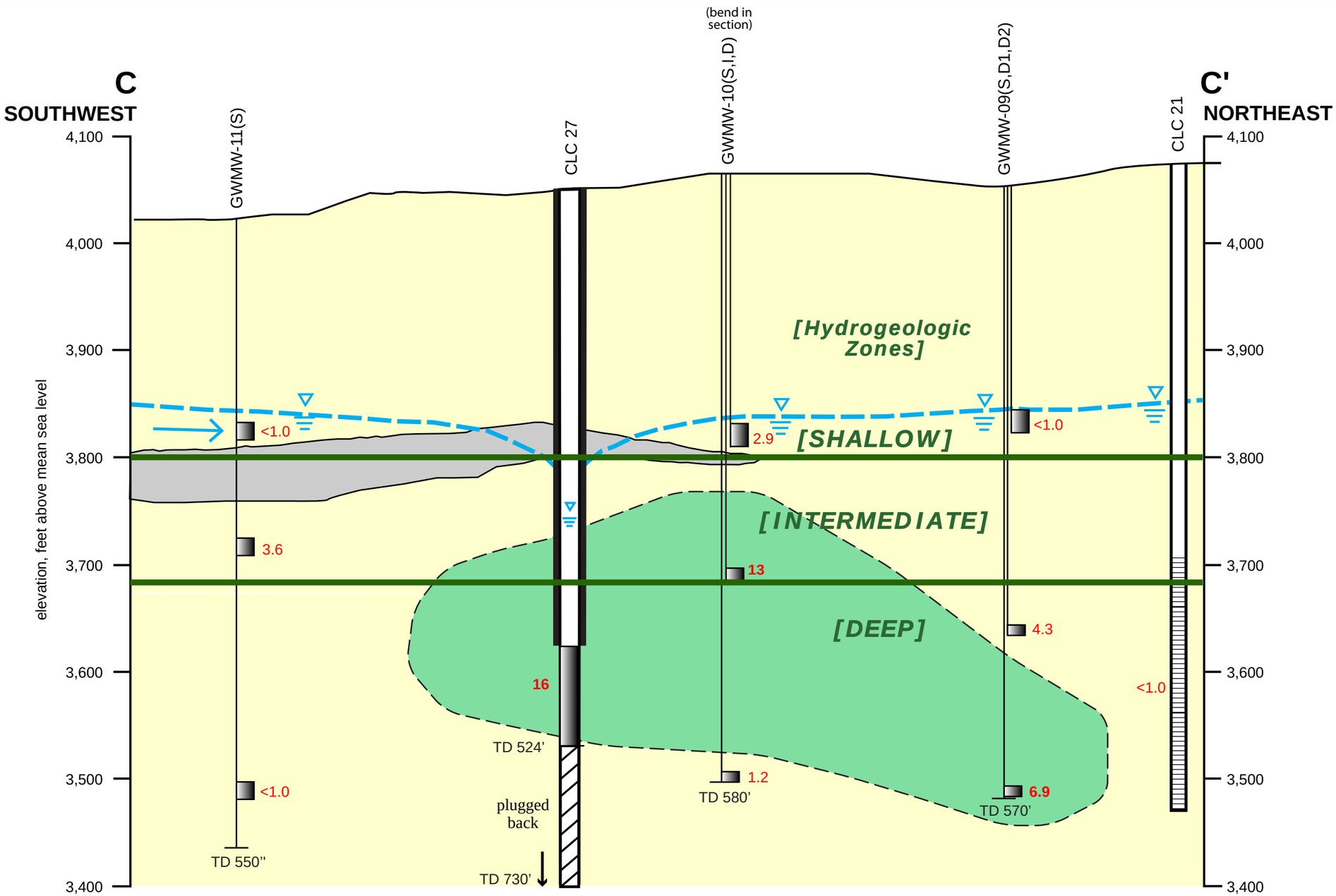


Figure 6. Hydrogeologic cross-section C-C' with December 2021 PCE concentrations, Griggs and Walnut Site, Las Cruces, New Mexico.

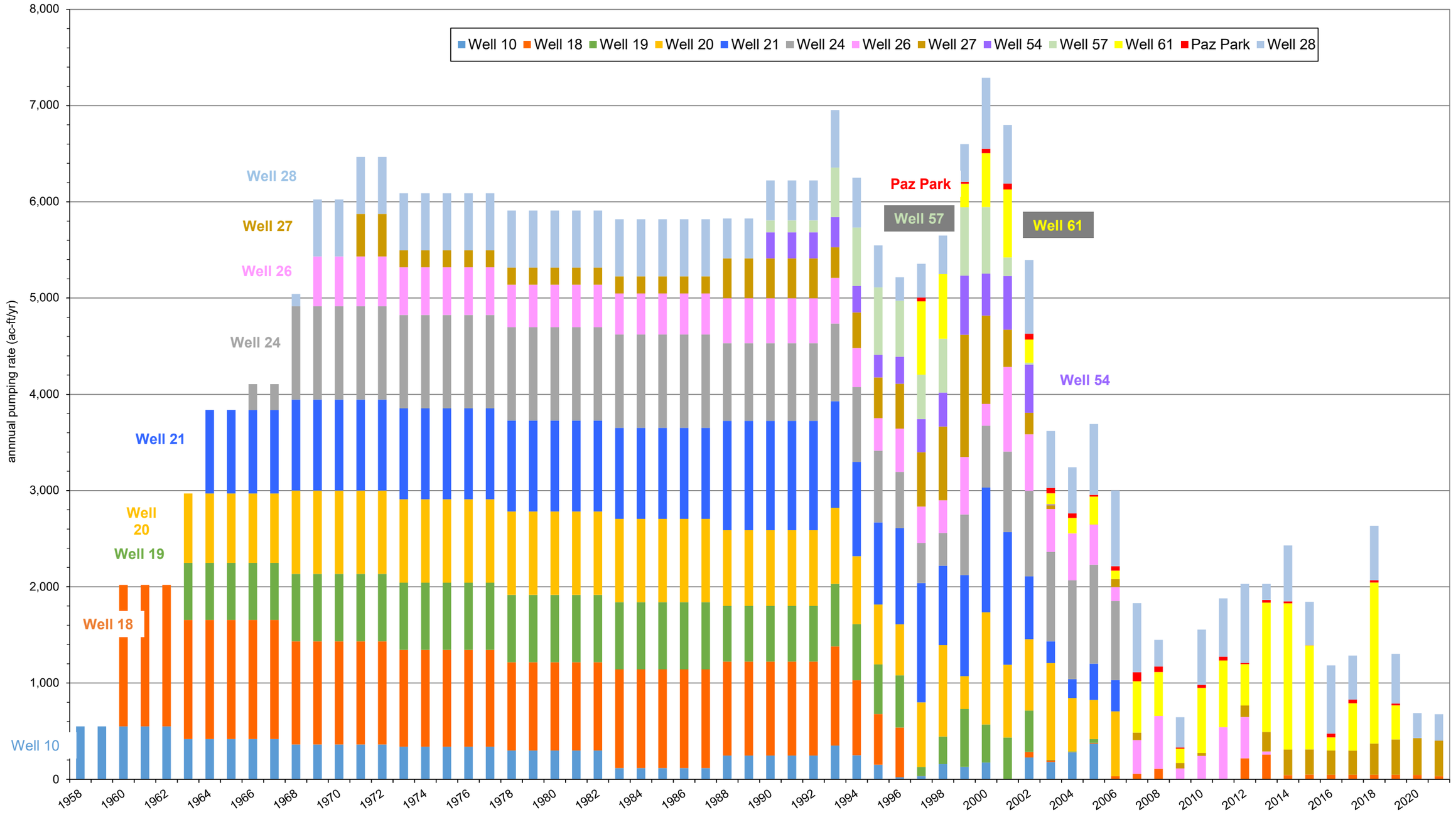


Figure 7. Bar graph of annual pumping from wells in the Griggs and Walnut site area, Las Cruces, New Mexico.

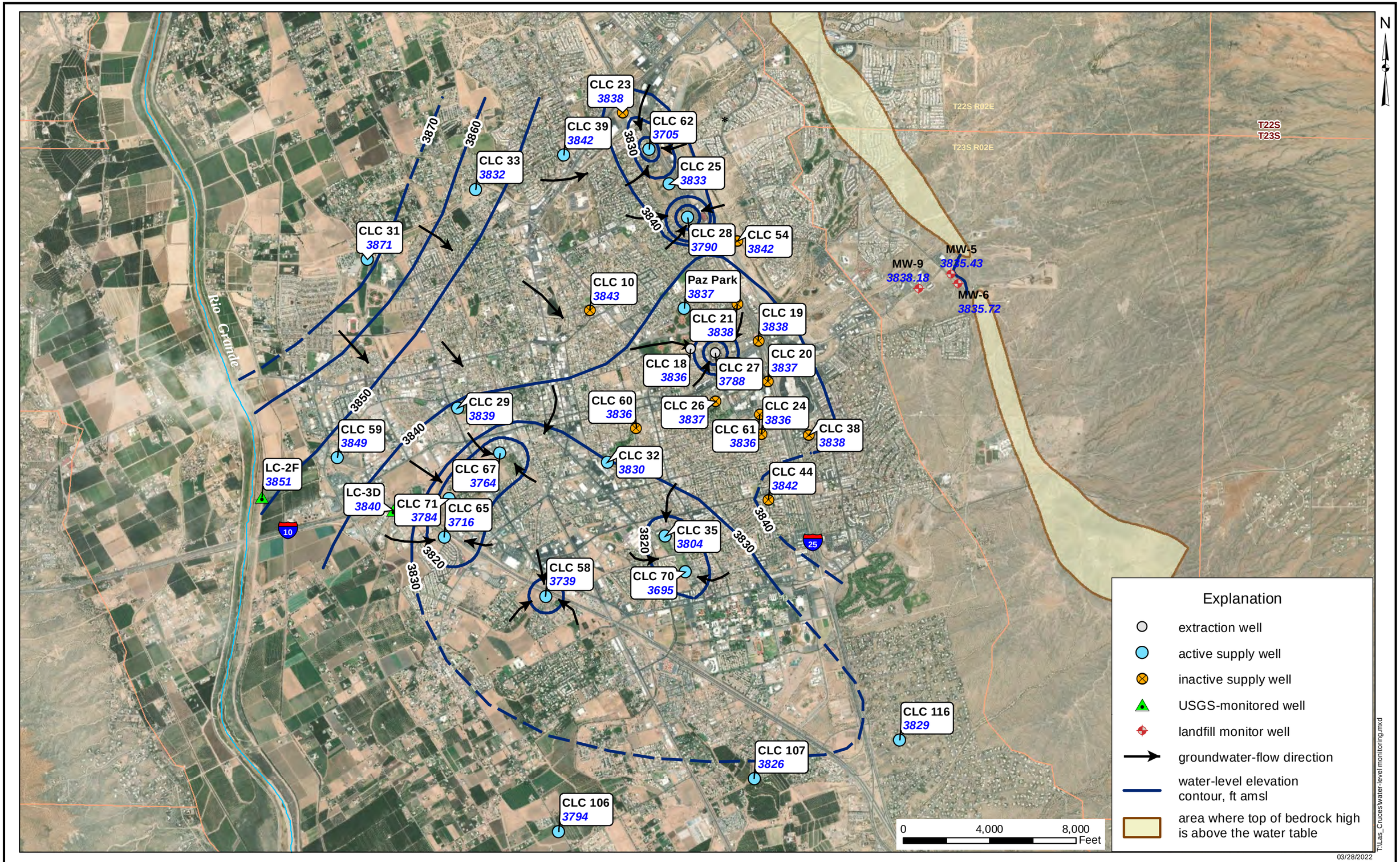


Figure 8. Aerial photograph showing December 2021 water-level elevation contours, City of Las Cruces, New Mexico.



Figure 9. Aerial photograph showing December 2021water-level elevation contours and PCE concentrations for the Shallow Hydrogeologic Zone, Griggs and Walnut Site, Las Cruces, New Mexico.

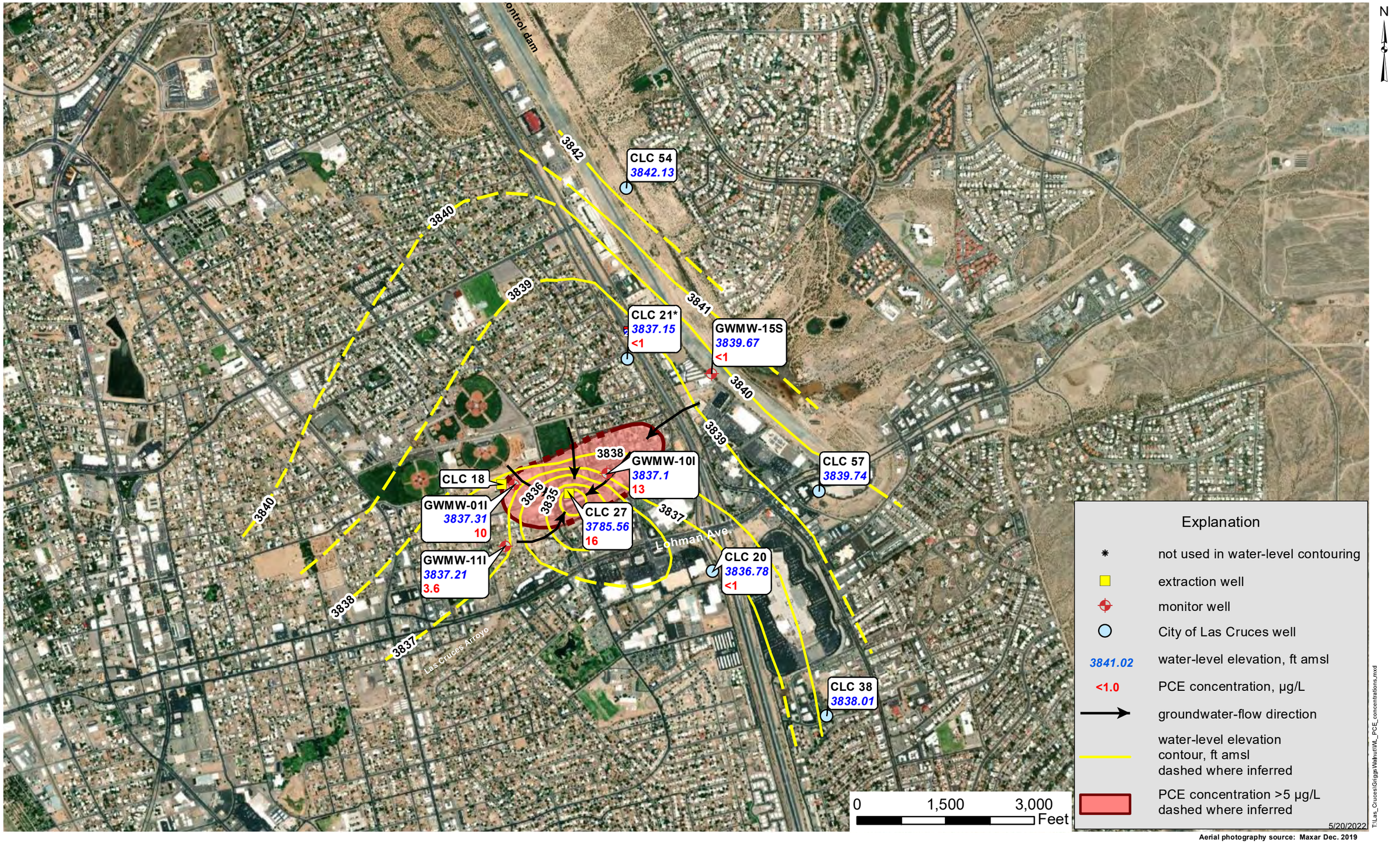


Figure 10. Aerial photograph showing December 2021 water-level elevation contours and PCE concentrations for the Intermediate Hydrogeologic Zone, Griggs and Walnut Site, Las Cruces, New Mexico.

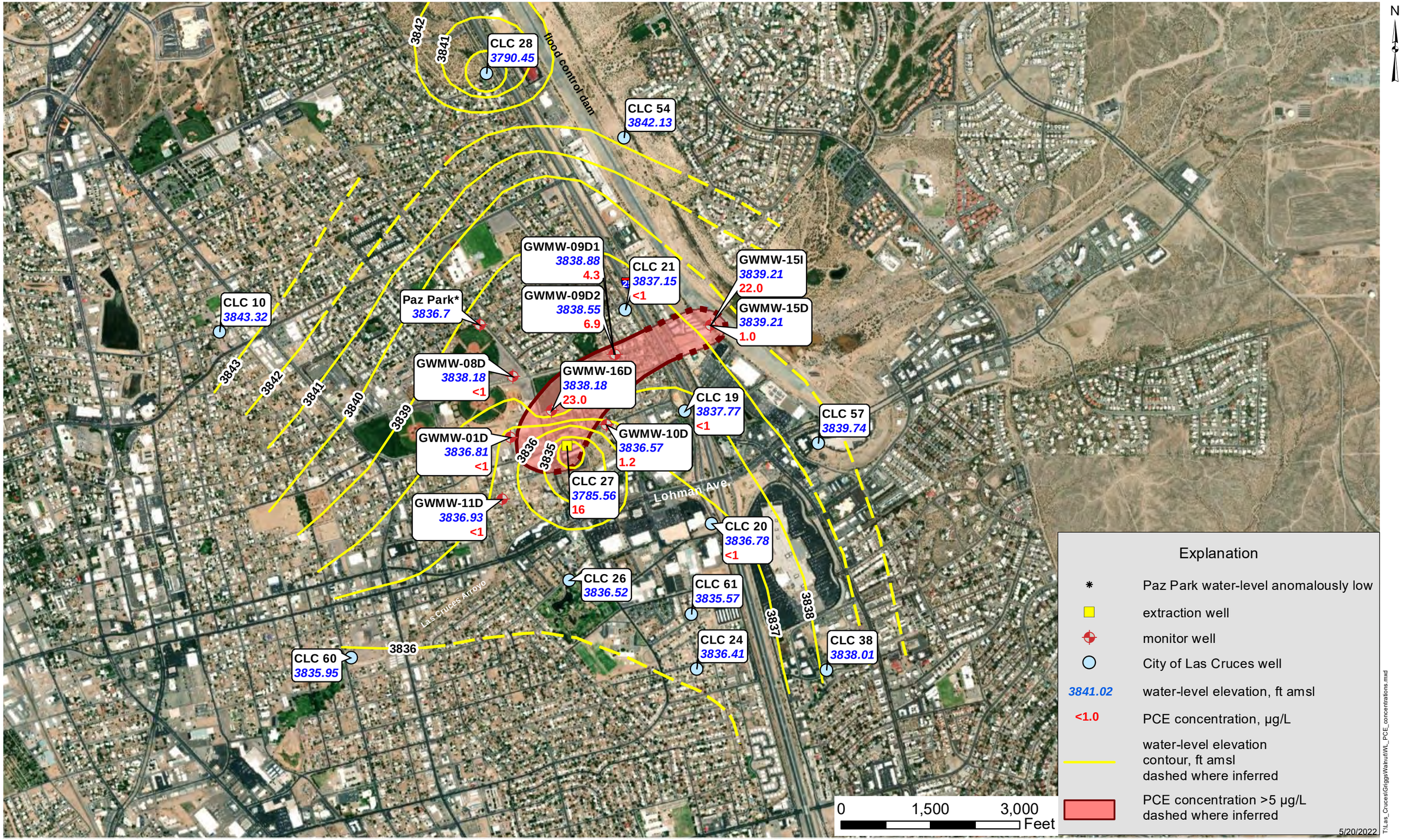


Figure 11. Aerial photograph showing December 2021 water-level elevation contours and PCE concentrations for the Deep Hydrogeologic Zone, Griggs and Walnut Site, Las Cruces, New Mexico.

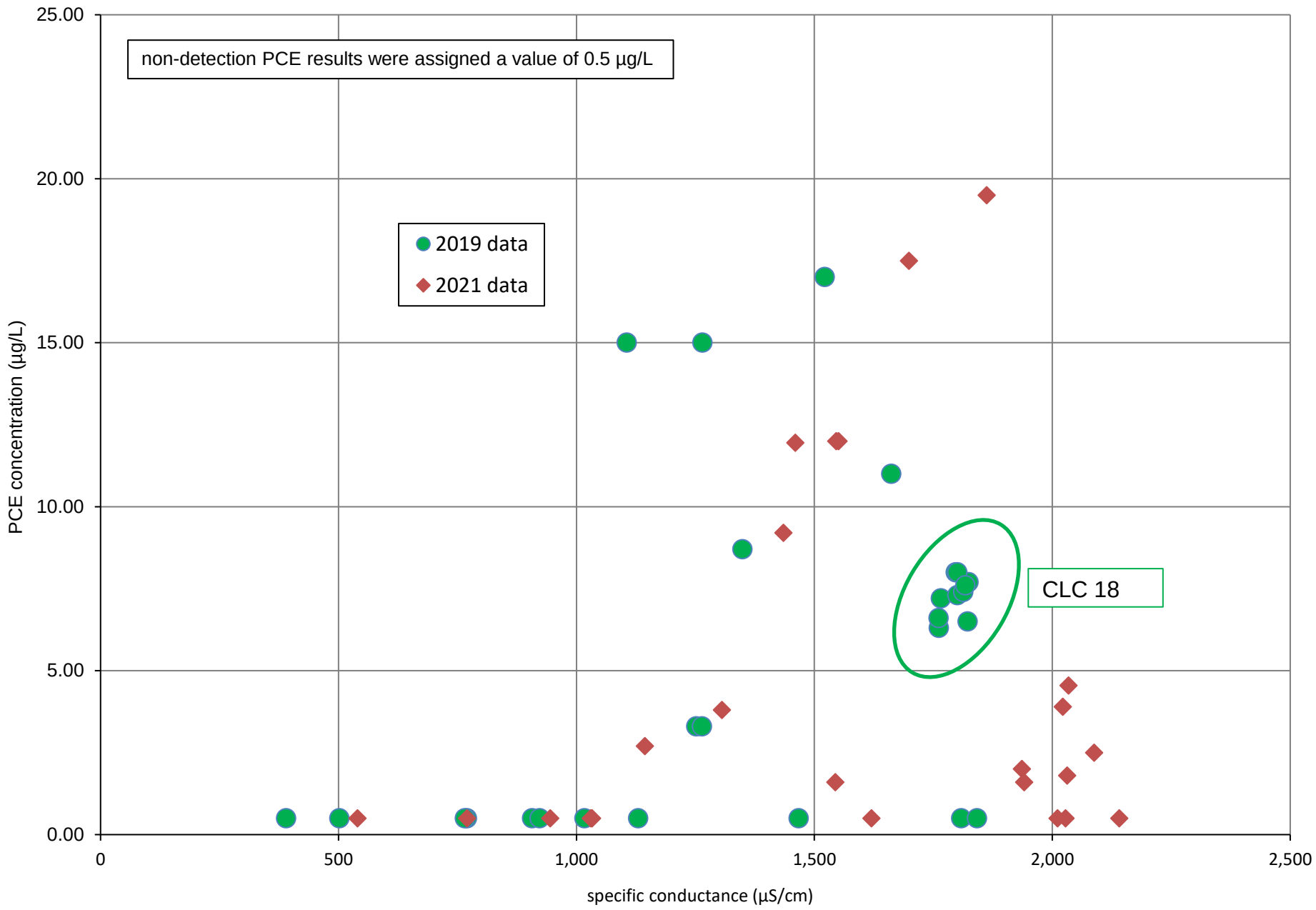


Figure 12. Graph of PCE concentration versus specifc conductance values for the winter 2019 and winter 2021 monitoring event, Griggs and Walnut Site, Las Cruces, New Mexico..

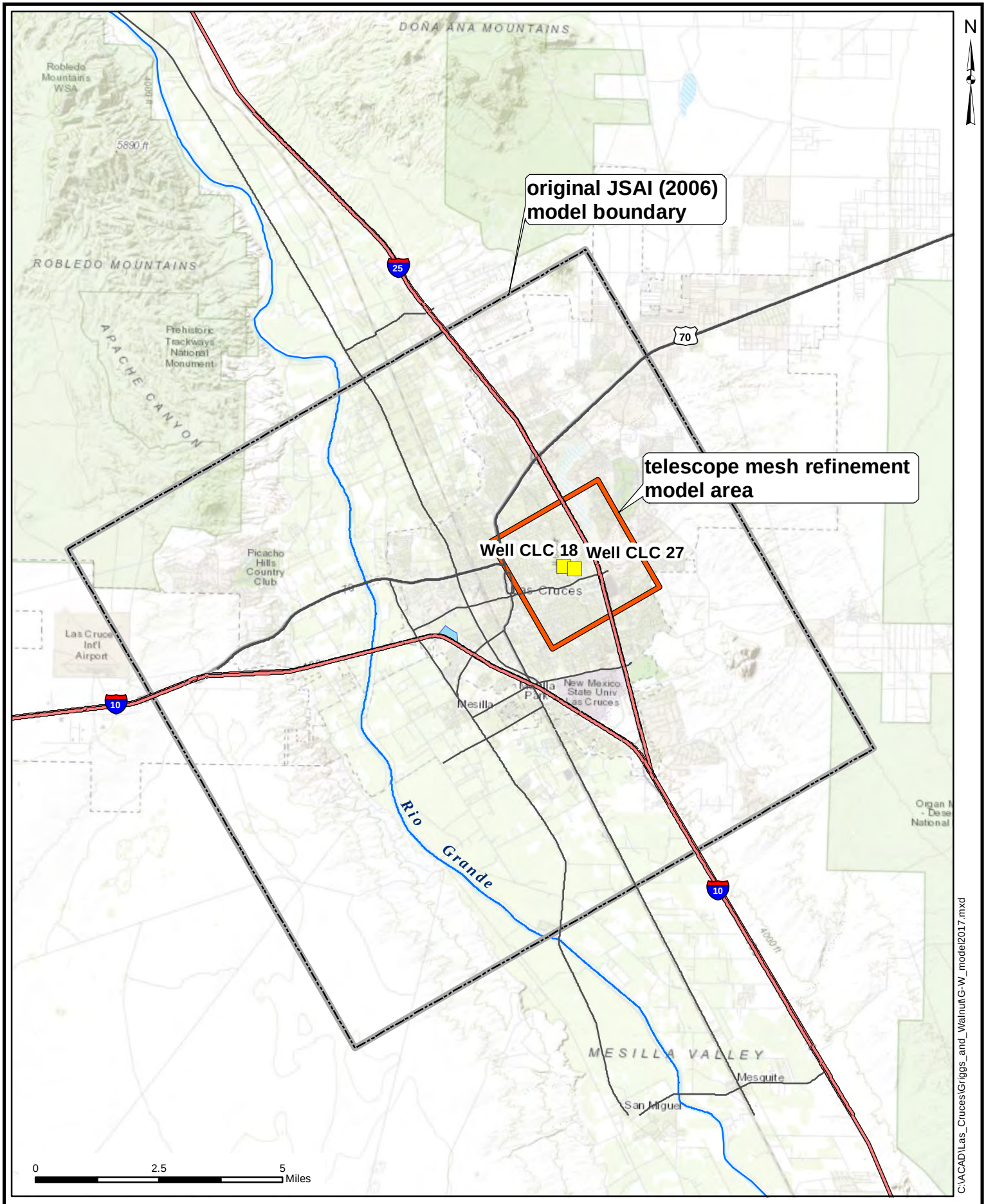


Figure 13. Topographic map showing telescope mesh refinement (TMR) groundwater-flow model grid, Griggs and Walnut Site, Las Cruces, New Mexico.

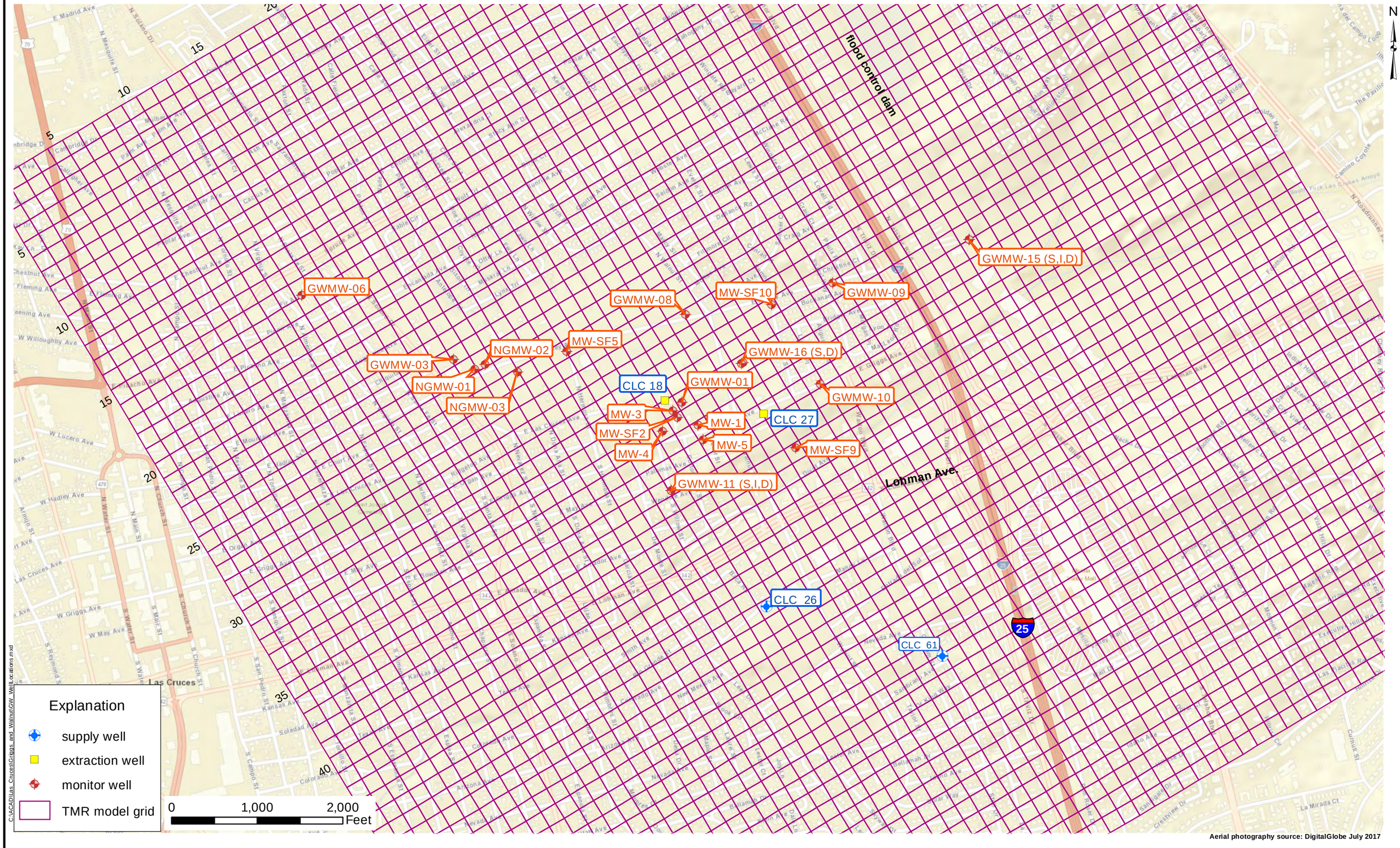


Figure 14. Map showing telescope mesh refinement (TMR) groundwater-flow model with Griggs and Walnut Site monitoring network, Las Cruces, New Mexico.

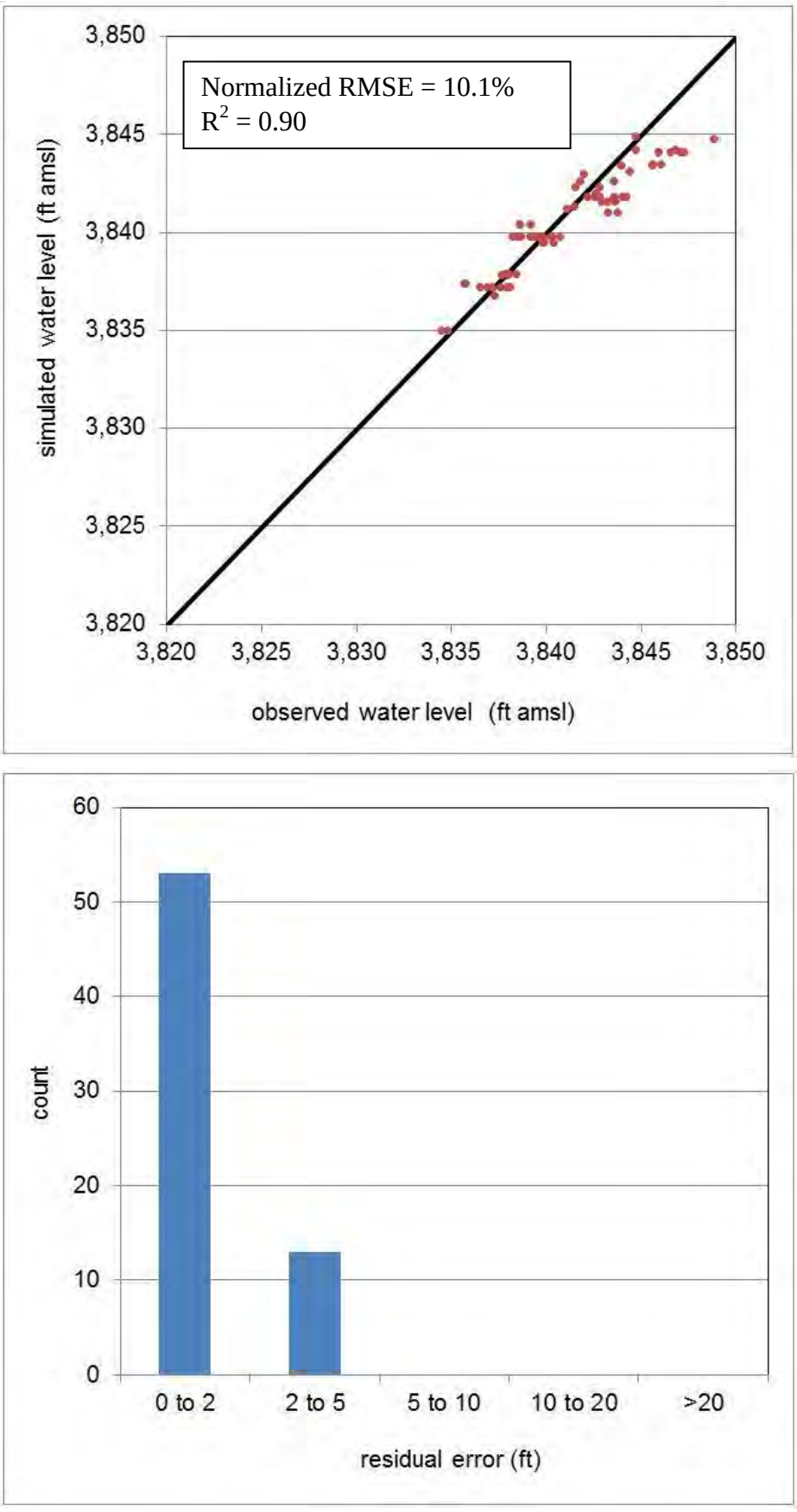


Figure 15. Scatter plot and histogram showing distribution of model-calibrated residual error in heads.

APPENDICES

Appendix A.

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

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03/29/2021

Kelly Jayne, CFM, P.E.
Daniel B. Stephens & Associates, Inc.
13949 West Colfax Avenue, Suite 220
Lakewood, CO 80401

Emailed to: kjayne@geo-logic.com on date of letter.

RE: Griggs-Walnut Ground Water Plume Site

Atkins Engineering Associates, Inc. (AEA) has completed the Monitor Well survey at the Griggs-Walnut Ground Water Plume Site, Las Cruces, NM 88001. The table on the following page summarizes the coordinate and elevation data for the Monitor Well locations and elevations, top-of-casing (TOC) north side and center top of well vault, located at the Griggs-Walnut Ground Water Plume Site.

Horizontal coordinates are in US Survey Feet NAD 83 (2011) (EPOCH:2010.0000) New Mexico State Plane Central Grid Coordinates and New Mexico State Plane Central Grid Coordinates scaled to ground. The combined scale factor used is 1.002620486515057215.

Orthometric Heights for Monitor Well Locations were established by GPS observations referenced to previously used benchmark with a PID of "CX1966". A TBM "WAL" was set in a more centrally located area to be used in future as a check in location and is a set 3" aluminum cap and is referenced to the NGS published Benchmark set by the City of Las Cruces and designated "GPS 14" with a PID of "CX1966" and a published Orthometric Elevation of 4001 feet (NAVD88). For the purposes of this survey the Orthometric Elevation of "CX1966" was referenced as 4000.6 based on earlier monitor well survey data provided. This was honored in order to tie the newer data set to existing data set.

Attached to this email is a .xlsx spreadsheet of the table above.

If you have any questions, please contact me at (575) 624-2420 or ryan@atkinseng.com

Ryan C. Cortez, PS 22761

3/29/2021
Date (Signed)



Description	State Plane Central Grid		State Plane Central Grid		TOC Elevation (USft)	Vault Top Elevation (USft)
	Northing (USft)	Easting (USft)	Latitude (DD)	Longitude (DD)		
GWMW-01-S	479037.04	1483354.28	32.31593331	-106.75842520	4038.69	4039.85
GWMW-01-I	479031.28	1483330.09	32.31591716	-106.75850341	4038.96	4039.75
GWMW-01-D	479017.94	1483311.09	32.31588025	-106.75856471	4038.29	4038.56
GWMW-6-S	480268.97	1478869.86	32.31926030	-106.77296062	3946.78	3947.54
GWMW-8-S	480048.70	1483371.14	32.31871437	-106.75838615	4020.09	4020.46
GWMW-8-D	480044.88	1483351.73	32.31870361	-106.75844893	4019.85	4020.17
GWMW-9-S	480421.60	1485085.00	32.31976161	-106.75284391	4051.10	4051.65
GWMW-9-D1	480413.76	1485054.43	32.31973967	-106.75294275	4050.79	4051.34
GWMW-9-D2	480413.19	1485068.27	32.31973828	-106.75289794	4051.11	4051.36
GWMW-10-S	479213.78	1484883.41	32.31643898	-106.75347812	4063.84	4064.47
GWMW-10-I	479221.57	1484902.26	32.31646063	-106.75341722	4063.95	4064.70
GWMW-10-D	479228.62	1484920.89	32.31648025	-106.75335702	4064.60	4064.84
CX1966	482269.20	1482127.94	32.32480175	-106.76244487	4000.60	--
CX1963	475662.54	1487719.61	32.30671365	-106.74424432	4093.60	--
TBM "WAL"	479683.91	1483699.55	32.31771592	-106.75731748	4027.14	--

Description	State Plane Central Ground		State Plane Central Ground		TOC Elevation (USft)	Vault Top Elevation (USft)
	Northing (USft)	Easting (USft)	Latitude (DD)	Longitude (DD)		
GWMW-01-S	479036.97	1483354.12	32.31593312	-106.75842571	4038.69	4039.85
GWMW-01-I	479031.21	1483329.93	32.31591696	-106.75850394	4038.96	4039.75
GWMW-01-D	479017.86	1483310.91	32.31588004	-106.75856528	4038.29	4038.56
GWMW-6-S	480269.22	1478868.52	32.31926098	-106.77296495	3946.78	3947.54
GWMW-8-S	480048.89	1483370.98	32.31871489	-106.75838667	4020.09	4020.46
GWMW-8-D	480045.08	1483351.57	32.31870415	-106.75844945	4019.85	4020.17
GWMW-9-S	480421.90	1485085.29	32.31976243	-106.75284299	4051.10	4051.65
GWMW-9-D1	480414.05	1485054.72	32.31974048	-106.75294183	4050.79	4051.34
GWMW-9-D2	480413.48	1485068.56	32.31973909	-106.75289701	4051.11	4051.36
GWMW-10-S	479213.75	1484883.65	32.31643891	-106.75347734	4063.84	4064.47
GWMW-10-I	479221.55	1484902.50	32.31646057	-106.75341643	4063.95	4064.70
GWMW-10-D	479228.60	1484921.13	32.31648020	-106.75335623	4064.60	4064.84
CX1966	482269.98	1482127.46	32.32480390	-106.76244643	4000.60	--
CX1963	475661.69	1487720.49	32.30671133	-106.74424146	4093.60	--
TBM "WAL"	479684.01	1483699.48	32.31771620	-106.75731771	4027.14	--



FID	Descriptio	Northing	Easting	TOC_Elevat	Vault_Elev	Latitude	Longitude
0	GWMW-01-S	479036.9715	1483354.122	4038.69	4039.85	32.31593312	-106.7584257
1	GWMW-01-I	479031.2063	1483329.926	4038.96	4039.75	32.31591696	-106.7585039
2	GWMW-01-D	479017.8643	1483310.913	4038.29	4038.56	32.31588004	-106.7585653
3	GWMW-6-S	480269.2216	1478868.524	3946.78	3947.54	32.31926098	-106.7729649
4	GWMW-8-S	480048.8924	1483370.982	4020.09	4020.46	32.31871489	-106.7583867
5	GWMW-8-D	480045.0755	1483351.571	4019.85	4020.17	32.31870415	-106.7584494
6	GWMW-9-S	480421.897	1485085.288	4051.1	4051.65	32.31976243	-106.752843
7	GWMW-9-D1	480414.0543	1485054.717	4050.79	4051.34	32.31974048	-106.7529418
8	GWMW-9-D2	480413.484	1485068.561	4051.11	4051.36	32.31973909	-106.752897
9	GWMW-10-S	479213.7535	1484883.651	4063.84	4064.47	32.31643891	-106.7534773
10	GWMW-10-I	479221.5456	1484902.503	4063.95	4064.7	32.31646057	-106.7534164
11	GWMW-10-D	479228.5983	1484921.134	4064.6	4064.84	32.3164802	-106.7533562
12	CX1966	482269.9828	1482127.459	4000.6	0	32.3248039	-106.7624464
13	CX1963	475661.6926	1487720.49	4093.6	0	32.30671133	-106.7442415
14	TBMWAL	479684.0133	1483699.479	4027.14	0	32.3177162	-106.7573177

Appendix B.

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

Appendix B.

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

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

Figure B3. Graph of water-level data and monthly pumping data collected by the City of Las Cruces for Well 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 Well 26.

Figure B6. Graph of water-level data collected by the City of Las Cruces for Well 21, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 26, 61, and Paz Park).

Figure B7. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for Well 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 Well 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 Well 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 Well 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 Well 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 Well 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 Well 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 Well 60, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 26, 61, and Paz Park).

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

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

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

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

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-16 (S, D) (shallow 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.

Figure B25. Graph of GWMW-16(S,D) hourly transducer water level data for December 2020.

Figure B26. Graph of GWMW-16(S,D) and CLC 18 water level data for 2021.

Figure B27. Graph of GWMW-16(S,D) transducer water level data for 2021.

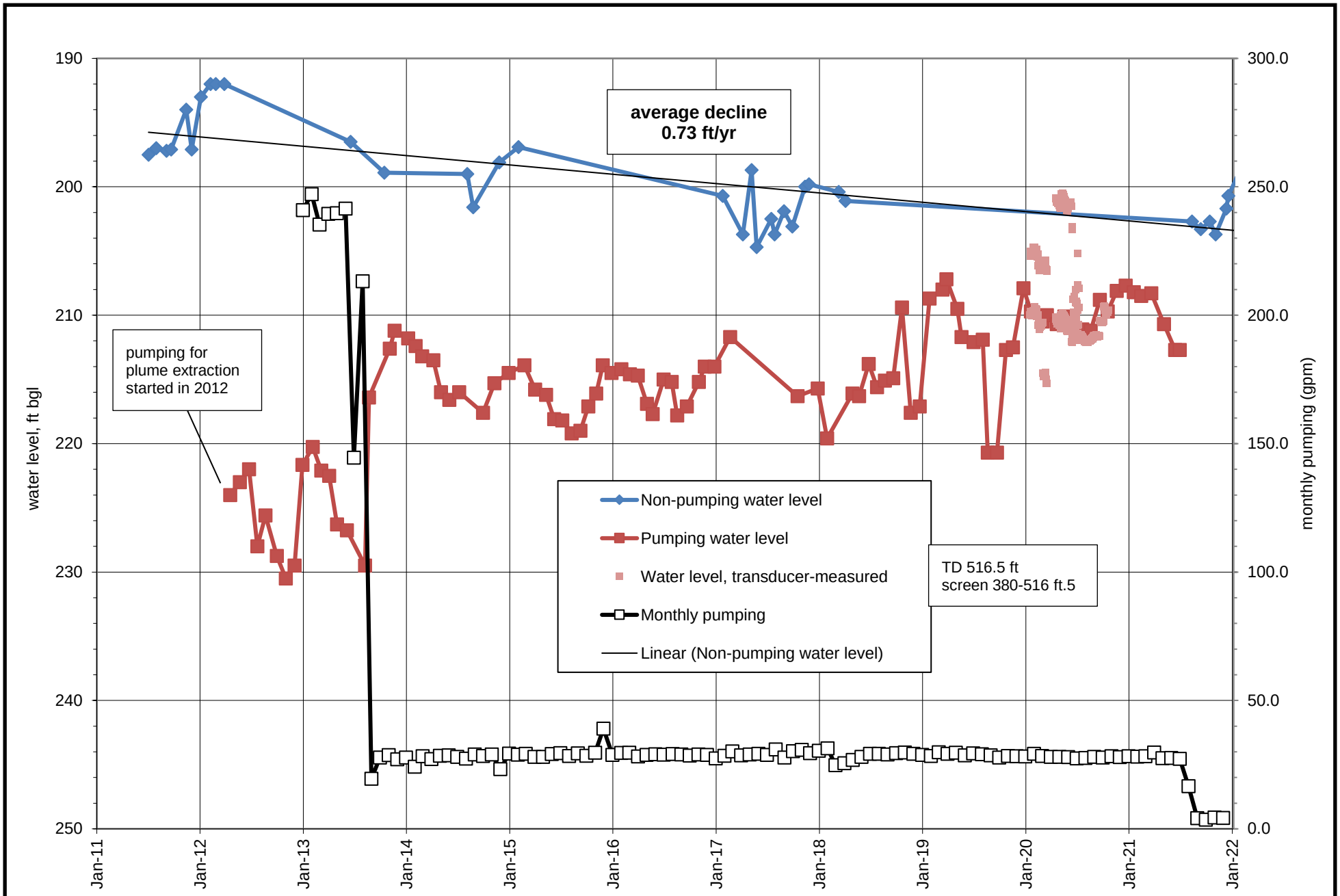


Figure B1. Graph of water-level data and monthly pumping data collected by the City of Las Cruces for Well 18.

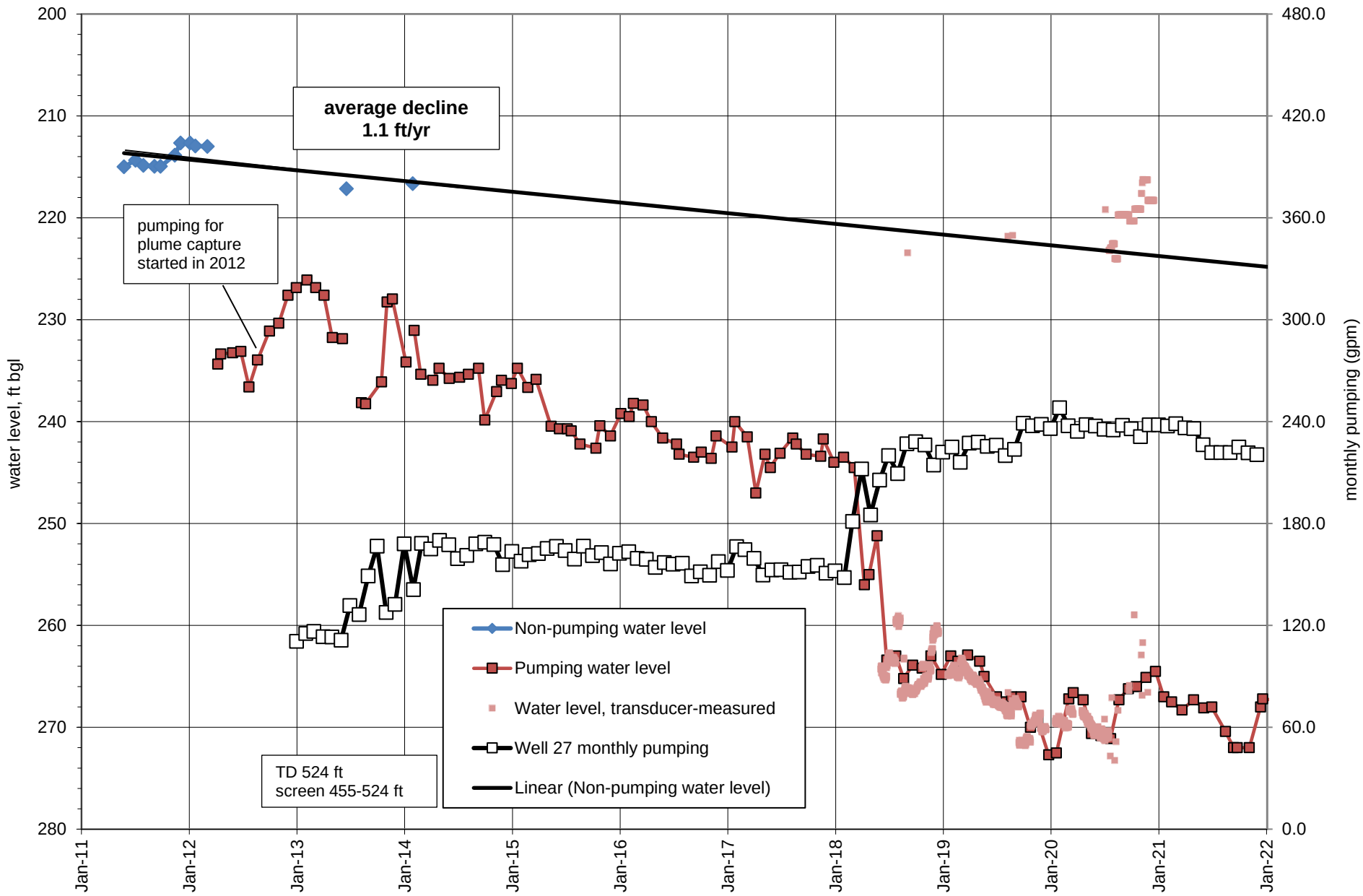


Figure B2. Graph of water-level data and monthly pumping data collected by the City of Las Cruces for Well 27.

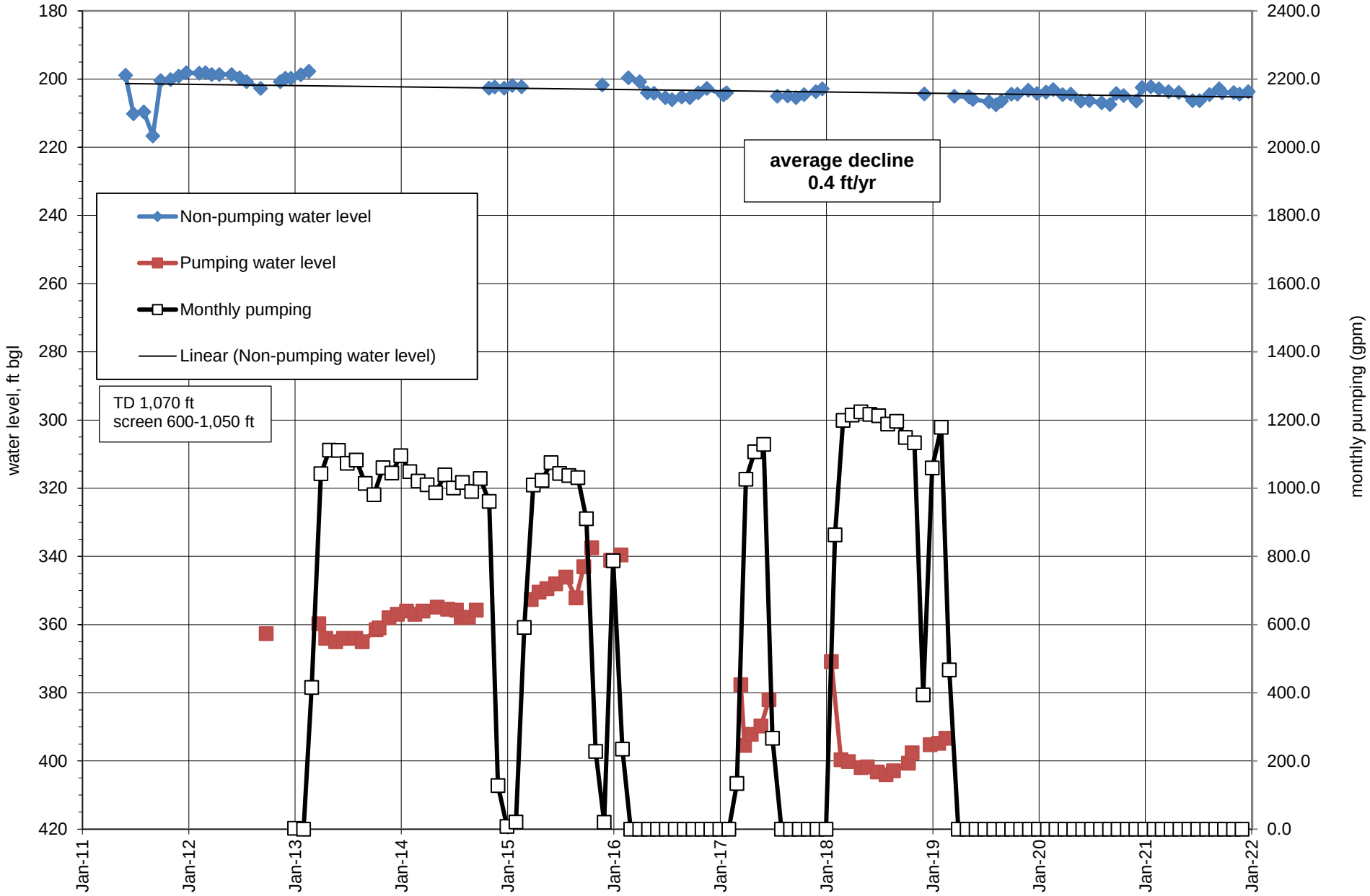


Figure B3. Graph of water-level data and monthly pumping data collected by the City of Las Cruces for Well 61.

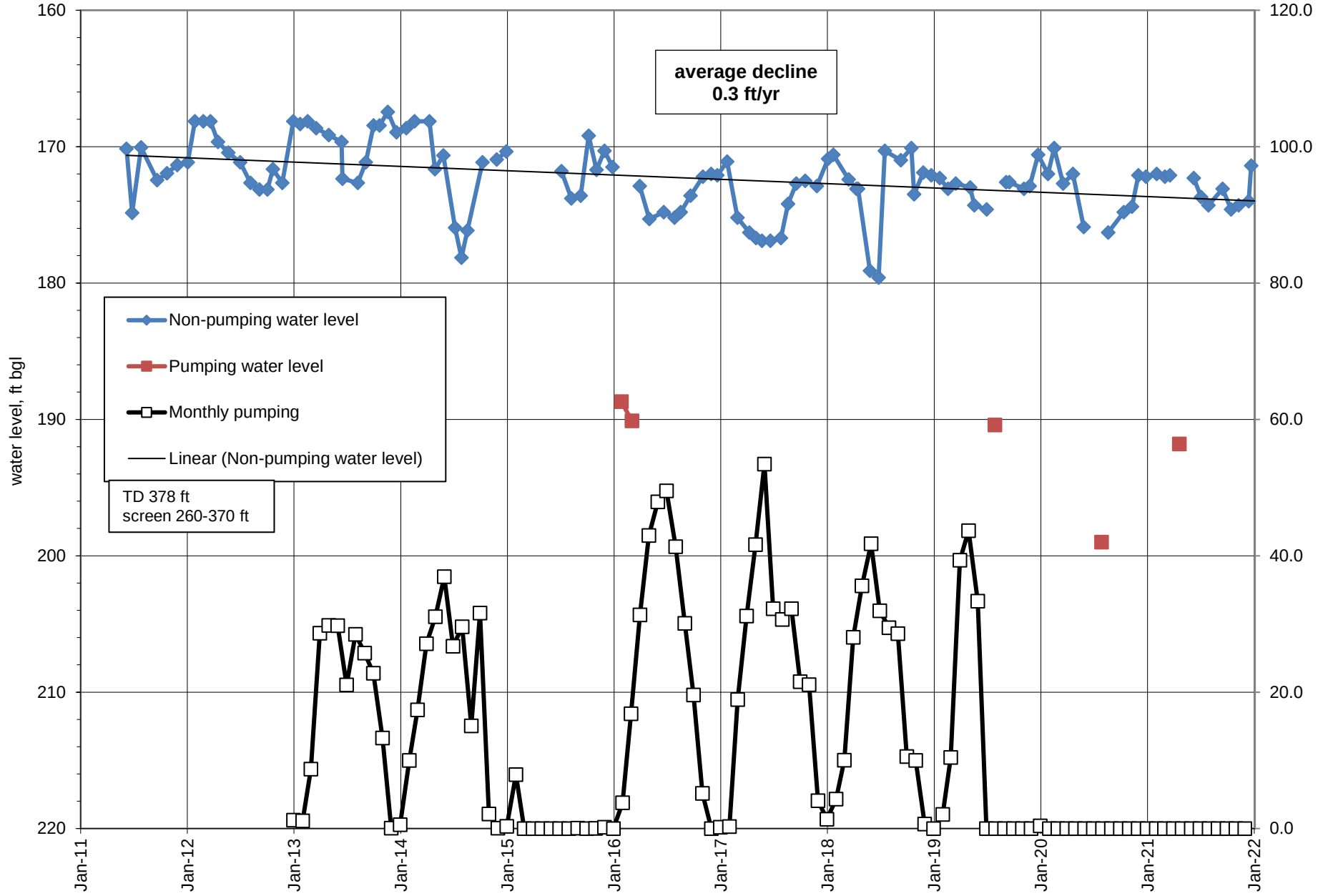


Figure B4. Graph of water-level data and monthly pumping data collected by the City of Las Cruces for Paz Park Well.

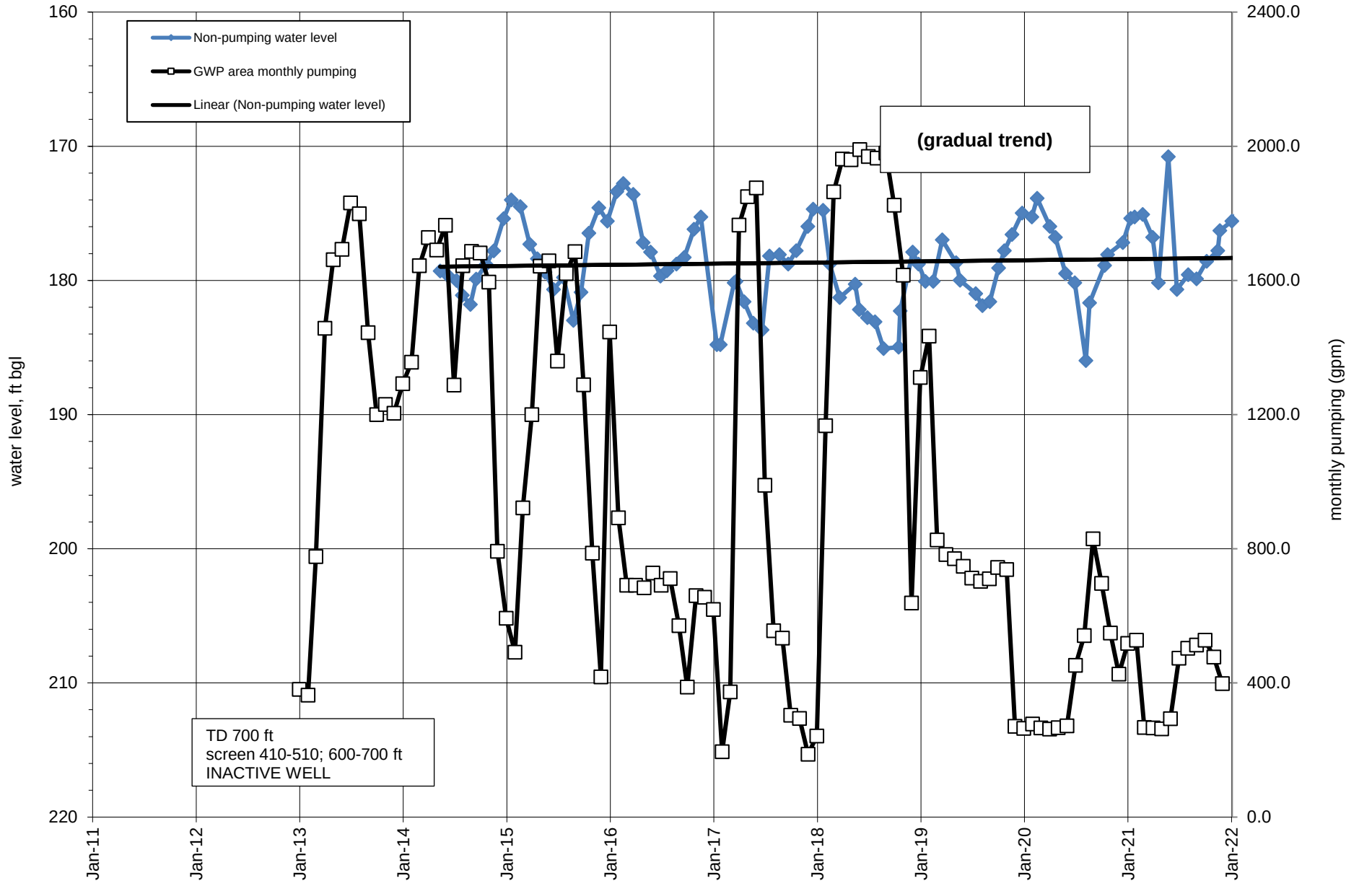


Figure B5. Graph of water-level data and monthly pumping data collected by the City of Las Cruces for Well 26.

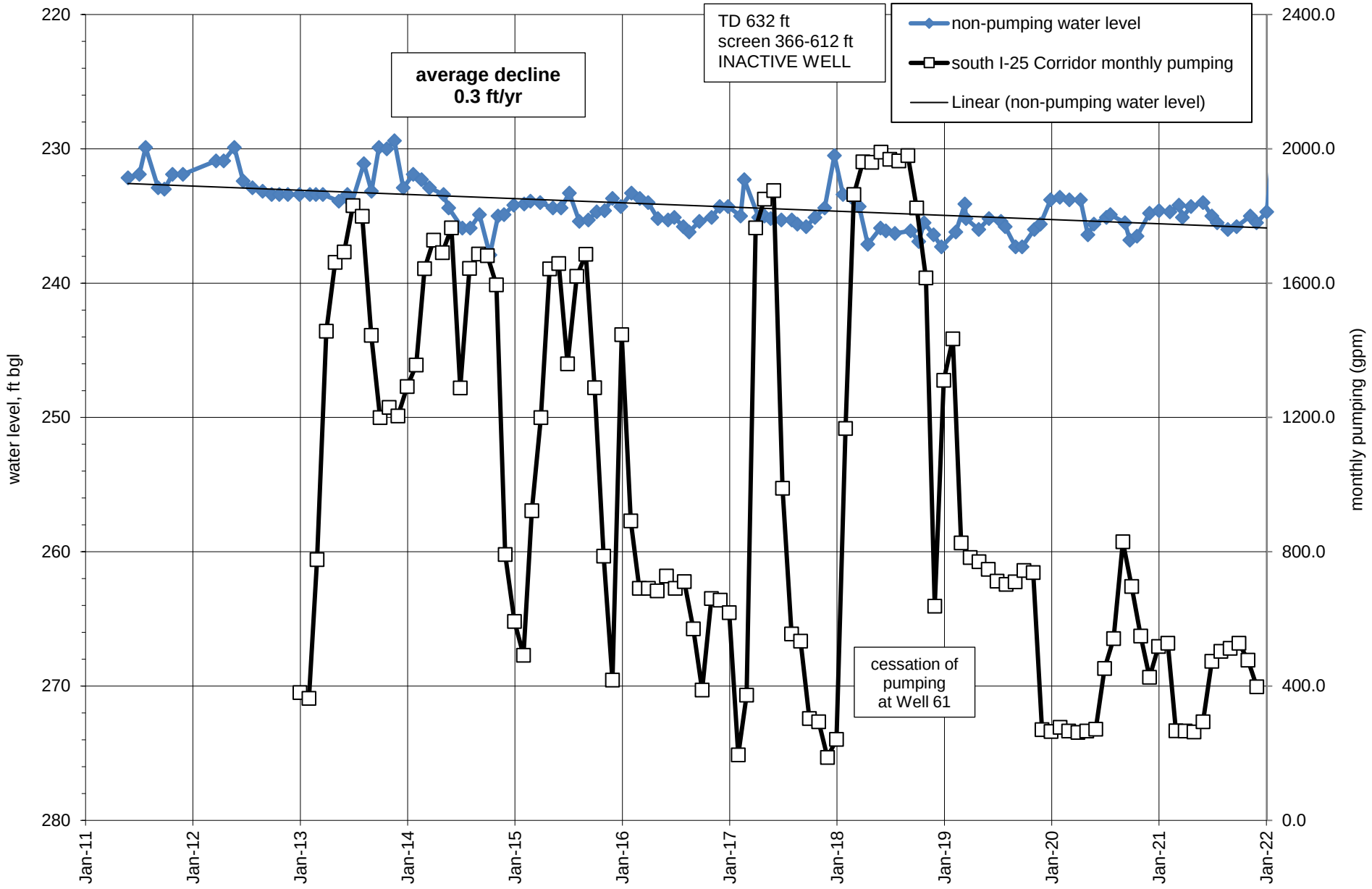


Figure B6. Graph of water-level data collected by the City of Las Cruces for Well 21, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 28, 61, and Paz Park).

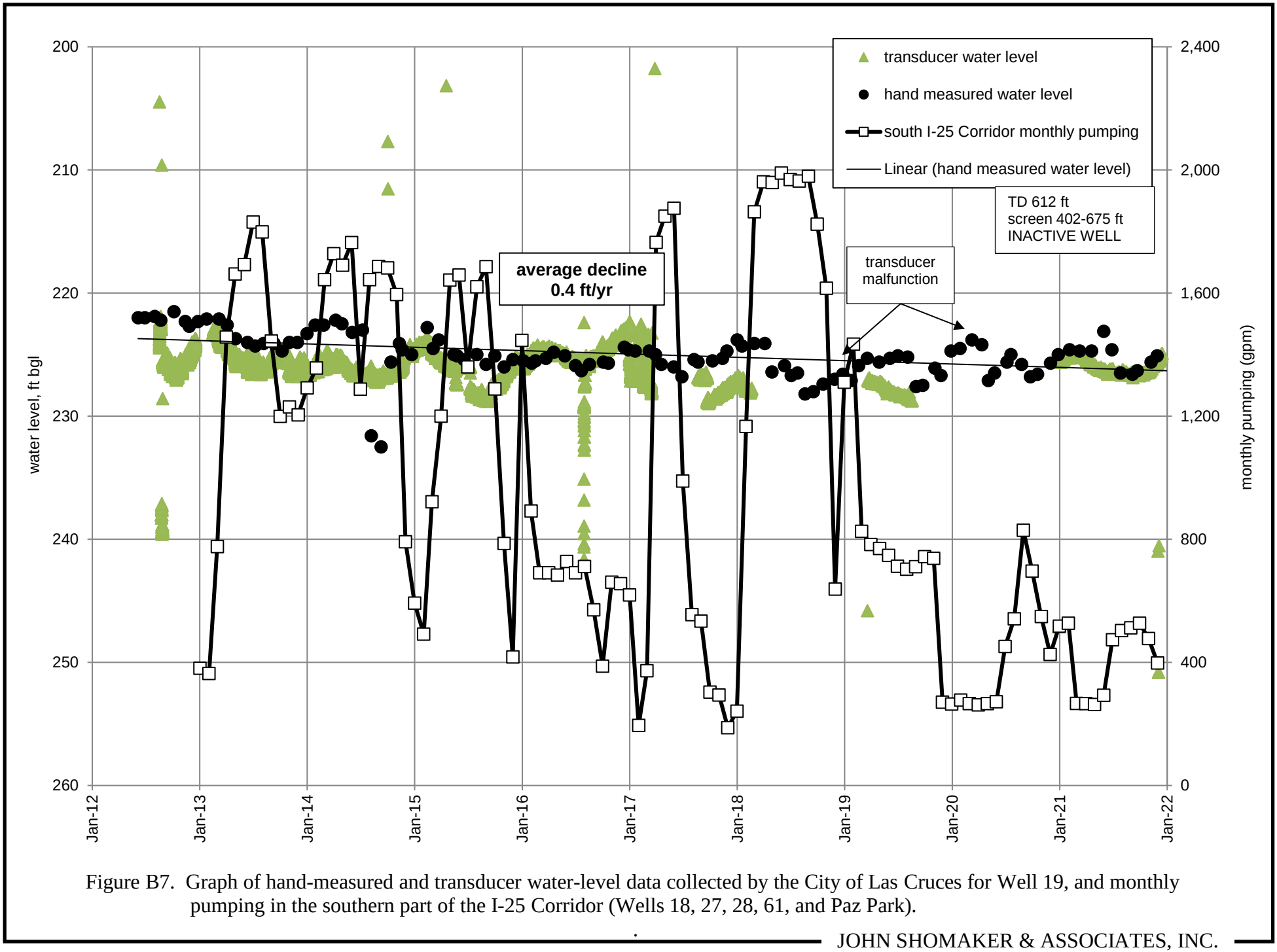


Figure B7. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for Well 19, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 28, 61, and Paz Park).

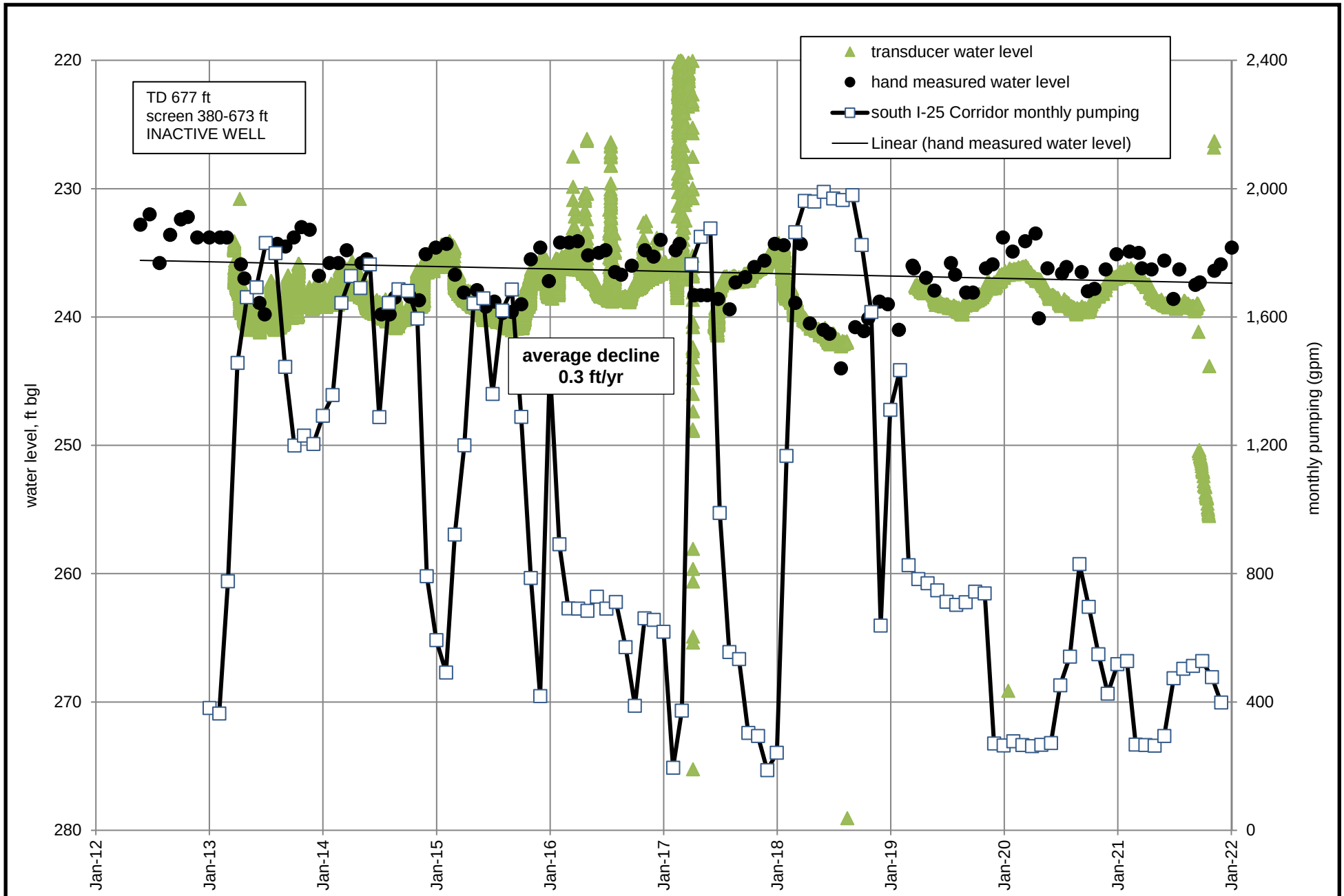


Figure B8. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for Well 20, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 26, 61, and Paz Park).

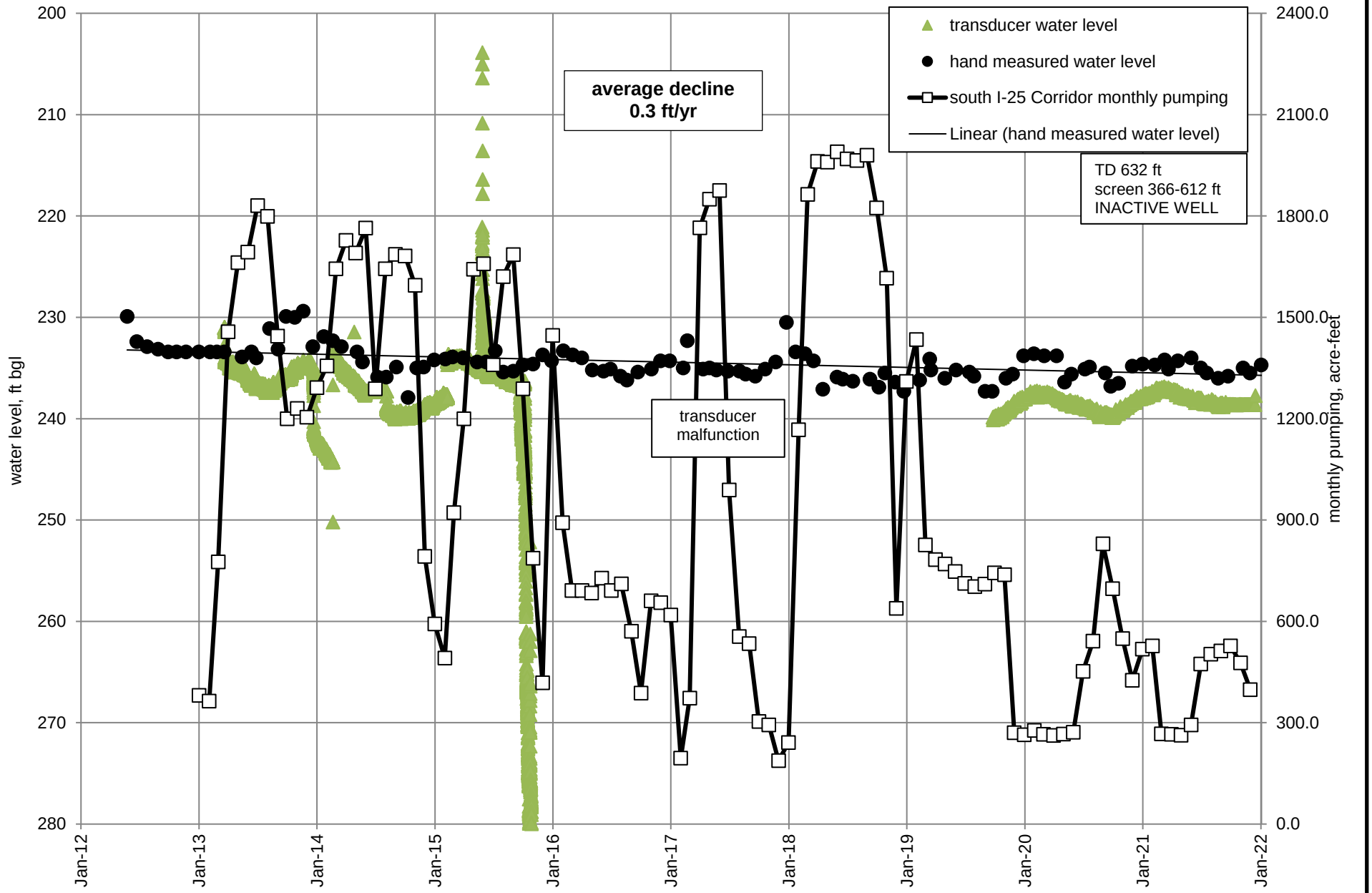


Figure B9. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for Well 21, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 28, 61, and Paz Park).

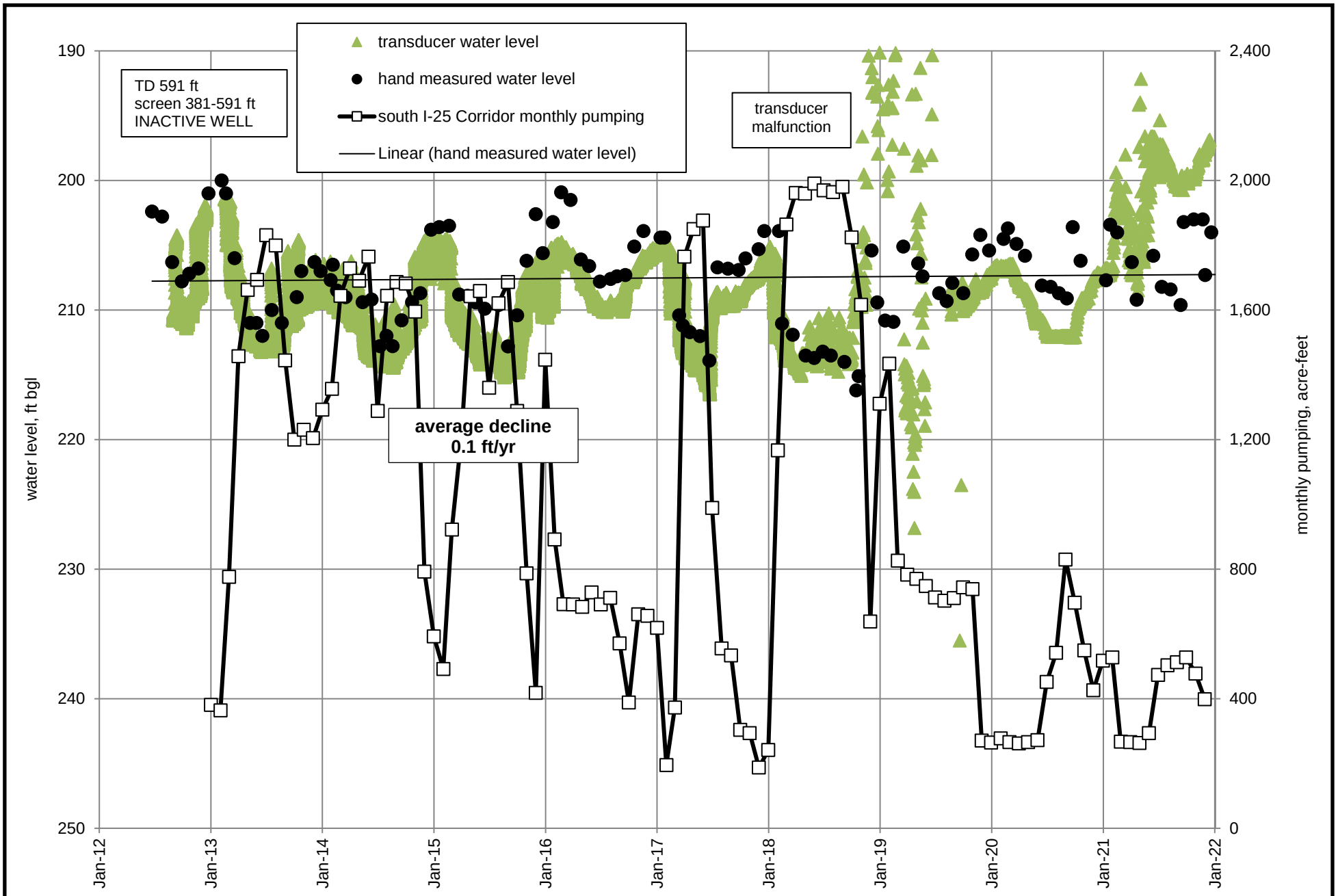


Figure B10. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for Well 24, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 28, 61, and Paz Park).

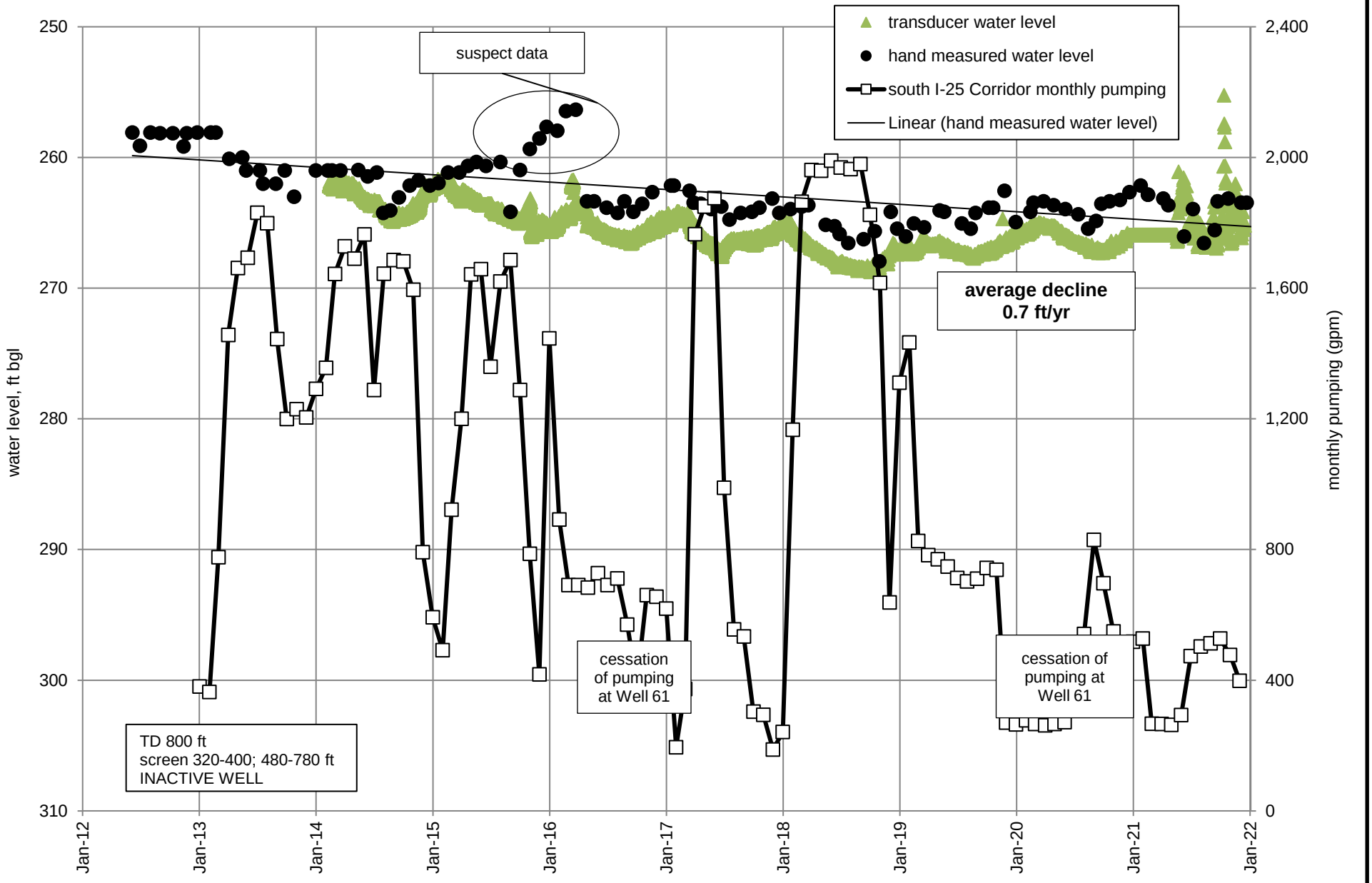


Figure B11. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for Well 38, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 28, 61, and Paz Park).

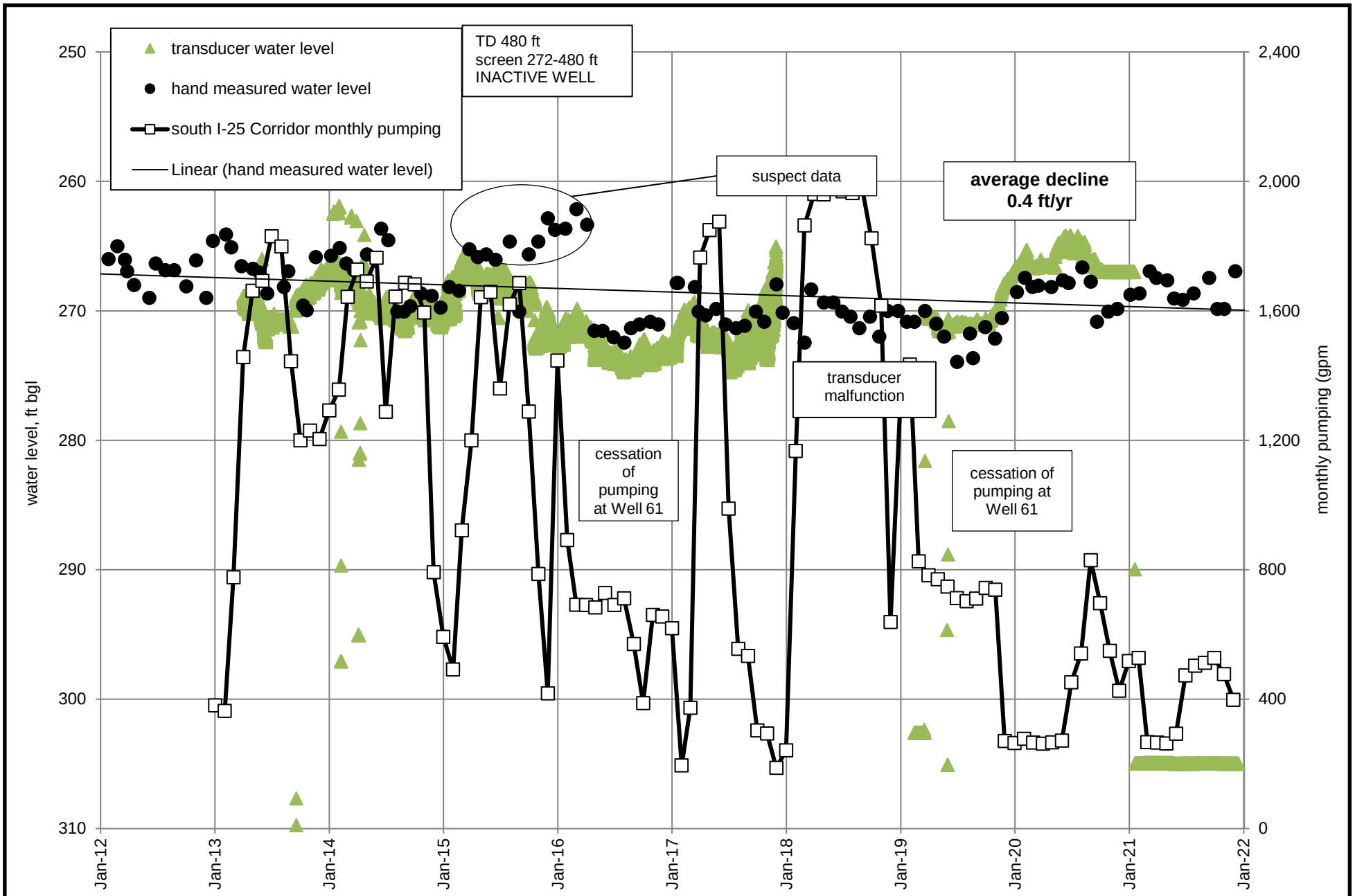


Figure B12. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for Well 54, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 28, 61, and Paz Park).

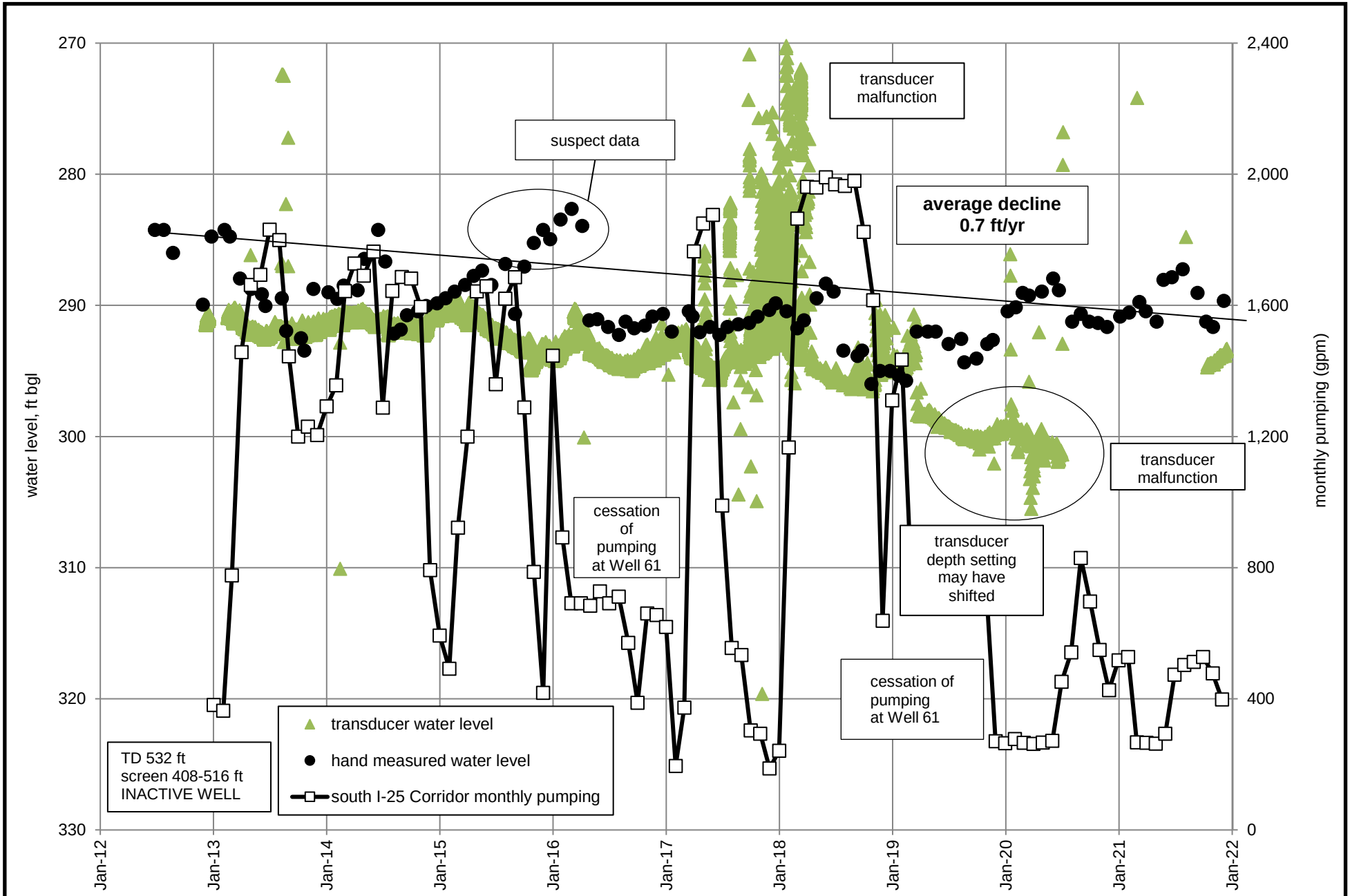


Figure B13. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for Well 57, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 28, 61, and Paz Park).

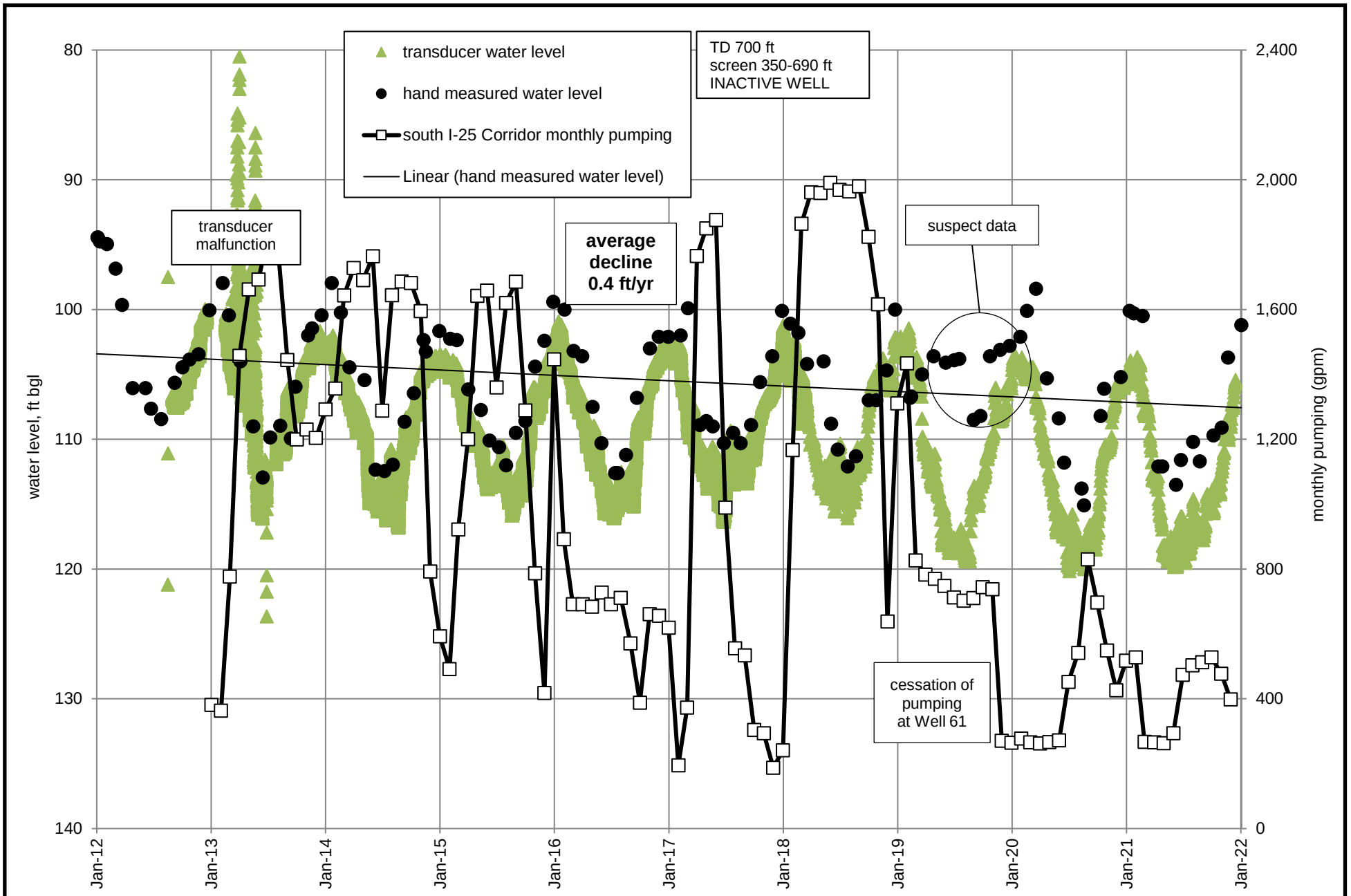


Figure B14. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for Well 60, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 28, 61, and Paz Park).

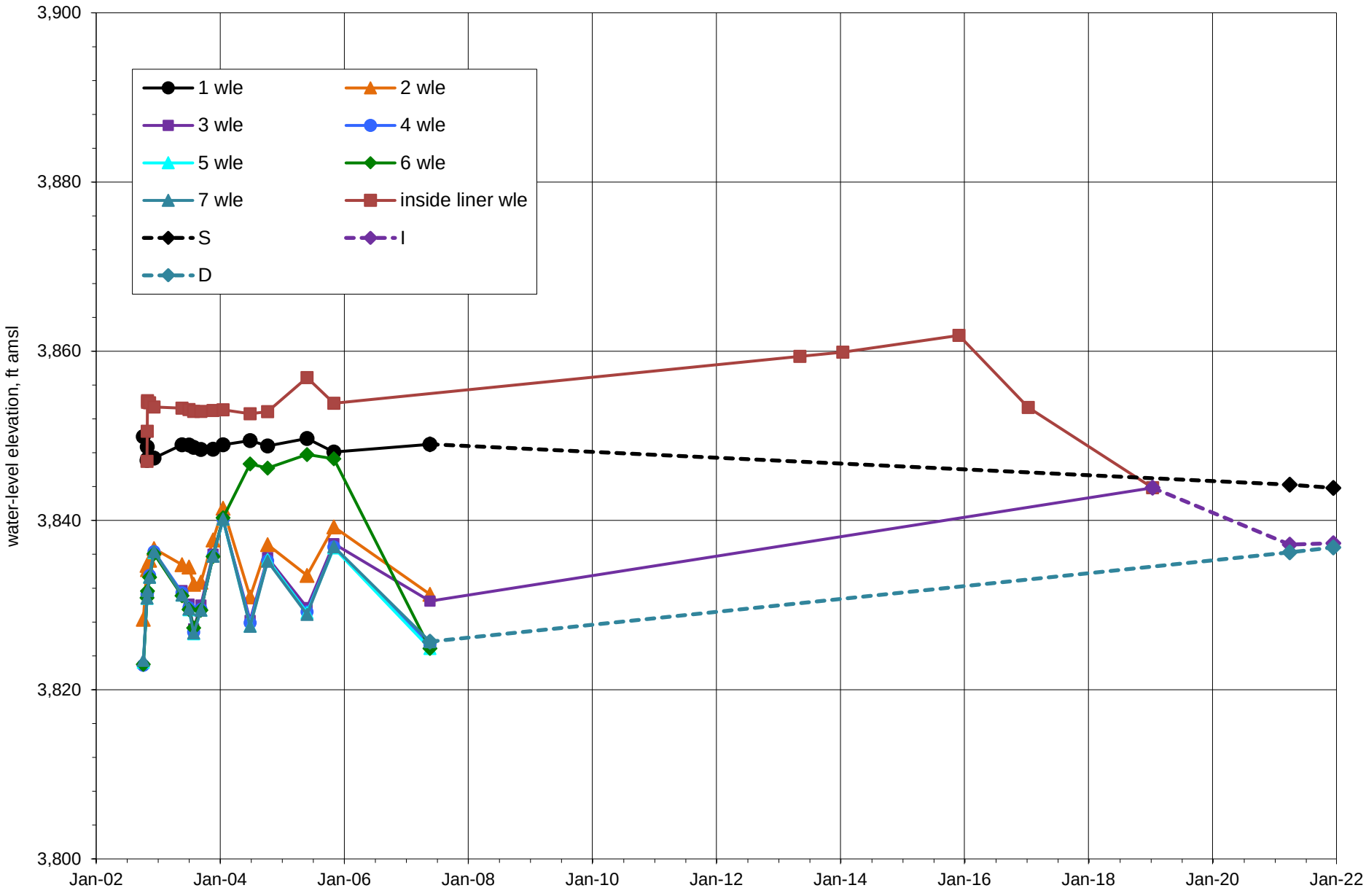


Figure B15. Graph of GWMW-01 (Ports 1 through 7 and inside liner) observed water levels, Griggs and Walnut site.

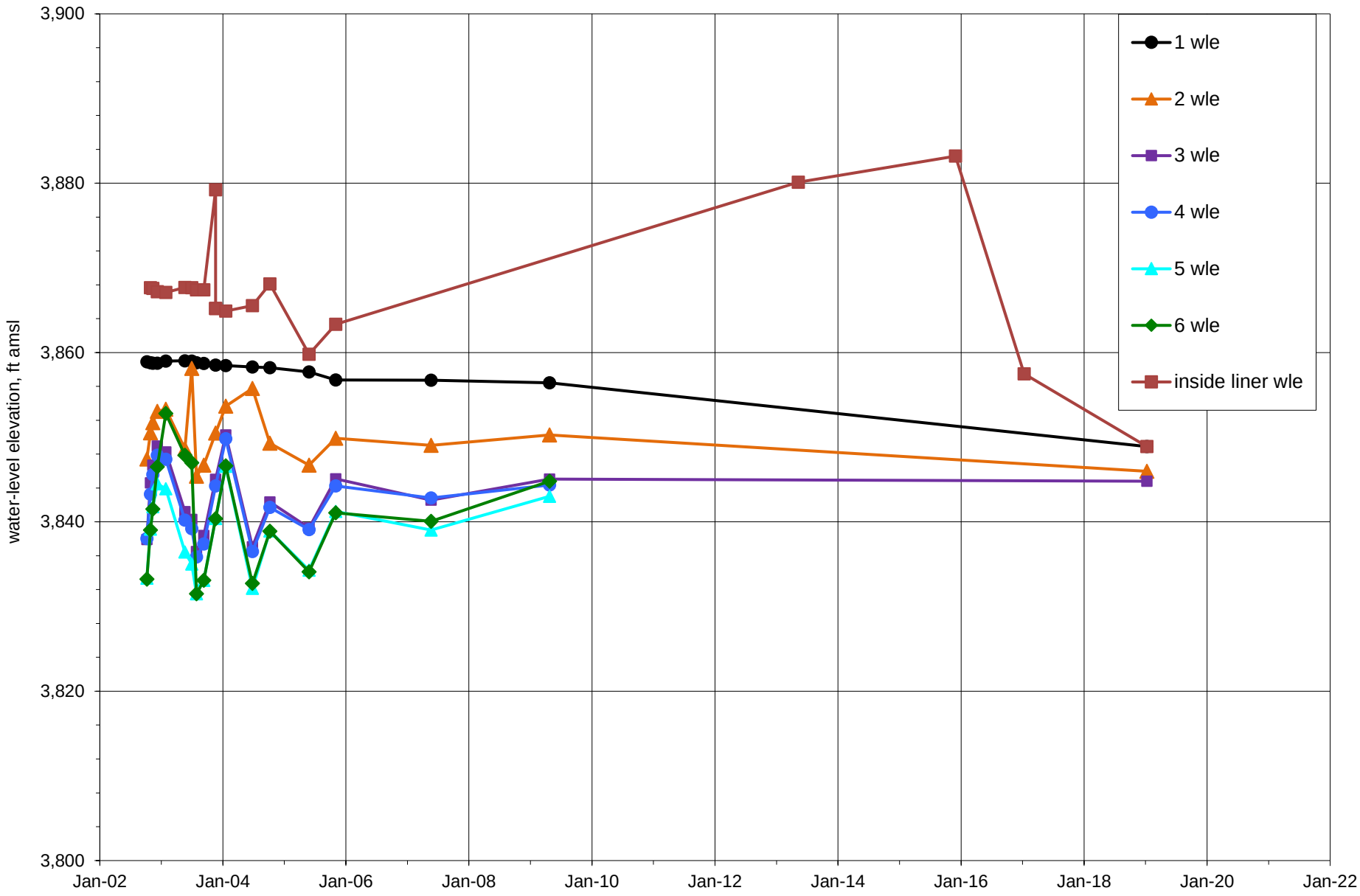


Figure B16. Graph of GWMW-03 (Ports 1 through 6 and inside liner) observed water levels, Griggs and Walnut site.

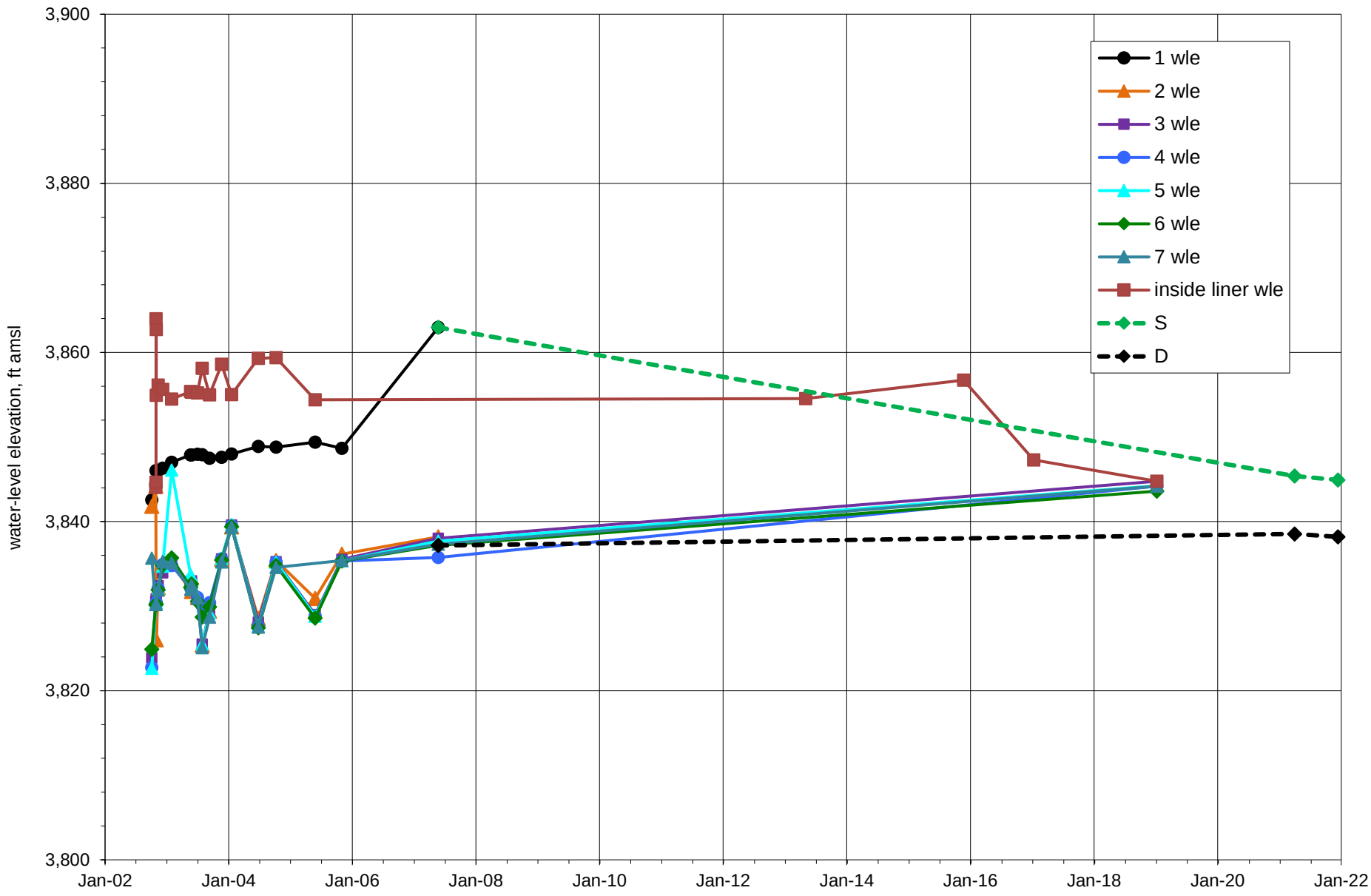


Figure B17. Graph of GWMW-08 (Ports 1 through 7 and inside liner) observed water levels, Griggs and Walnut site.

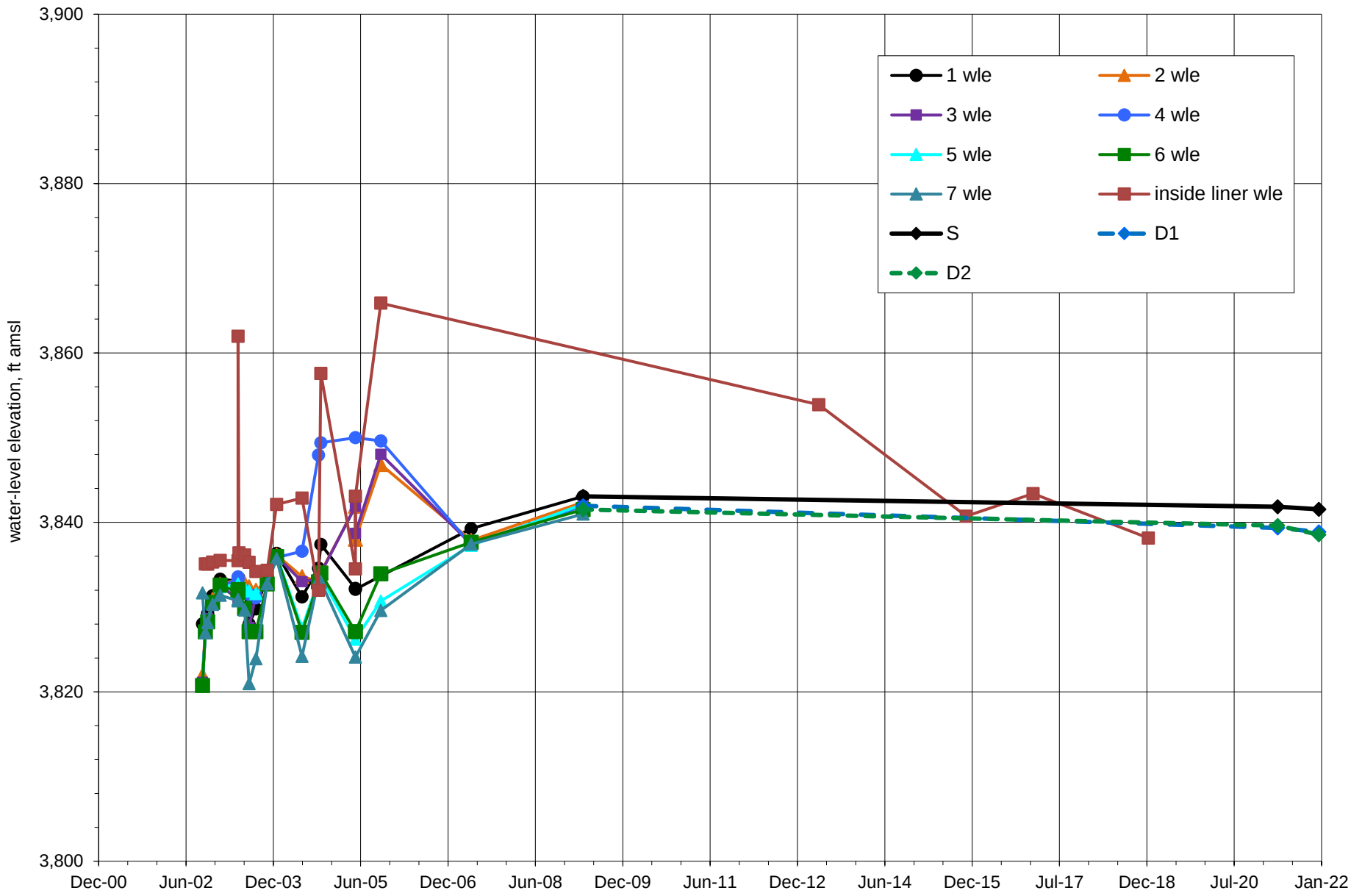


Figure B18. Graph of GWMW-09 (Ports 1 through 7 and inside liner) observed water levels, Griggs and Walnut site.

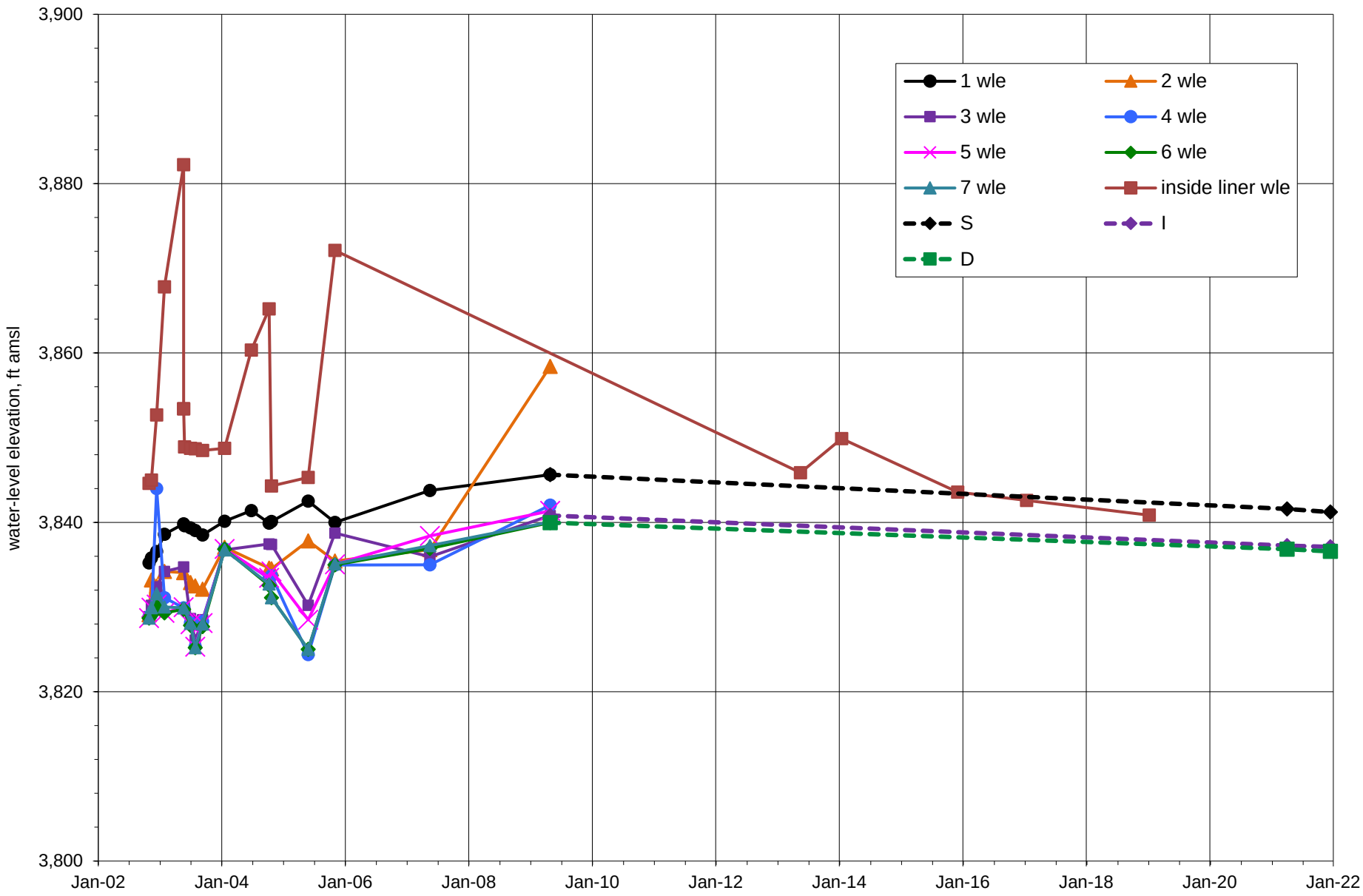


Figure B19. Graph of GWMW-10 (Ports 1 through 7 and inside liner) observed water levels, Griggs and Walnut site.

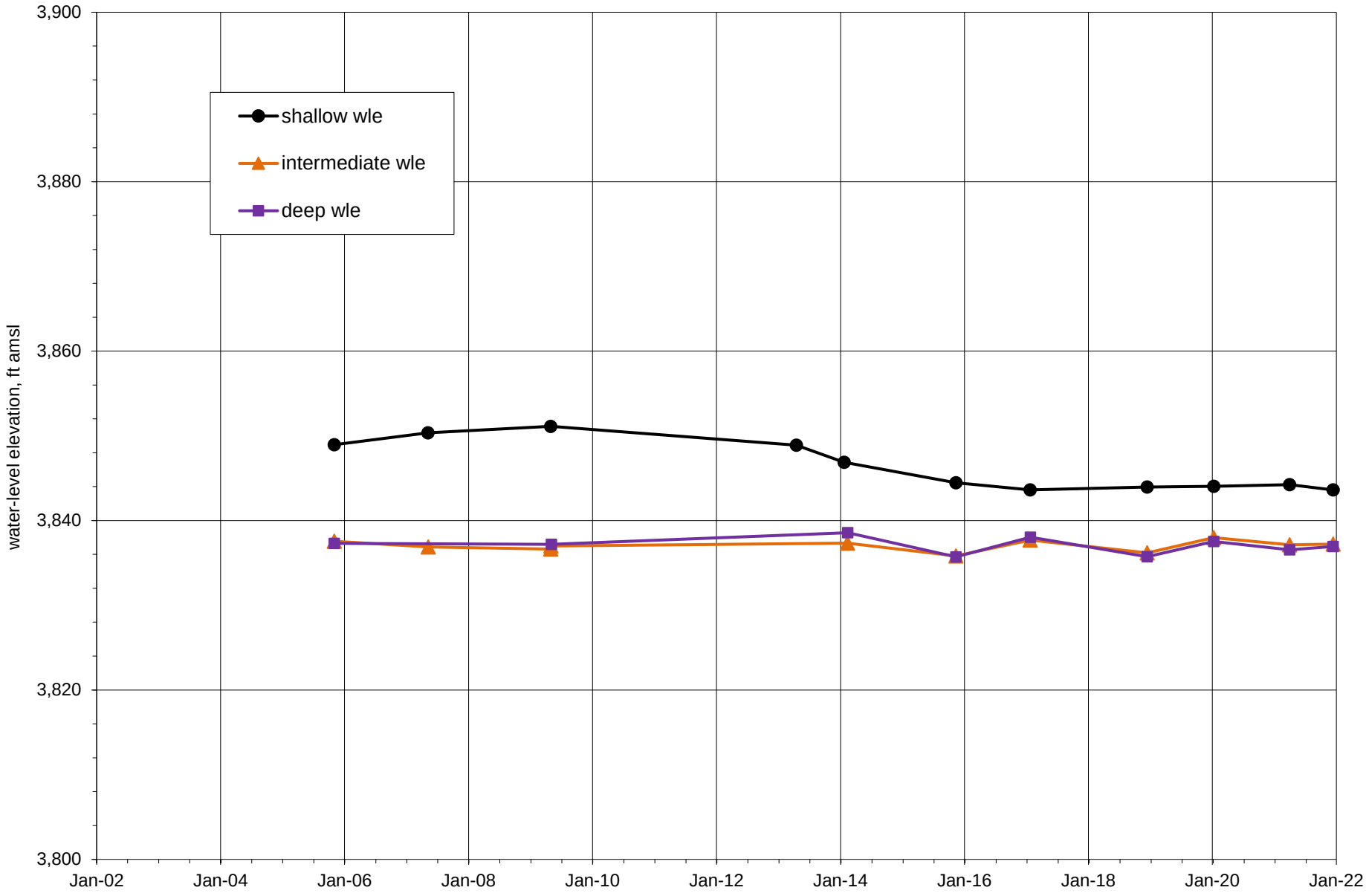


Figure B20. Graph of GWMW-11 (S, I, D) (shallow, intermediate, and deep) observed water levels, Griggs and Walnut.

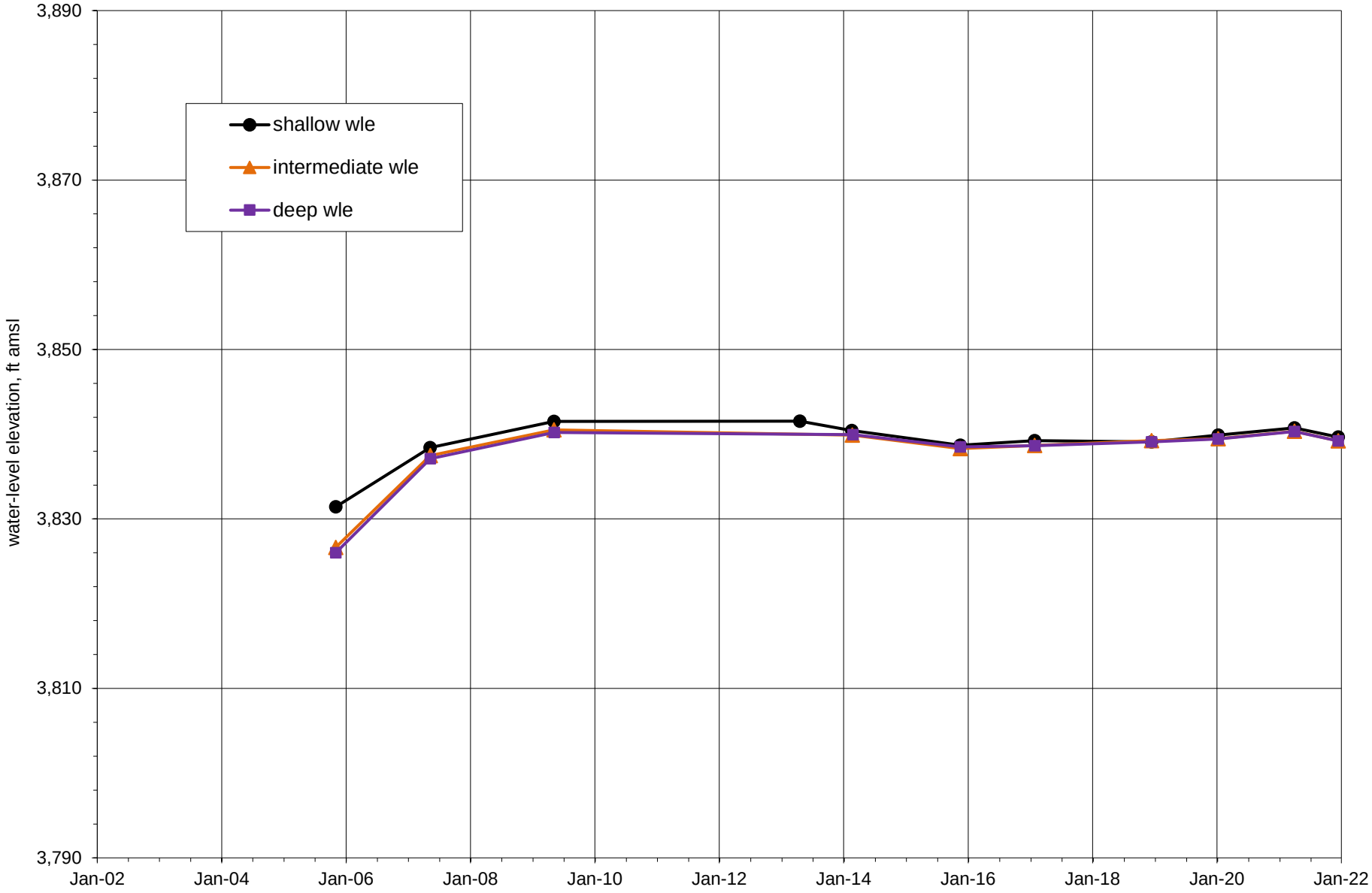


Figure B21. Graph of GWMW-15 (S, I, D) (shallow, intermediate, and deep) observed water levels, Griggs and Walnut site.

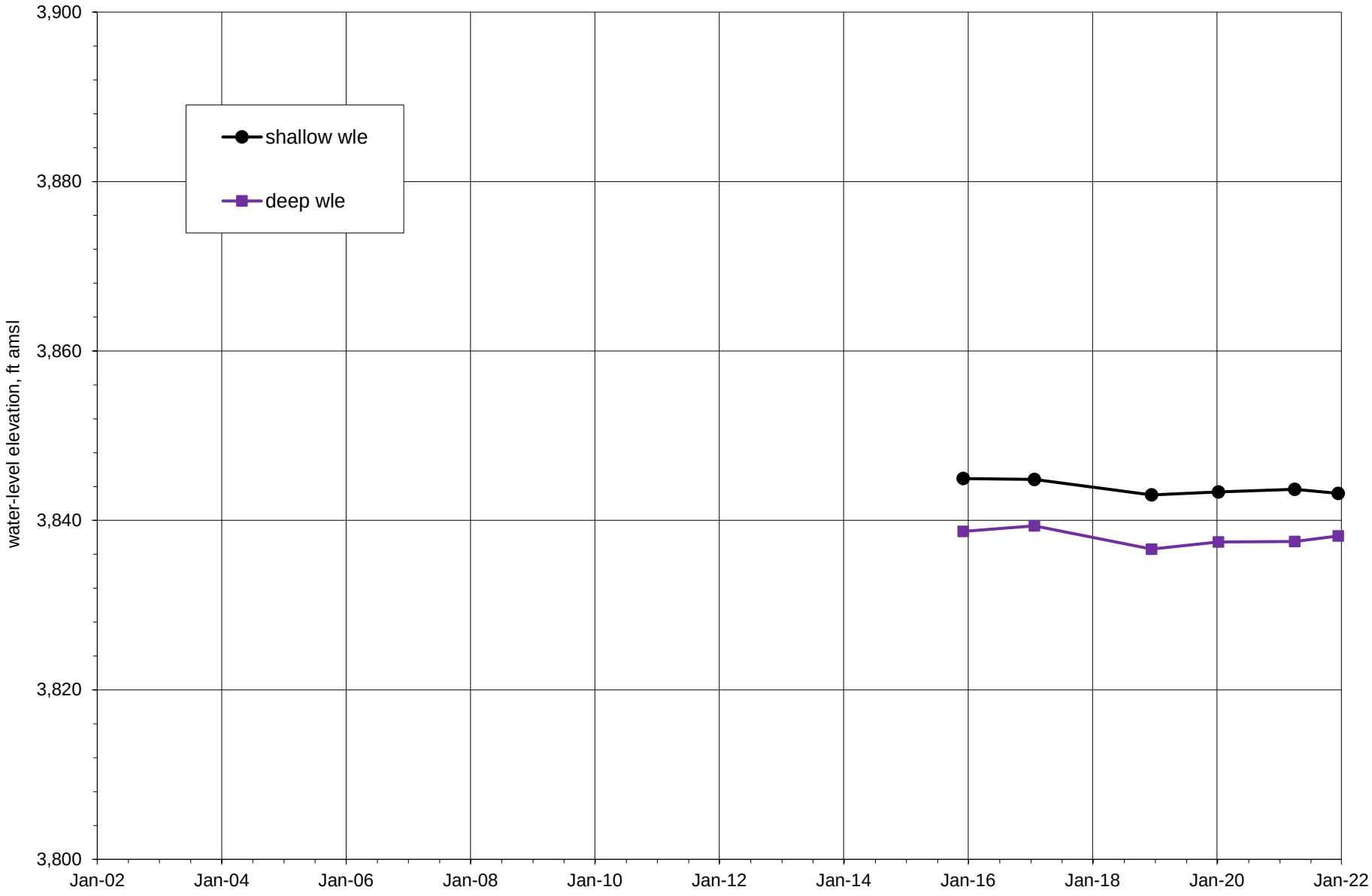


Figure B22. Graph of GWMW-16 (S, D) (shallow and deep) observed water levels, Griggs and Walnut site.

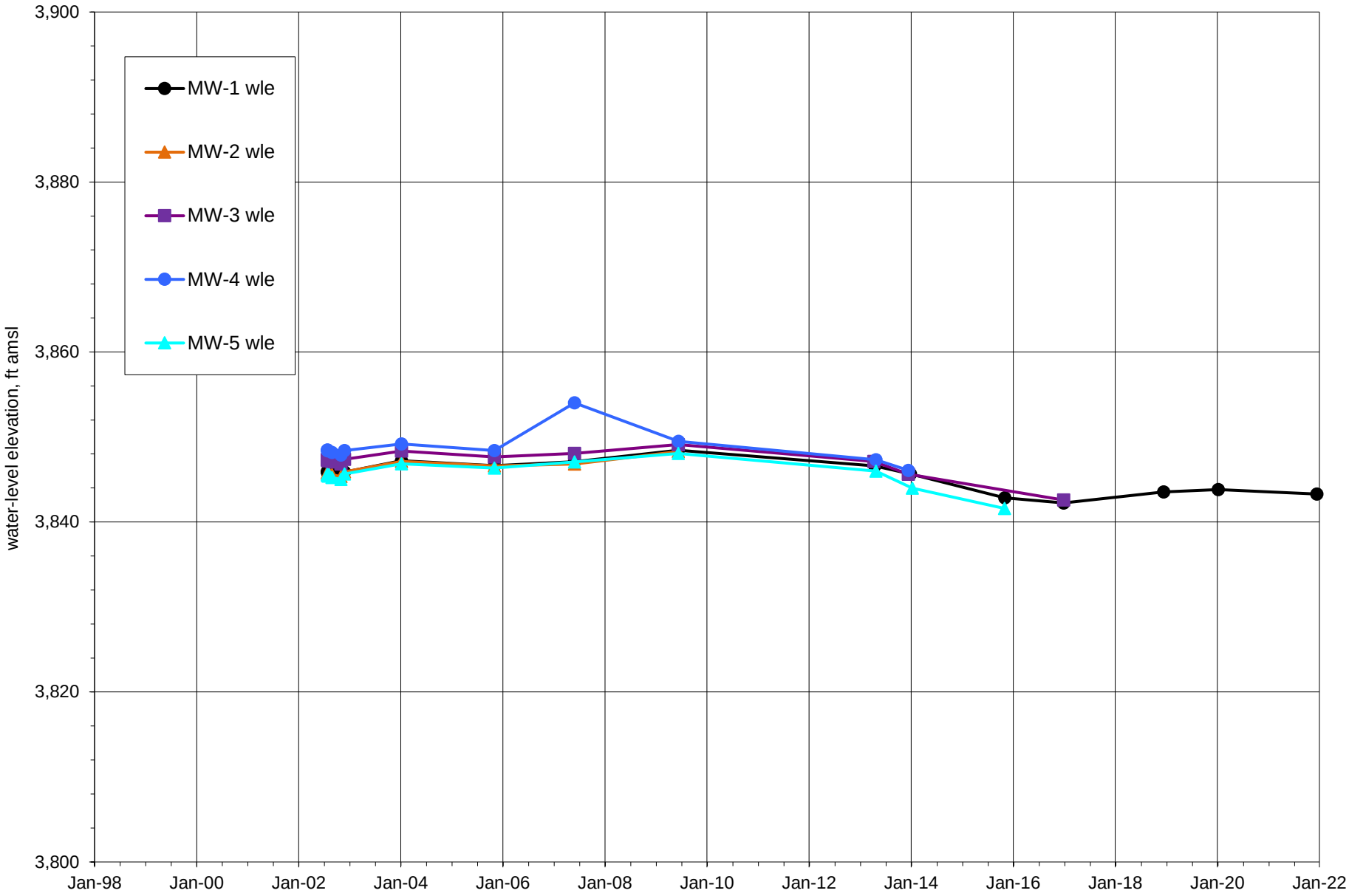


Figure B23. Graph of MW-1 through MW-5 observed water levels, Griggs and Walnut site.

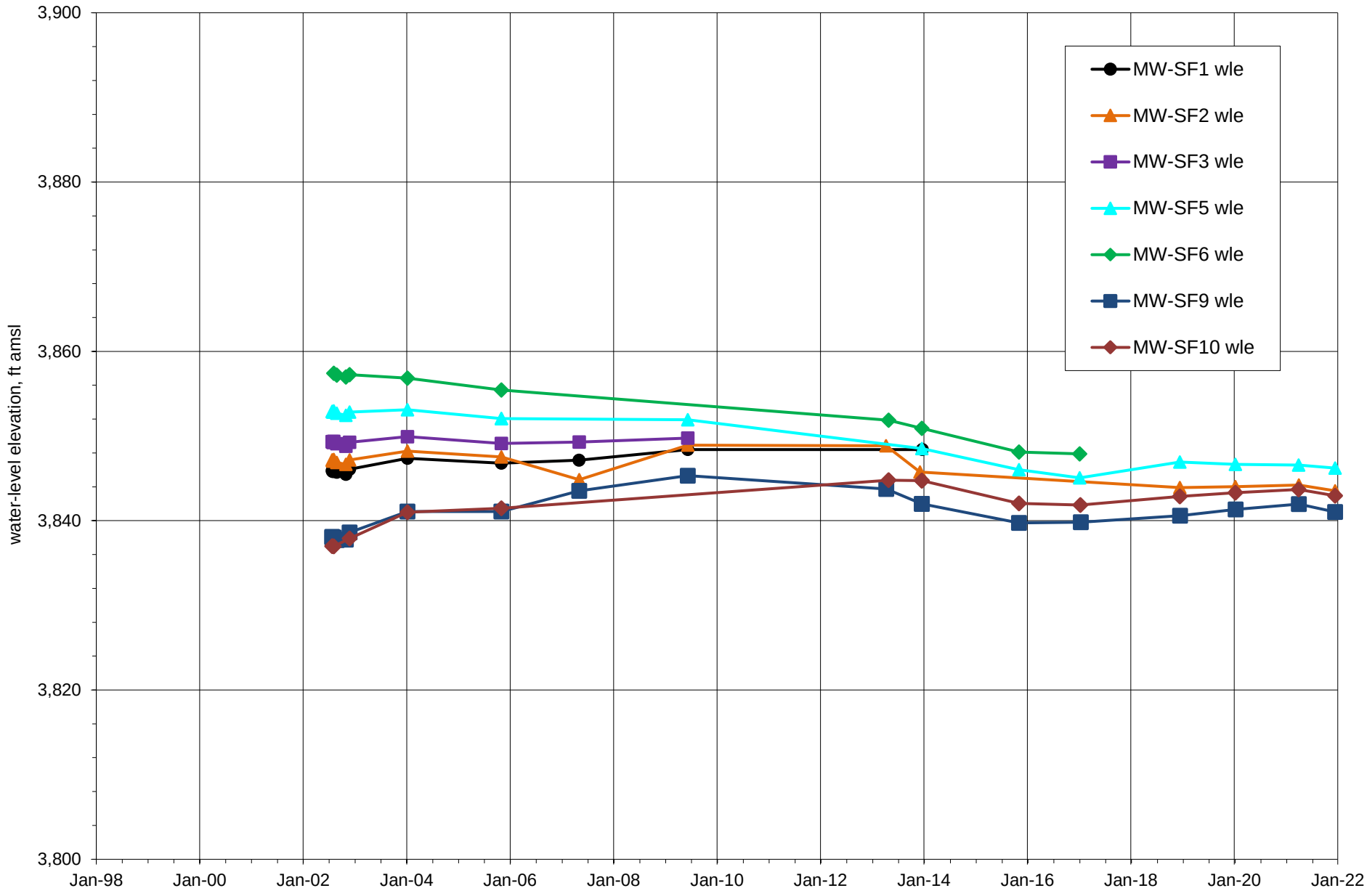


Figure B24. Graph of observed water levels for selected MW-SF series monitor wells, Griggs and Walnut site.

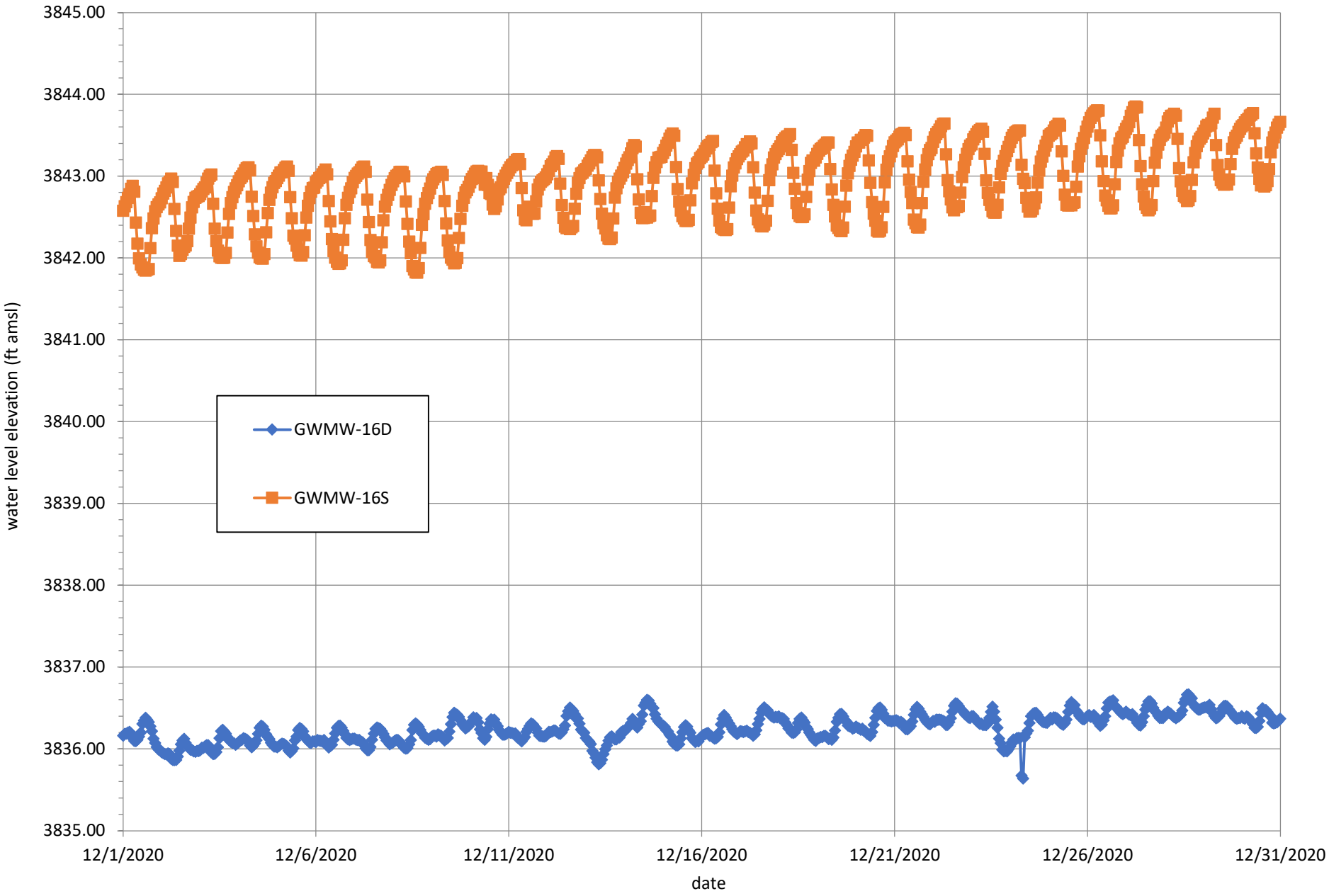


Figure B25. Graph of GWMW-16(S,D) hourly transducer water level data for December 2020.

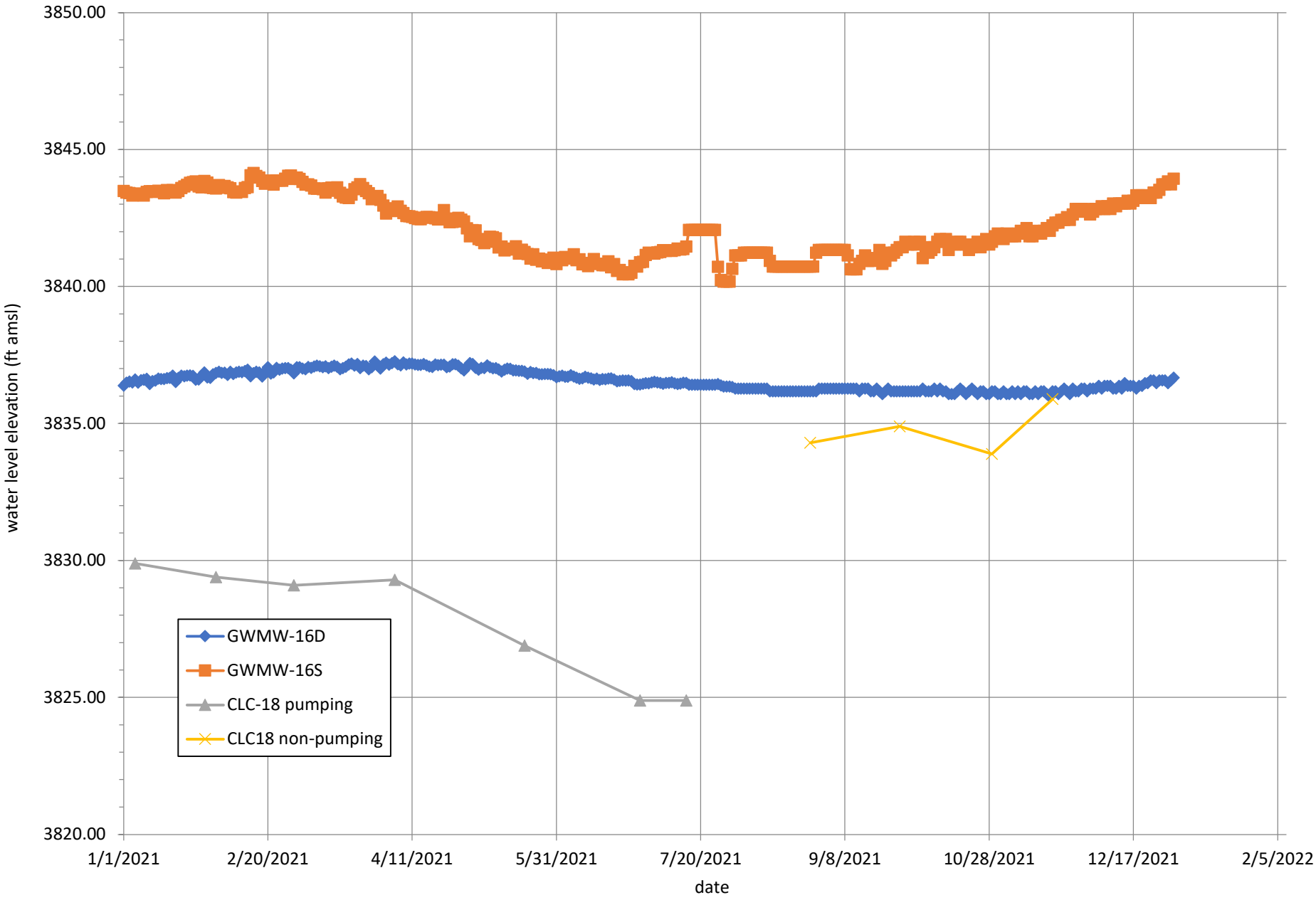


Figure B26. Graph of GWMW-16(S,D) and CLC 18 water level data for 2021.

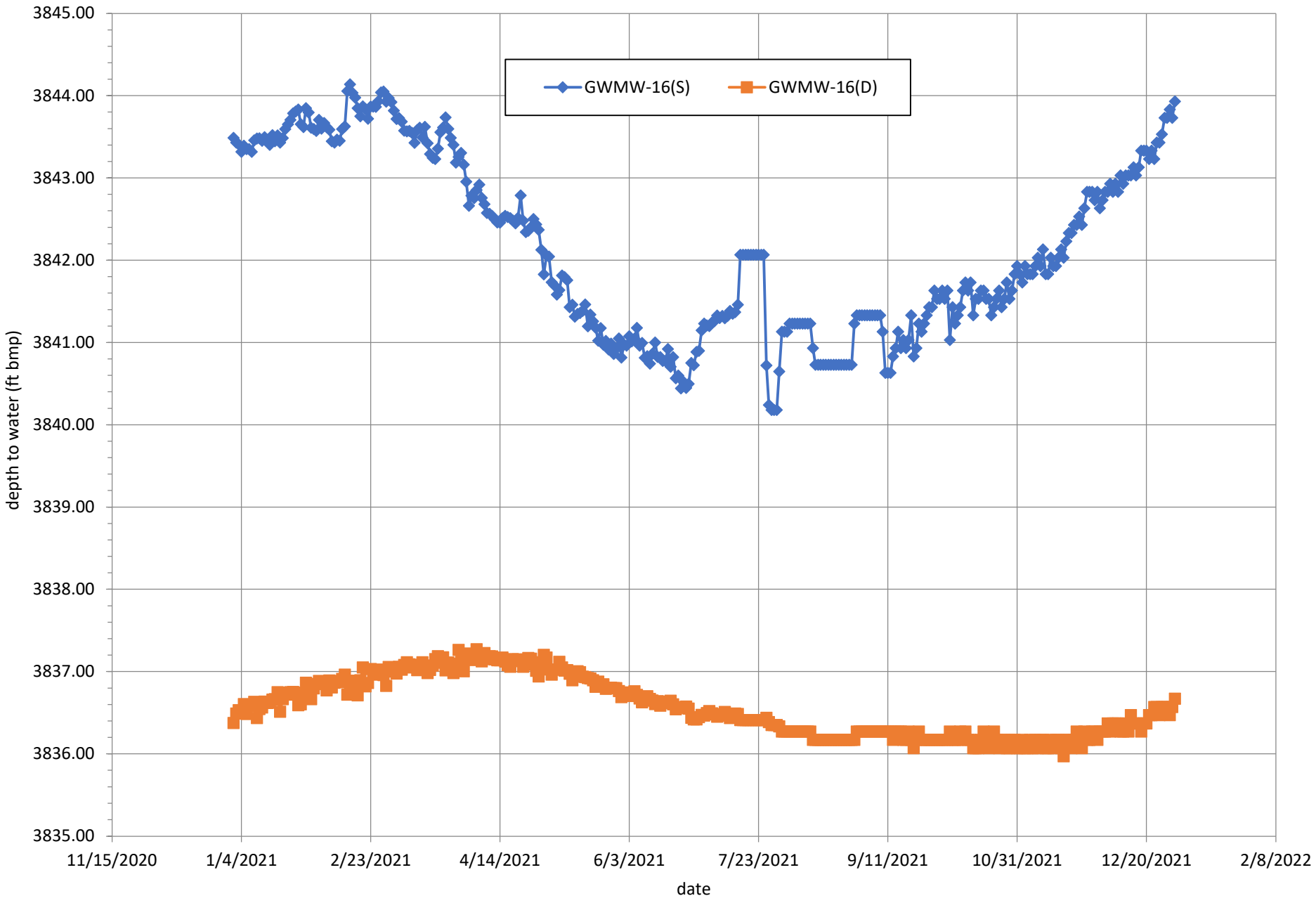


Figure B27. Graph of GWMW-16(S,D) transducer water level data for 2021.

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 28*	CLC 54	CLC 57	CLC 61	Paz Park	east pumping (ac-ft/yr)	source
1958	550	0	0	0	0	0	0	0	0	0	0	0	0	550	JSAI (2006)
1959	550	0	0	0	0	0	0	0	0	0	0	0	0	550	JSAI (2006)
1960	550	1,470	0	0	0	0	0	0	0	0	0	0	0	2,020	JSAI (2006)
1961	550	1,470	0	0	0	0	0	0	0	0	0	0	0	2,020	JSAI (2006)
1962	550	1,470	0	0	0	0	0	0	0	0	0	0	0	2,020	JSAI (2006)
1963	417	1,240	592	721	0	0	0	0	0	0	0	0	0	2,969	JSAI (2006)
1964	417	1,240	592	721	869	0	0	0	0	0	0	0	0	3,838	JSAI (2006)
1965	417	1,240	592	721	869	0	0	0	0	0	0	0	0	3,838	JSAI (2006)
1966	417	1,240	592	721	869	268	0	0	0	0	0	0	0	4,106	JSAI (2006)
1967	417	1,240	592	721	869	268	0	0	0	0	0	0	0	4,106	JSAI (2006)
1968	361	1,073	699	866	946	969	0	0	127	0	0	0	0	5,042	JSAI (2006)
1969	361	1,073	699	866	946	969	518	0	593	0	0	0	0	6,025	JSAI (2006)
1970	361	1,073	699	866	946	969	518	0	593	0	0	0	0	6,025	JSAI (2006)
1971	361	1,073	699	866	946	969	518	443	593	0	0	0	0	6,468	JSAI (2006)
1972	361	1,073	699	866	946	969	518	443	593	0	0	0	0	6,468	JSAI (2006)
1973	338	1,006	699	866	946	969	495	177	593	0	0	0	0	6,090	JSAI (2006)
1974	338	1,006	699	866	946	969	495	177	593	0	0	0	0	6,090	JSAI (2006)
1975	338	1,006	699	866	946	969	495	177	593	0	0	0	0	6,090	JSAI (2006)
1976	338	1,006	699	866	946	969	495	177	593	0	0	0	0	6,090	JSAI (2006)
1977	338	1,006	699	866	946	969	495	177	593	0	0	0	0	6,090	JSAI (2006)
1978	299	918	699	866	946	969	442	177	593	0	0	0	0	5,909	JSAI (2006)
1979	299	918	699	866	946	969	442	177	593	0	0	0	0	5,909	JSAI (2006)
1980	299	918	699	866	946	969	442	177	593	0	0	0	0	5,909	JSAI (2006)
1981	299	918	699	866	946	969	442	177	593	0	0	0	0	5,909	JSAI (2006)
1982	299	918	699	866	946	969	442	177	593	0	0	0	0	5,909	JSAI (2006)
1983	117	1,025	699	866	946	969	427	177	593	0	0	0	0	5,819	JSAI (2006)
1984	117	1,025	699	866	946	969	427	177	593	0	0	0	0	5,819	JSAI (2006)
1985	117	1,025	699	866	946	969	427	177	593	0	0	0	0	5,819	JSAI (2006)
1986	117	1,025	699	866	946	969	427	177	593	0	0	0	0	5,819	JSAI (2006)
1987	117	1,025	699	866	946	969	427	177	593	0	0	0	0	5,819	JSAI (2006)
1988	246	977	578	787	1,136	807	468	413	415	0	0	0	0	5,827	JSAI (2006)
1989	246	977	578	787	1,136	807	468	413	415	0	0	0	0	5,827	JSAI (2006)
1990	246	977	578	787	1,136	807	468	413	415	272	123	0	0	6,222	JSAI (2006)
1991	246	977	578	787	1,136	807	468	413	415	272	123	0	0	6,222	JSAI (2006)
1992	246	977	578	787	1,136	807	468	413	415	272	123	0	0	6,222	JSAI (2006)
1993	349	1,031	649	791	1,107	807	475	318	599	315	514	0	0	6,955	LCU metered data
1994	250	779	582	707	980	777	406	371	518	274	608	0	0	6,251	LCU metered data
1995	150	528	515	623	852	747	337	423	437	233	702	0	0	5,548	LCU metered data
1996	20	517	542	531	1,000	585	449	467	243	281	582	0	0	5,216	LCU metered data
1997	33	0	94	673	1,240	414	380	565	351	344	462	762	39	5,356	LCU metered data
1998	159	0	285	949	826	340	340	766	400	352	560	671	0	5,649	LCU metered data
1999	129	0	602	340	1,052	628	599	1,269	392	615	711	243	21	6,600	LCU metered data
2000	174	0	395	1,166	1,296	641	228	916	738	438	691	561	45	7,290	LCU metered data
2001	0	0	434	755	1,379	837	880	386	610	559	193	706	60	6,799	LCU metered data
2002	226	58	430	741	655	887	588	224	766	500	20	241	61	5,396	LCU metered data
2003	179	17	4	1,008	225	929	447	37	591	10	0	116	56	3,619	LCU metered data
2004	281	1	7	555	196	1,027	487	0	480	0	0	161	47	3,242	LCU metered data
2005	369	8	39	408	376	1,028	419	0	736	0	0	289	19	3,692	LCU metered data
2006	0	29	0	676	324	822	145	85	788	0	0	87	45	3,001	LCU metered data
2007	0	57	0	0	0	0	350	77	718	0	0	534	94	1,830	LCU metered data
2008	0	110	0	0	0	0	548	0	276	0	0	456	58	1,448	LCU metered data
2009	0	0	0	0	0	0	113	55	315	0	0	150	12	645	LCU metered data
2010	0	0	0	0	0	0	242	31	575	0	0	676	32	1,556	LCU metered data
2011	0	0	0	0	0	0	540	0	607	0	0	694	39	1,880	LCU metered data
2012	0	218	0	0	0	0	428	120	820	0	0	430	14	2,030	LCU metered data
2013	0	255	0	0	0	0	33	204	167	0	0	1,343	28	2,030	LCU metered data
2014	0	44	0	0	0	0	0	264	581	0	0	1,520	21	2,430	LCU metered data
2015	0	48	0	0	0	0	0	262	451	0	0	1,081	1	1,843	LCU metered data
2016	0	47	0	0	0	0	0	252	709	0	0	137	39	1,184	LCU metered data
2017	0	47	0	0	0	0	0	250	457	0	0	492	39	1,285	LCU metered data
2018	0	47	0	0	0	0	0	324	566	0	0	1,673	24	2,634	LCU metered data
2019	0	47	0	0	0	0	0	367	518	0	0	355	17	1,304	LCU metered data
2020	0	45	0	0	0	0	0	382	259	0	0	0	0	687	LCU metered data
2021	0	31	0	0	0	0	0	369	275	0	0	0	0	675	LCU metered data

* located north of Site
CLC - City of Las Cruces
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

Appendix D.

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 DACTD Monitoring Wells (PTSB) MW-1 through MW-5 observed PCE concentrations, Griggs and Walnut site.

Figure D10a. Graph of DACTD Monitoring Wells (PTSB) 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.

Figure D12. Graph of observed PCE concentrations for selected MW-SF5, MW-SF6, and MW-SF9 monitor wells, Griggs and Walnut site.

Figure D13. Graph of observed PCE concentrations for MW-SF2 monitor well, Griggs and Walnut site.

Figure D14. Graph of observed PCE concentrations for MW-SF10 monitor well, Griggs and Walnut site.

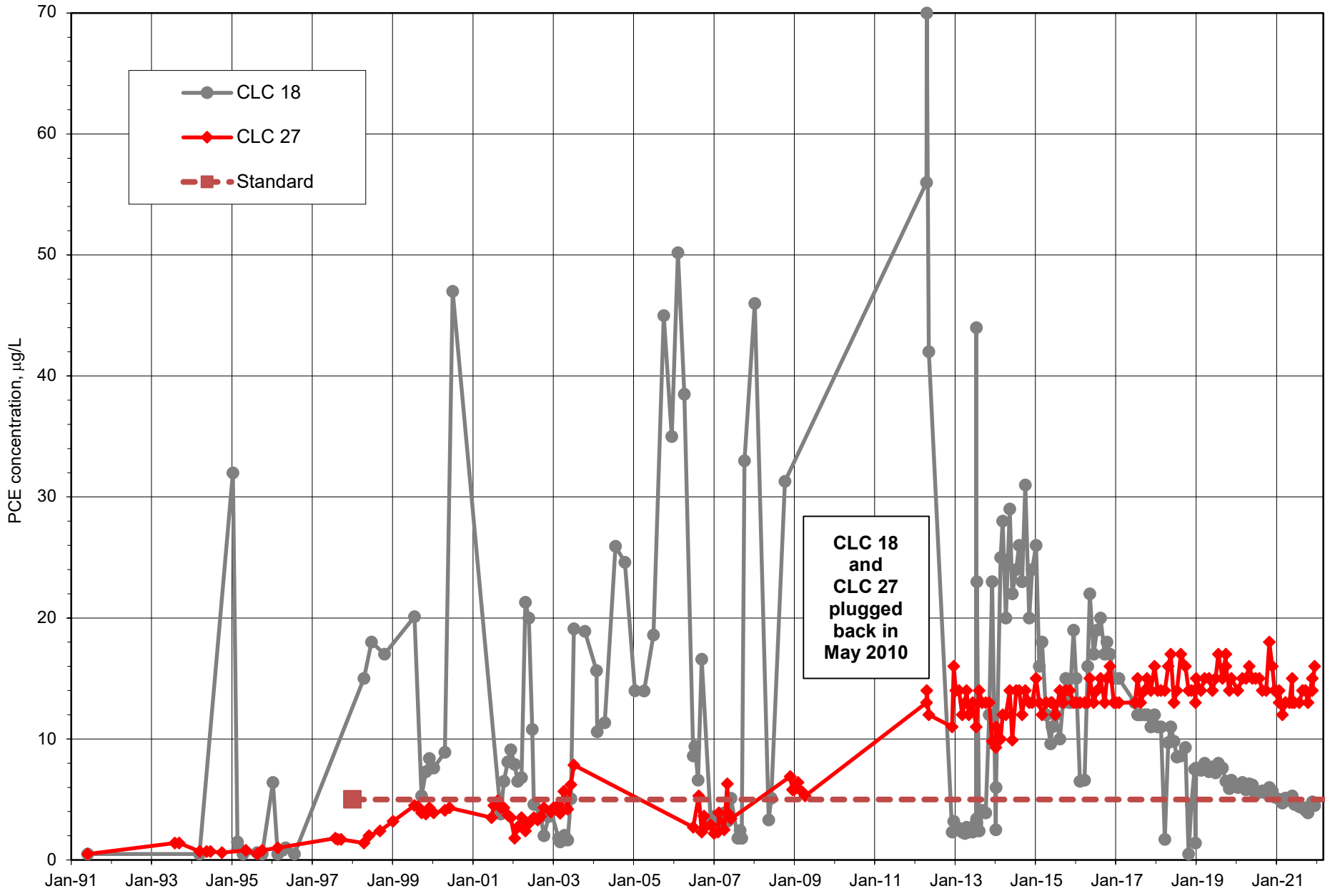


Figure D1. Graph showing PCE concentrations versus time for CLC 18 and CLC 27, Griggs and Walnut site.

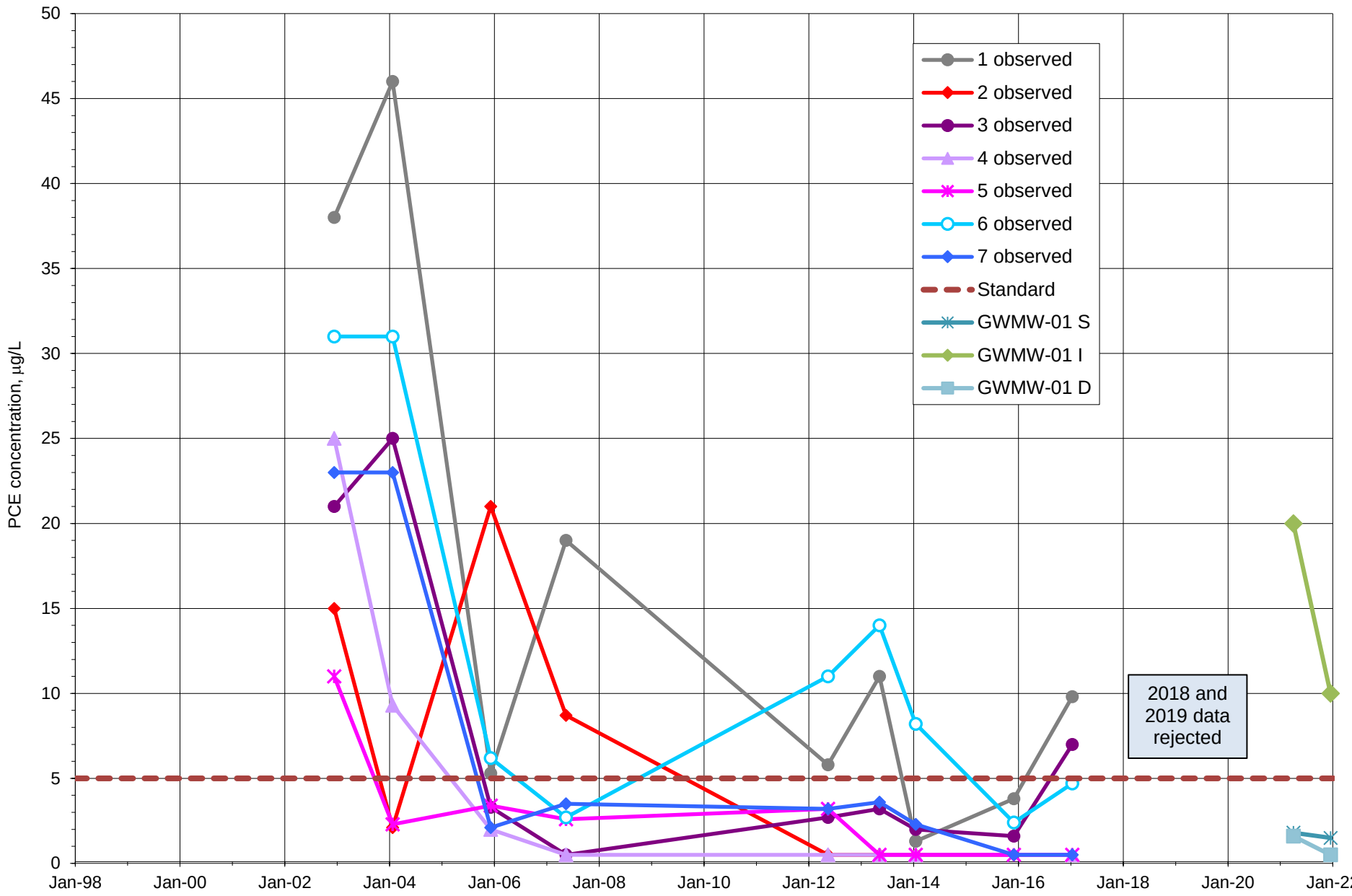


Figure D2. Graph of GWMW-01 (Ports 1 through 7) observed PCE concentrations, Griggs and Walnut site.

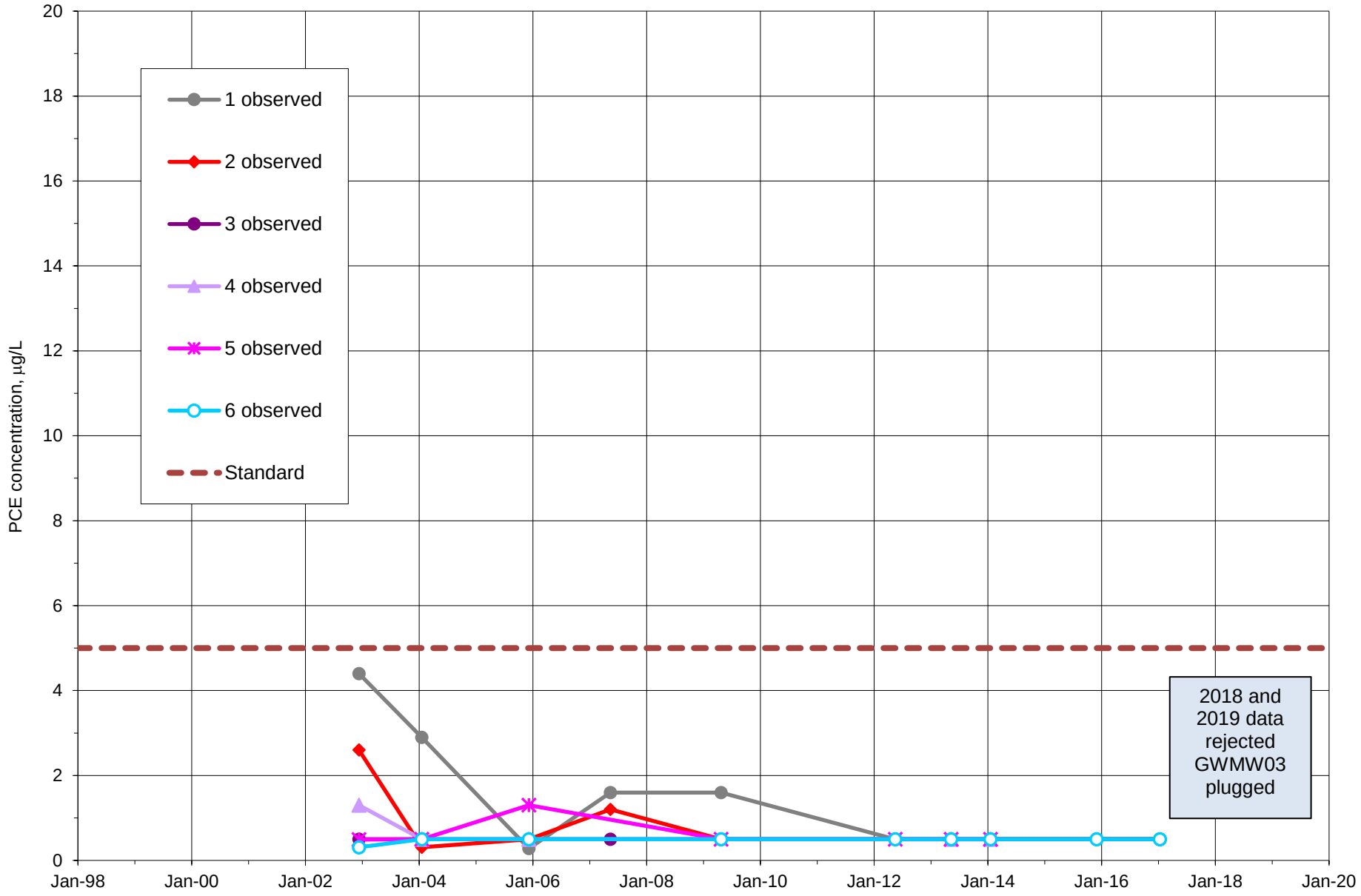


Figure D3. Graph of GWMW-03 (Ports 1 through 6) observed PCE concentrations, Griggs and Walnut Site.

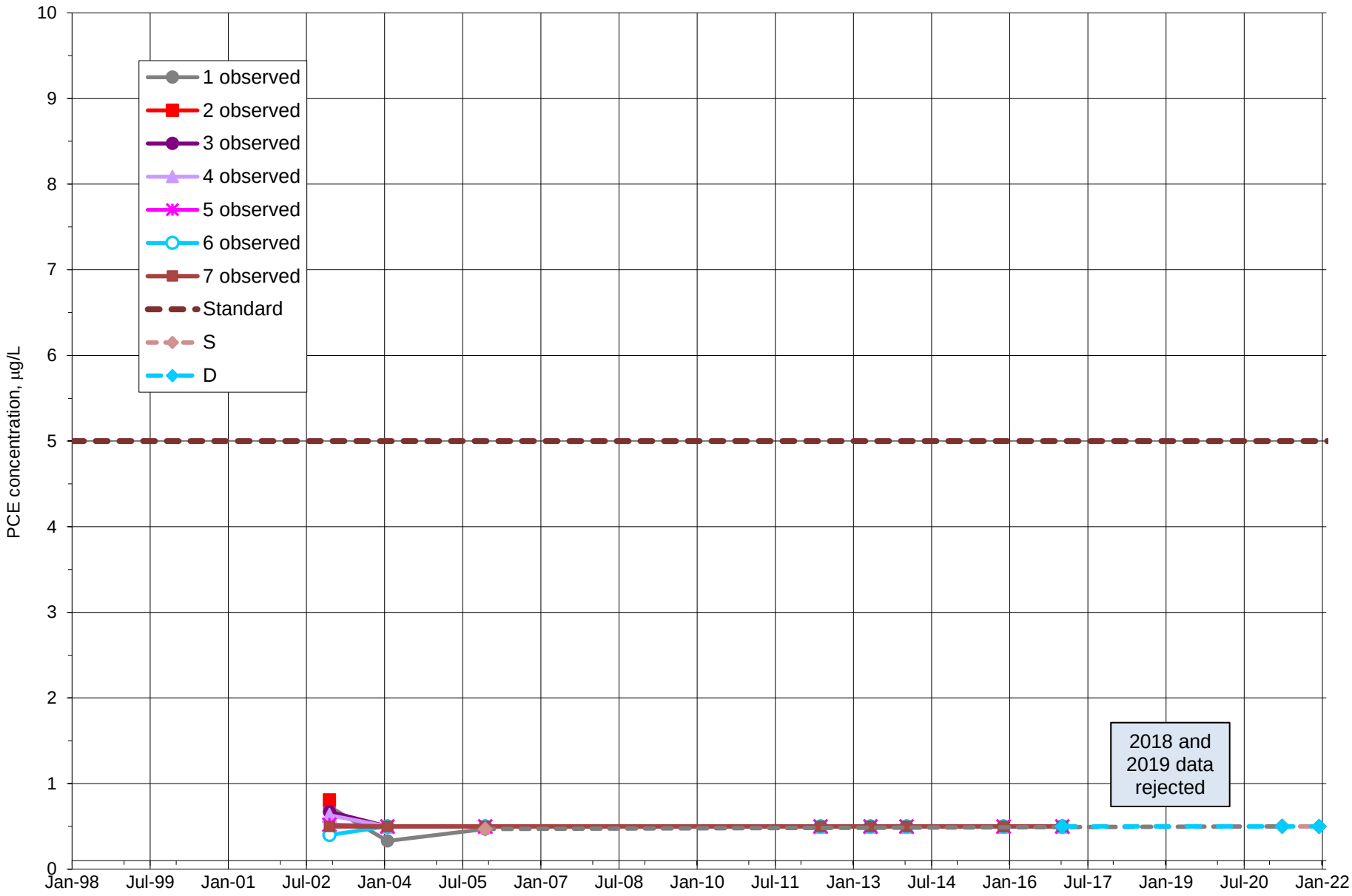


Figure D4. Graph of GWMW-08 (Ports 1 through 7) observed PCE concentrations, Griggs and Walnut Site.

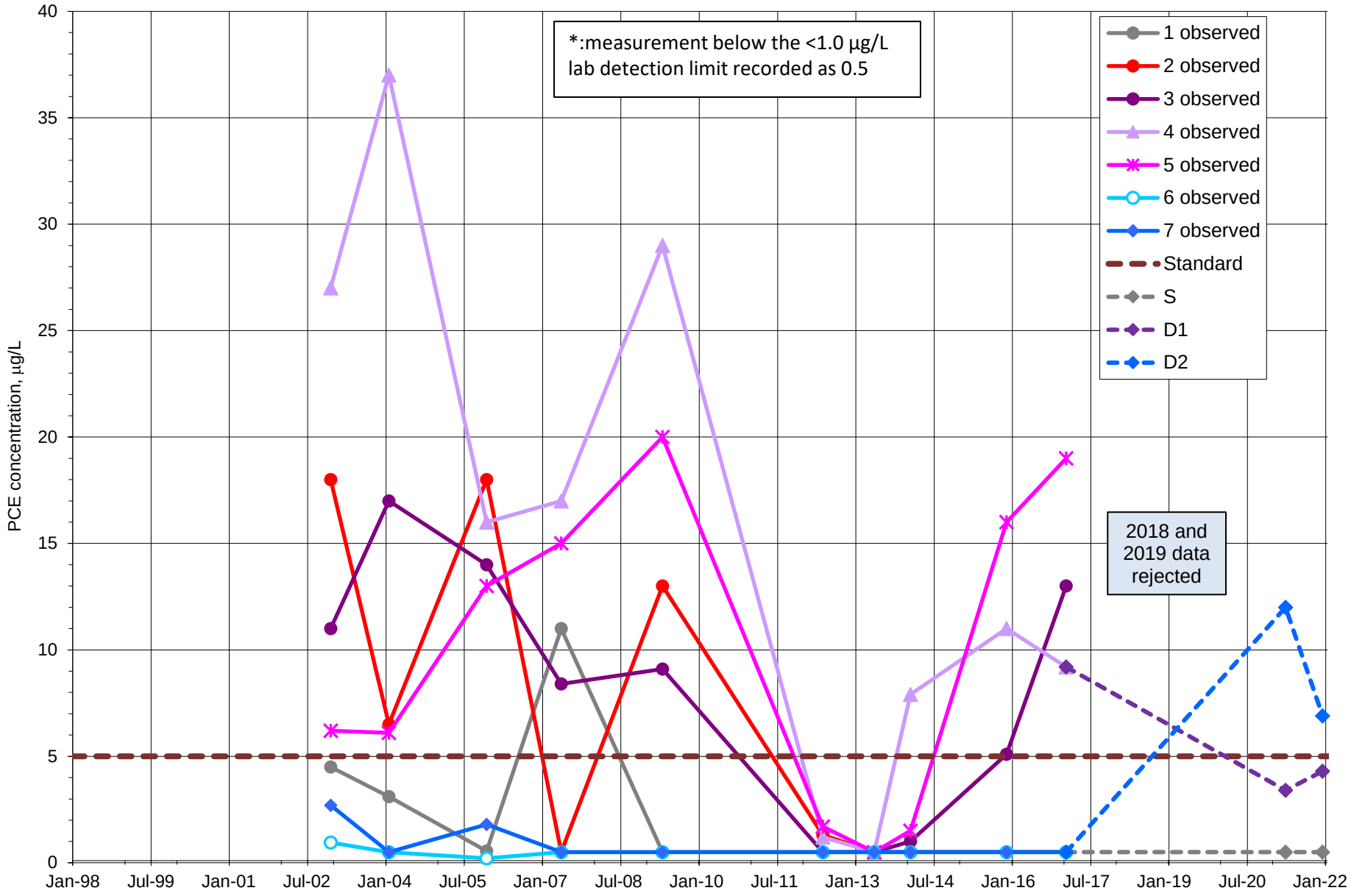


Figure D5. Graph of GWMW-09 (Ports 1 through 7) observed PCE concentrations, Griggs and Walnut Site.

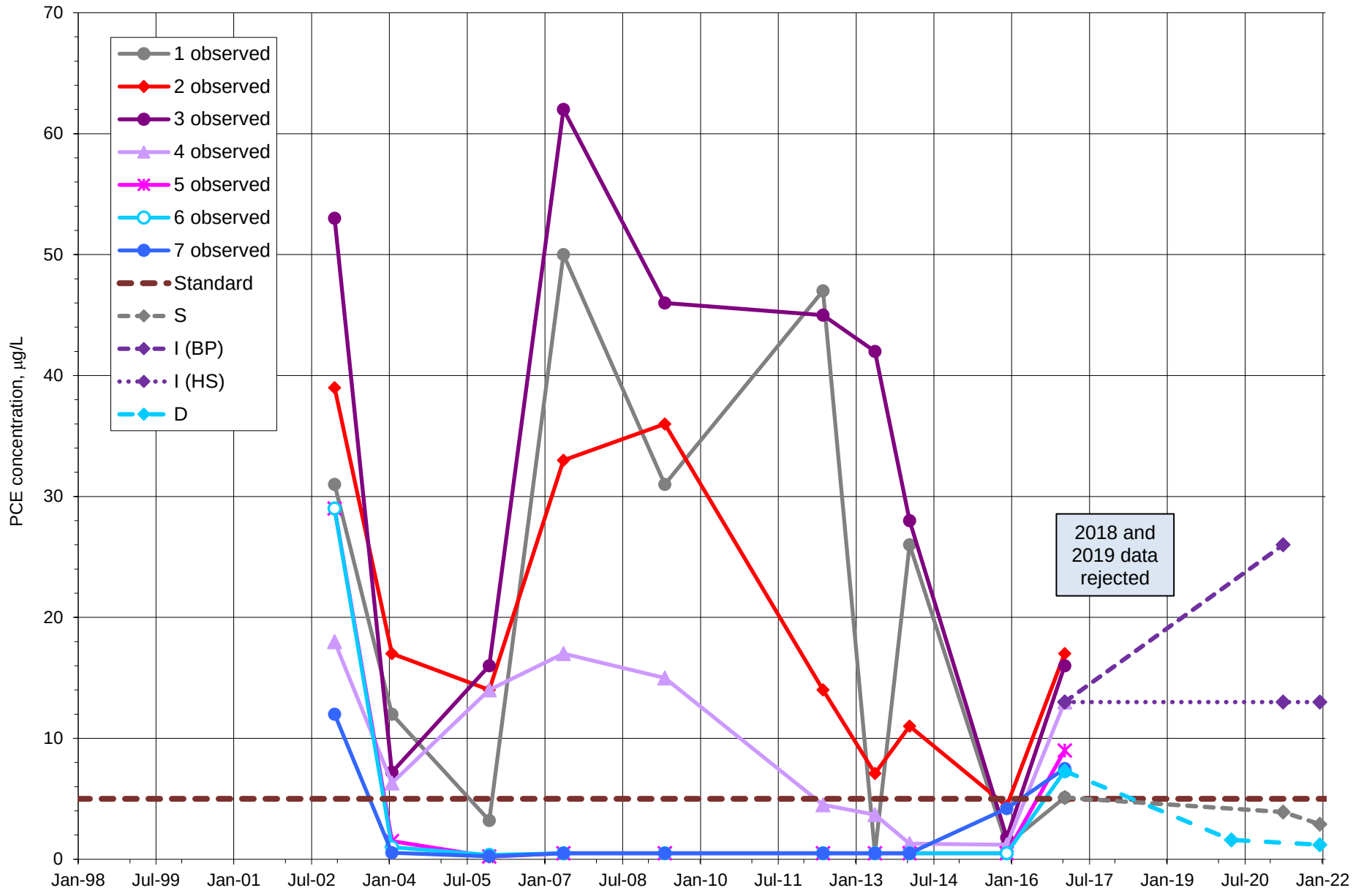


Figure D6. Graph of GWMW-10 (Ports 1 through 7) observed PCE concentrations, Griggs and Walnut Site.

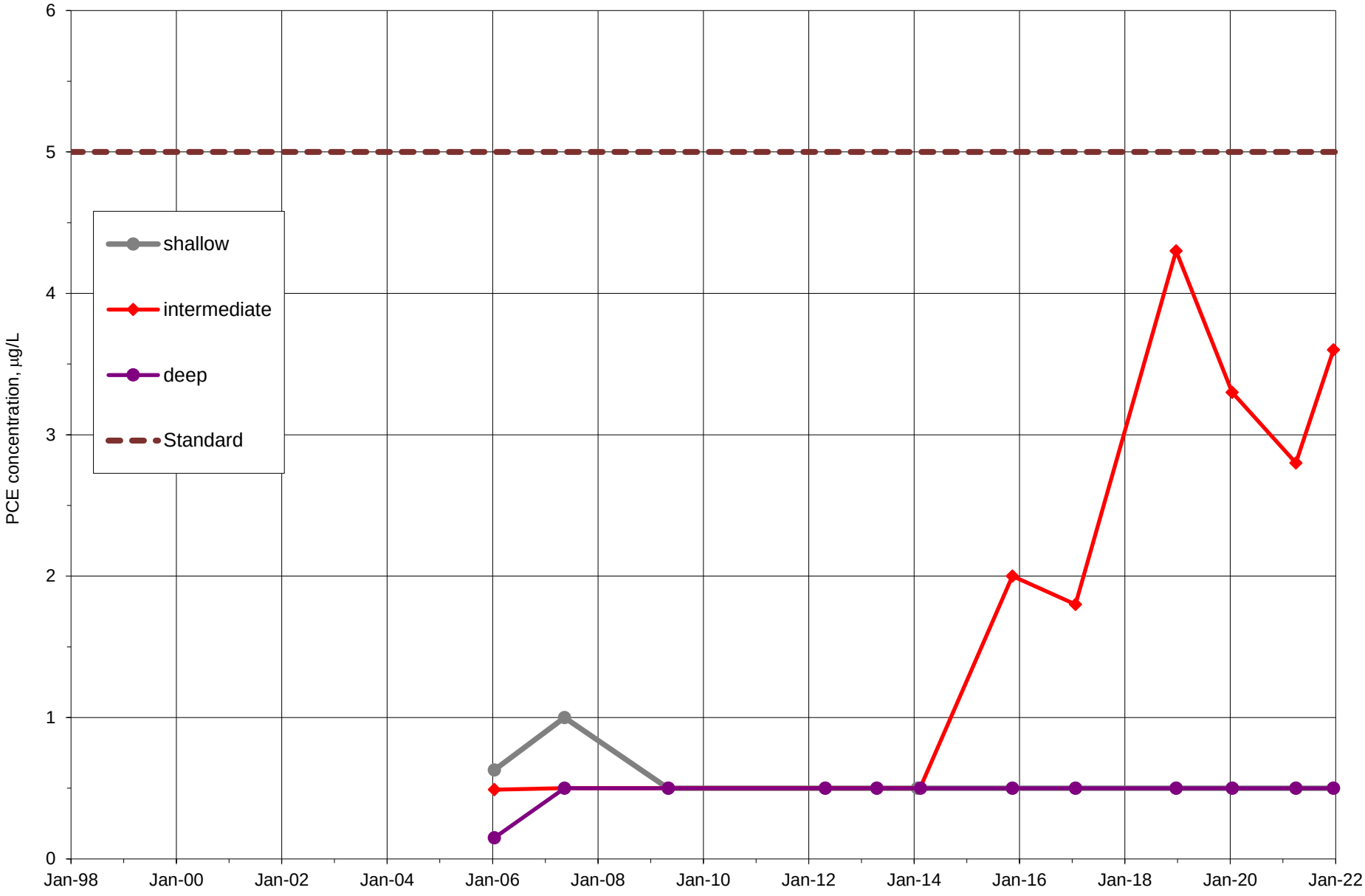


Figure D7. Graph of GWMW-11(S,I,D) (shallow, intermediate, and deep) observed PCE concentrations, Griggs and Walnut site.

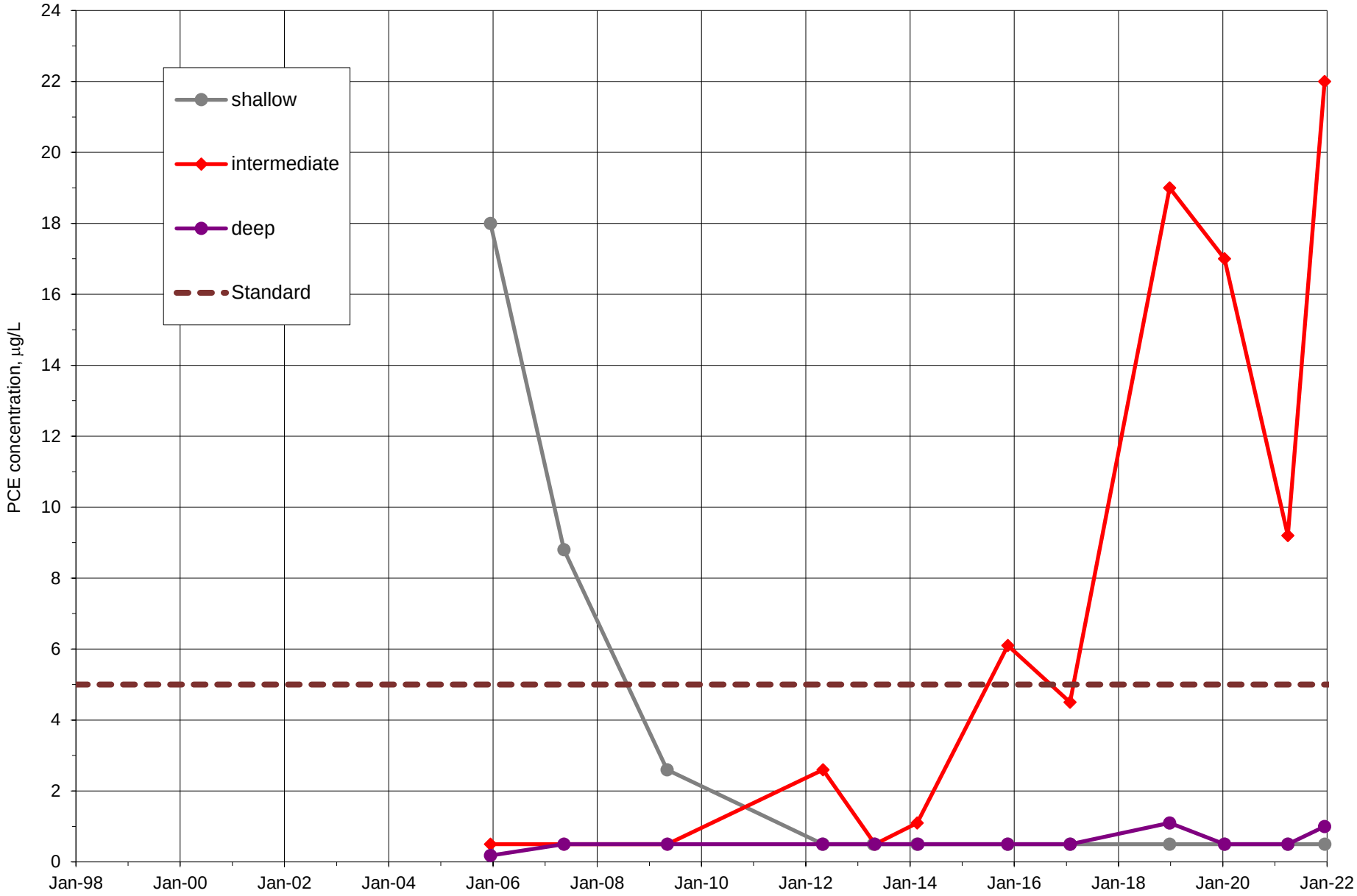


Figure D8. Graph of GWMW-15(S,I,D) (shallow, intermediate, and deep) observed PCE concentrations, Griggs and Walnut site.

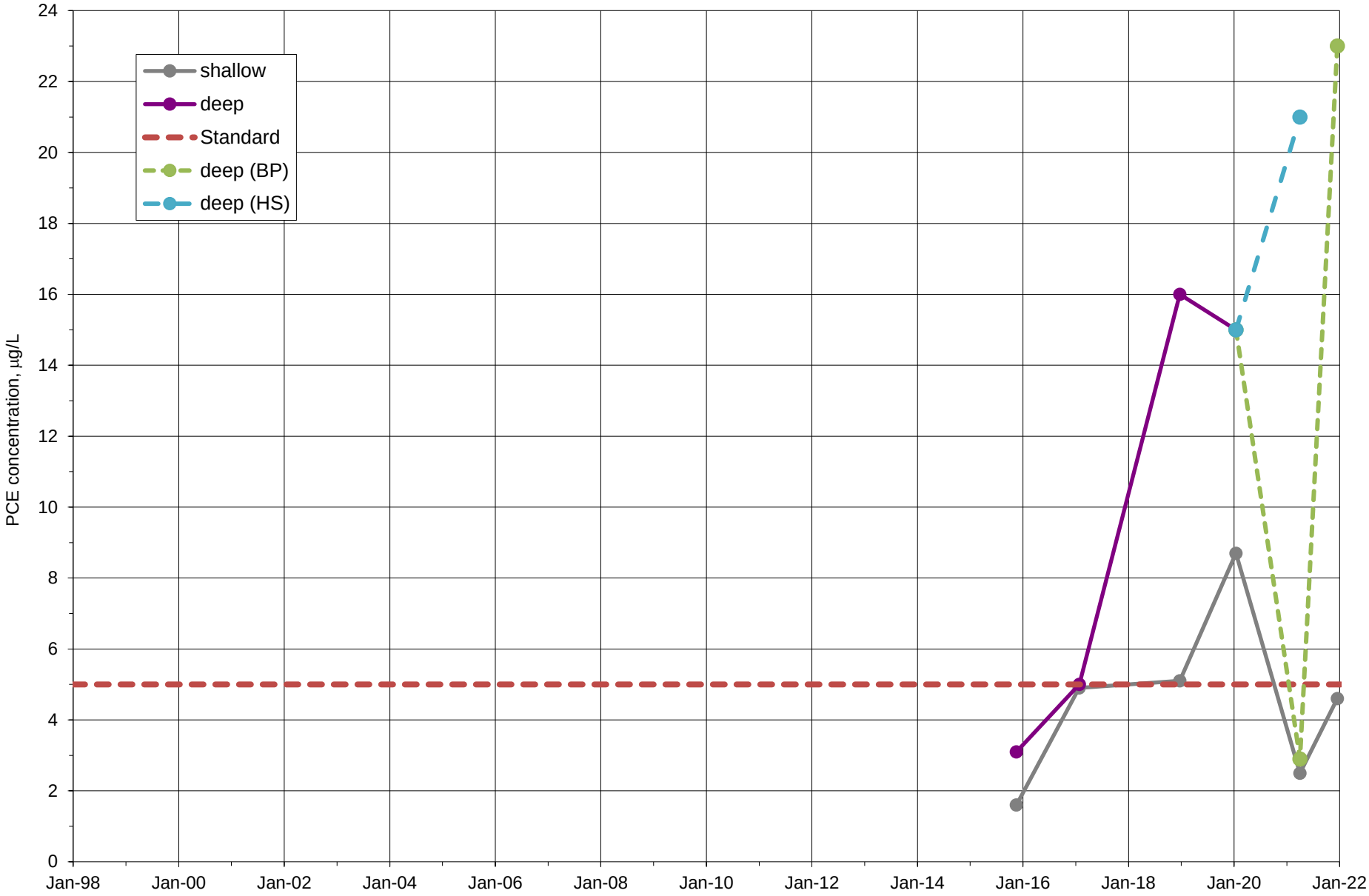


Figure D9. Graph of GWMW-16(S,D) (shallow and deep) observed PCE concentrations, Griggs and Walnut site.

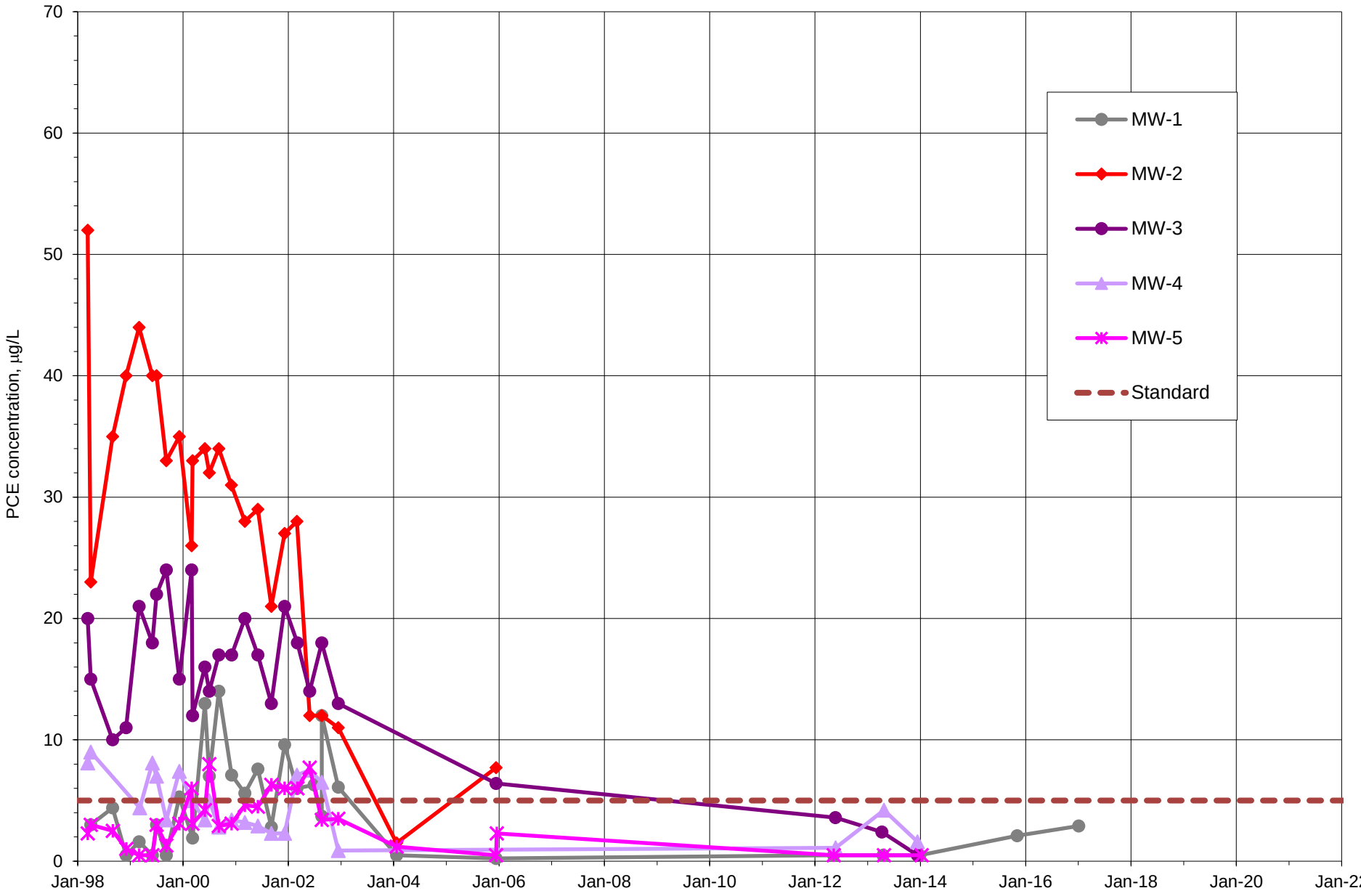


Figure D10. Graph of DACTD Monitoring Wells (PTSB) MW-1 through MW-5 observed PCE concentrations, Griggs and Walnut site.

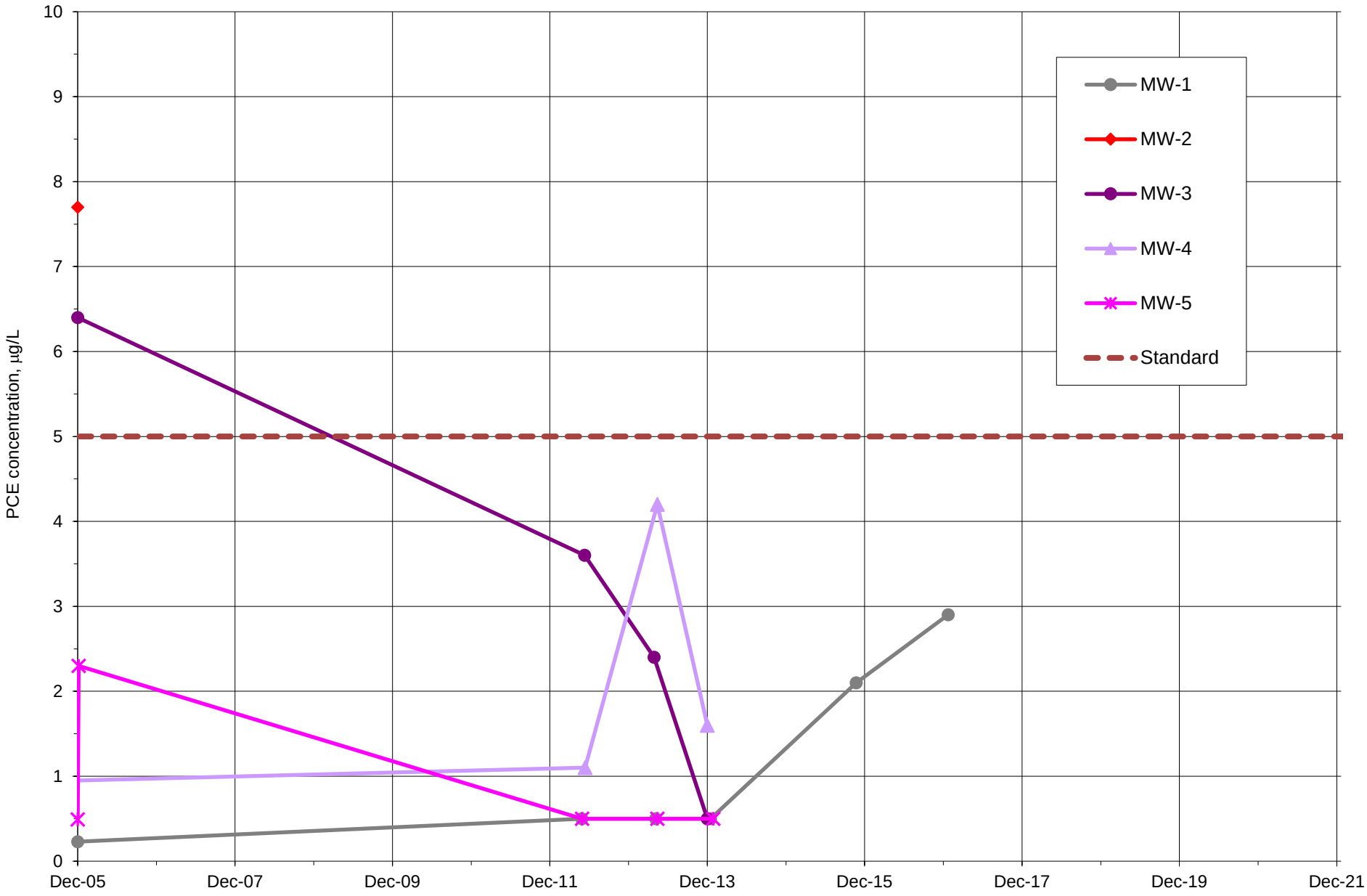


Figure D10a. Graph of DACTD Monitoring Wells (PTSB) MW-1 through MW-5 observed PCE concentrations, Griggs and Walnut site.

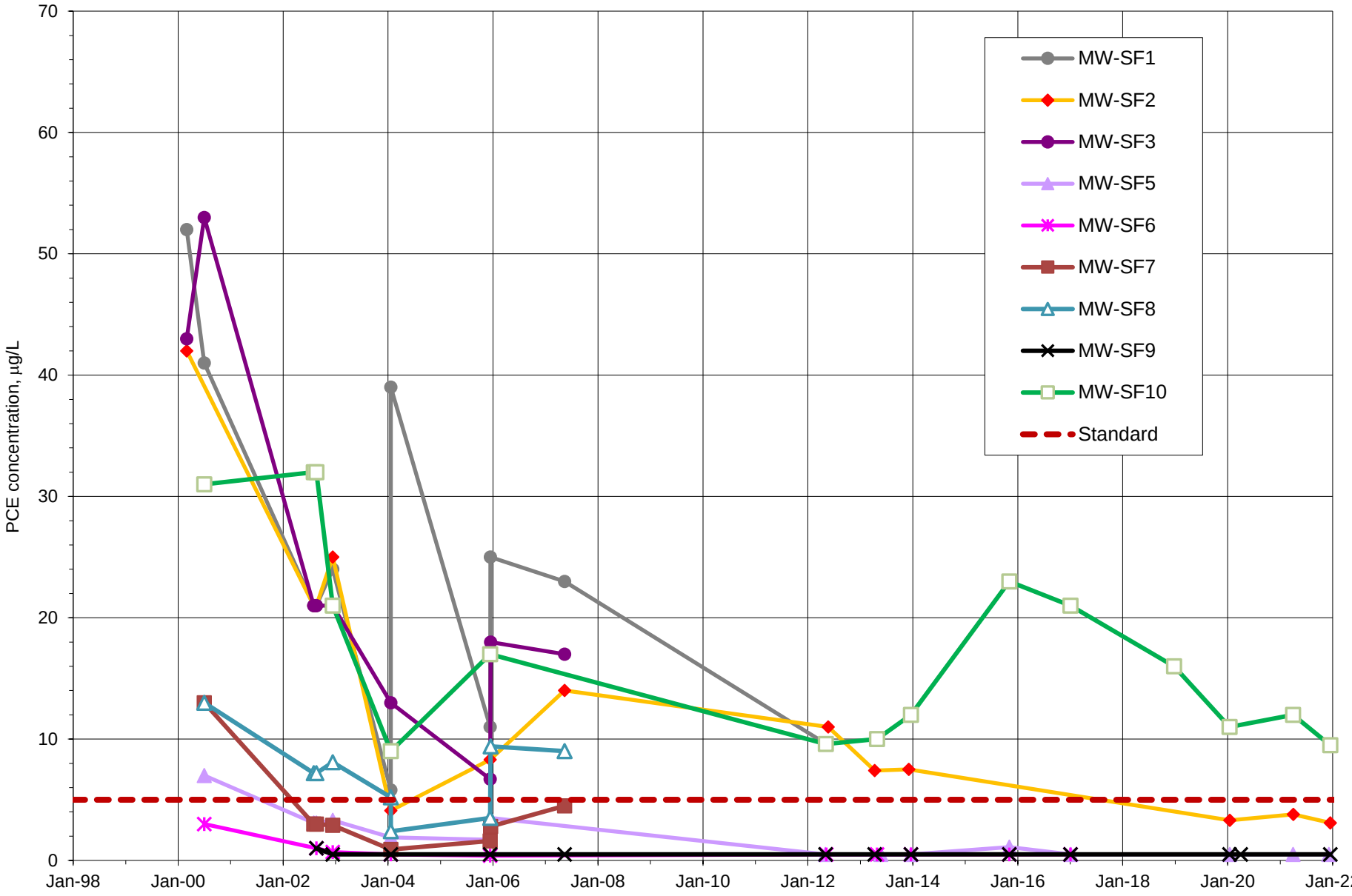


Figure D11. Graph of observed PCE concentrations for selected MW-SF-series monitor wells, Griggs and Walnut site.

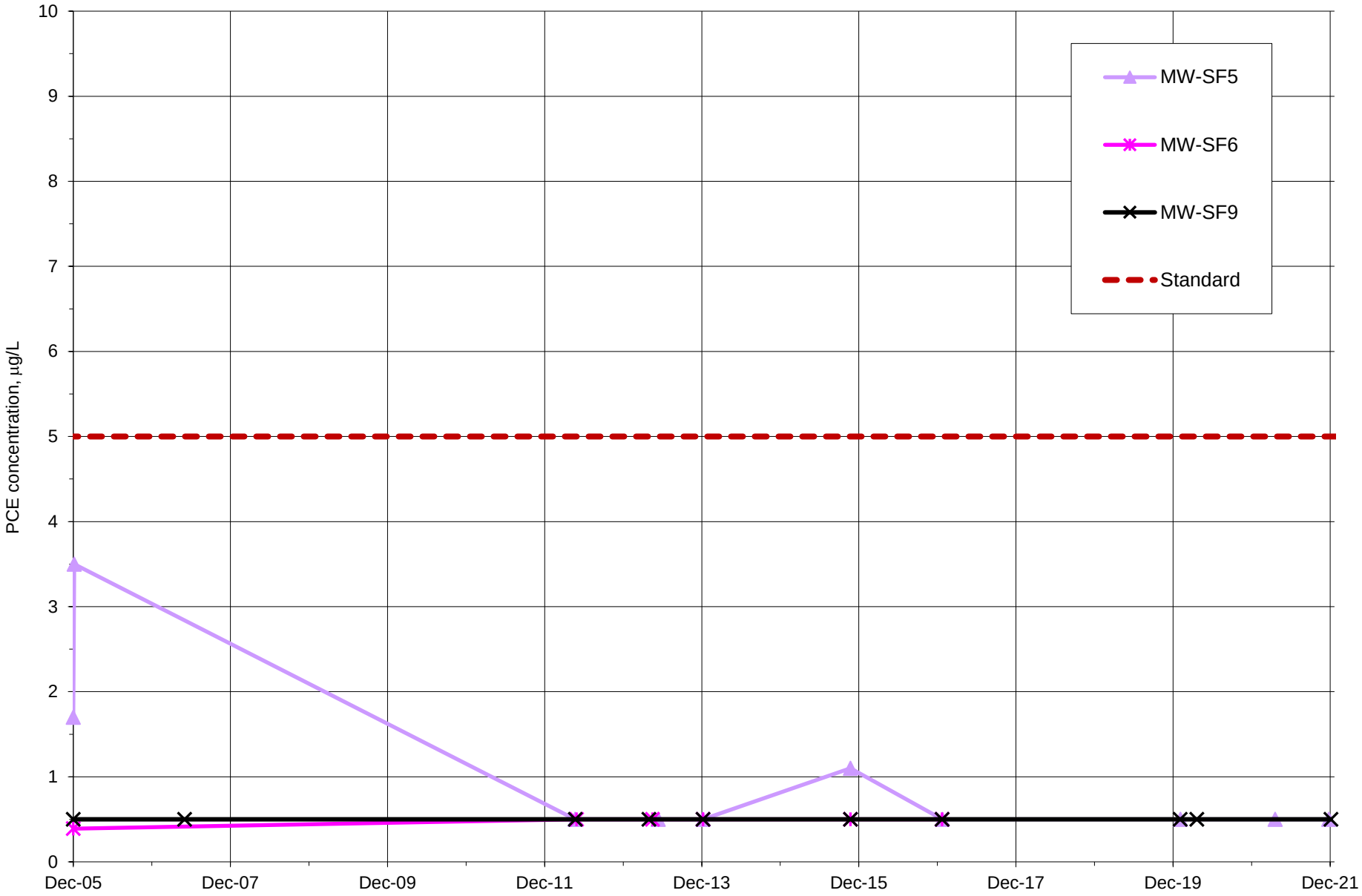


Figure D12. Graph of observed PCE concentrations for selected MW-SF5, MW-SF6, and MW-SF9 monitor wells, Griggs and Walnut site.

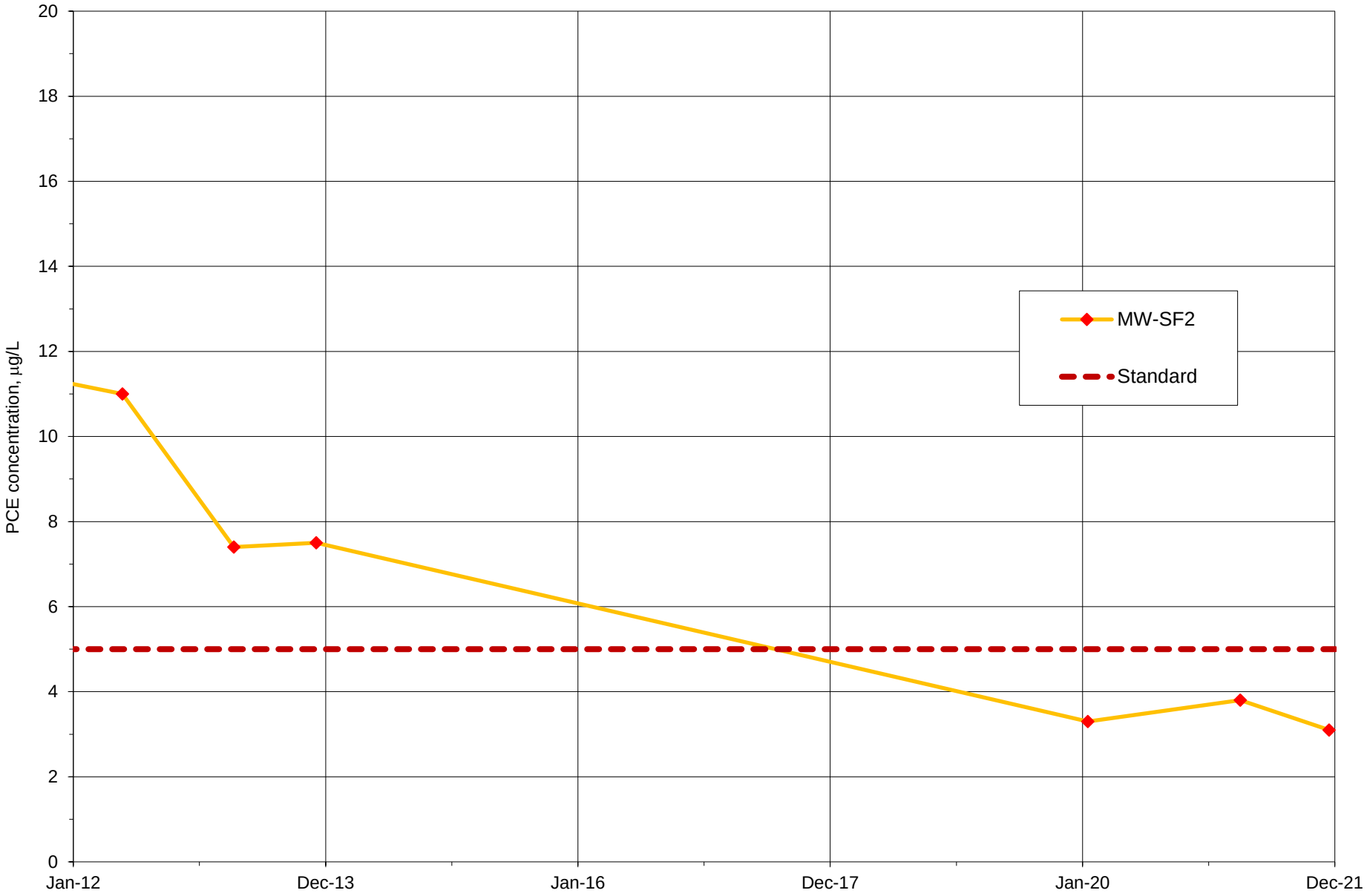


Figure D13. Graph of observed PCE concentrations for MW-SF2 monitor well, Griggs and Walnut site.

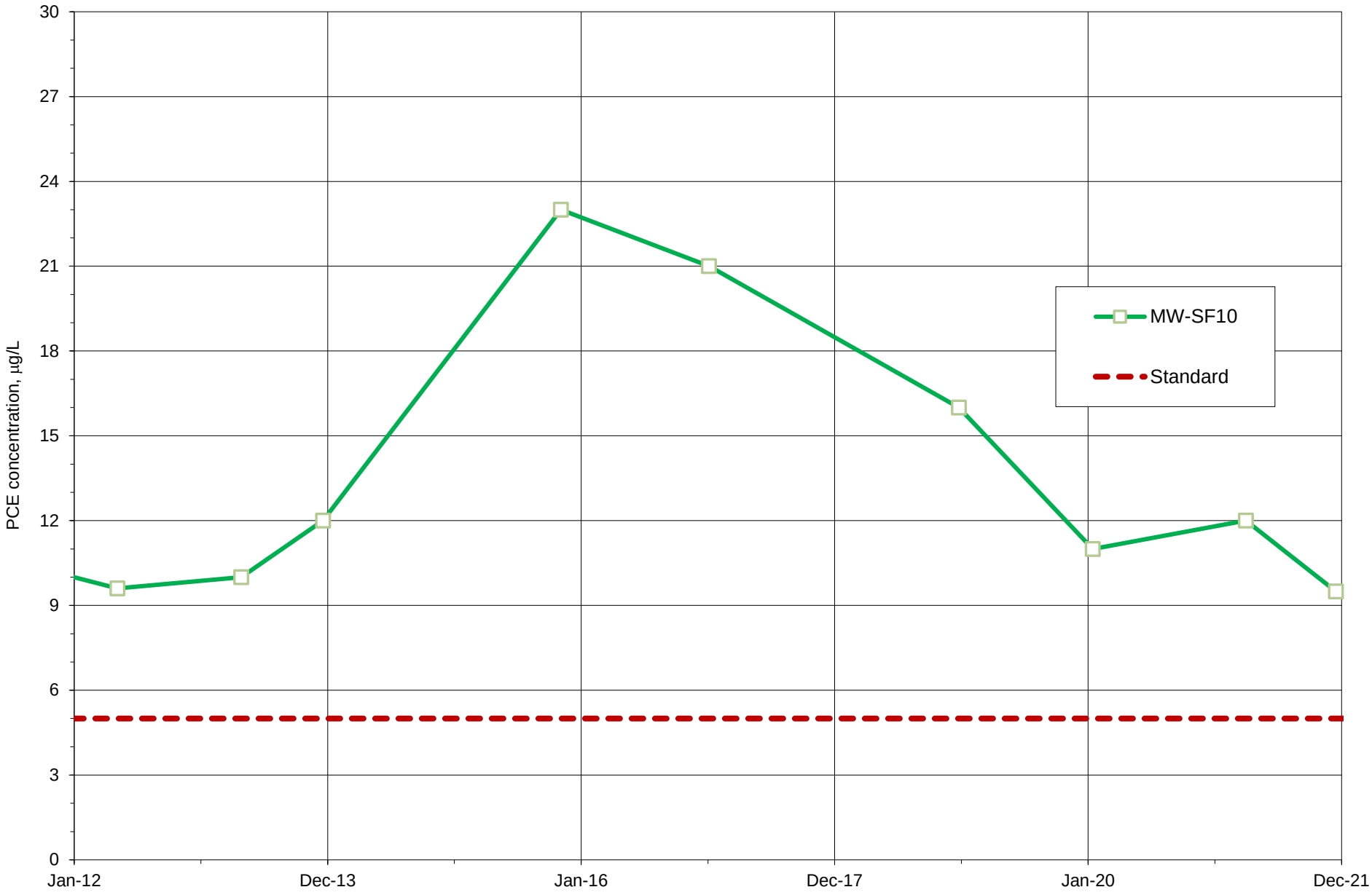


Figure D14. Graph of observed PCE concentrations for MW-SF10 monitor well, Griggs and Walnut site.

Appendix E.

Griggs and Walnut Site time-series model-calibration graphs

Appendix E.

Figure E1. Graph of City of Las Cruces Well 18 observed and model-simulated water levels, Griggs and Walnut site.

Figure E2. Graph of City of Las Cruces Well 27 observed and model-simulated water levels, Griggs and Walnut site.

Figure E3. Graph of City of Las Cruces Well 18 and Well 27 observed and model-simulated water levels, Griggs and Walnut site.

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

Figure E5. Graph of GWMW-15 (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.

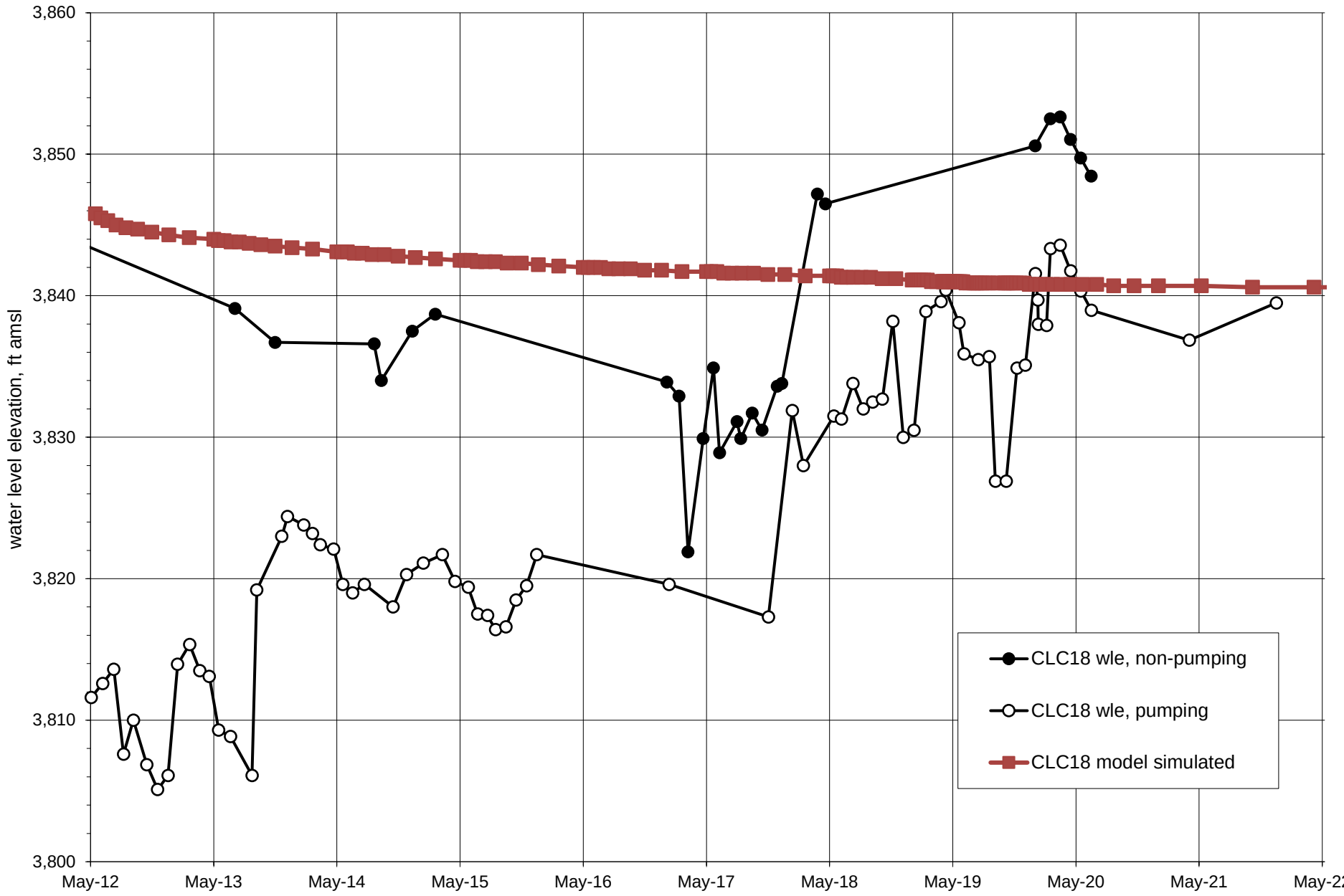


Figure E1. Graph of City of Las Cruces Well 18 observed and model-simulated water levels, Griggs and Walnut site.

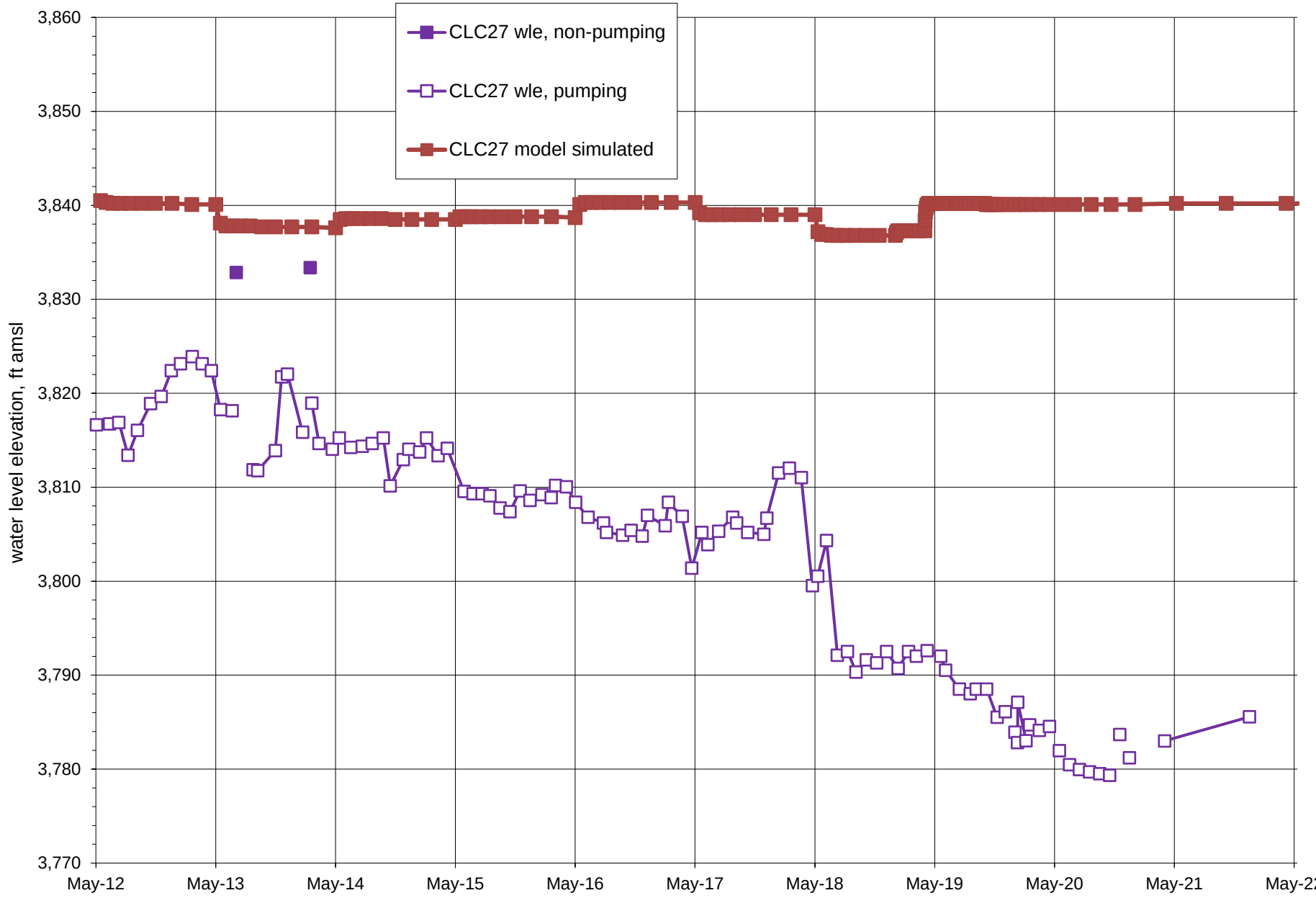


Figure E2. Graph of City of Las Cruces Well 27 observed and model-simulated water levels, Griggs and Walnut site.

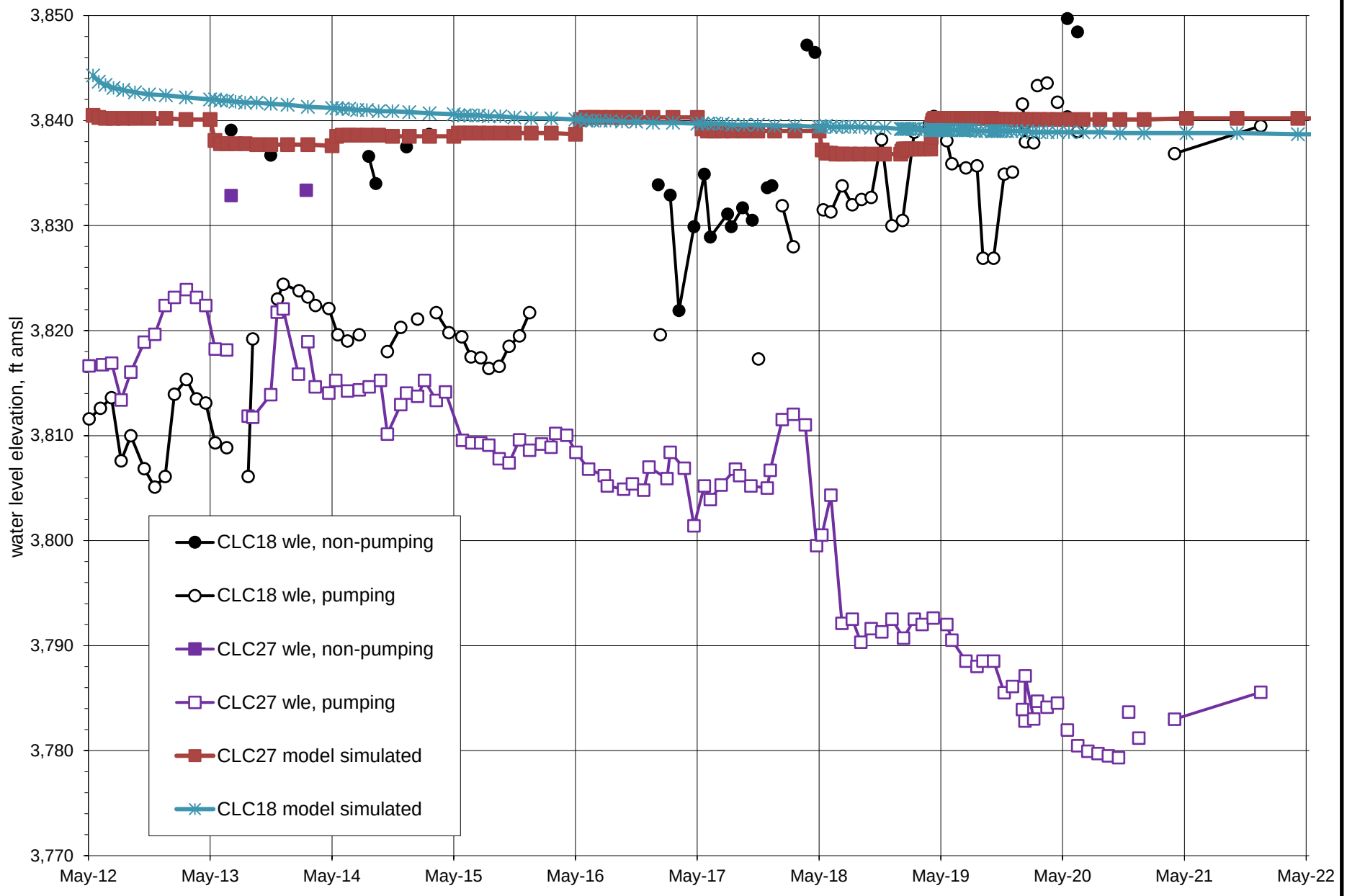


Figure E3. Graph of City of Las Cruces Well 18 and Well 27 observed and model-simulated water levels, Griggs and Walnut site.

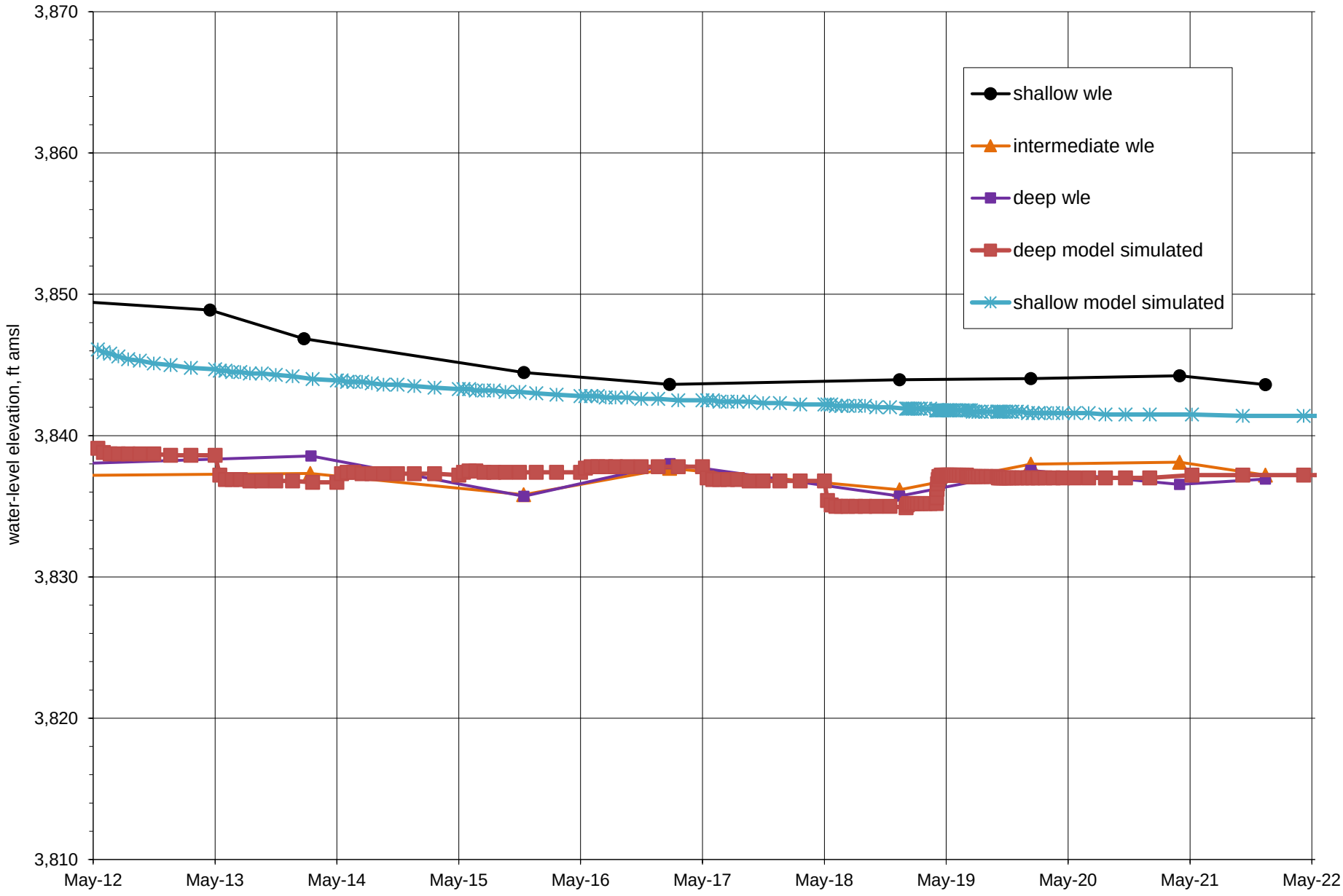


Figure E4. Graph of GWMW11 (shallow, intermediate, and deep) observed and model-simulated water levels, Griggs and Walnut site.

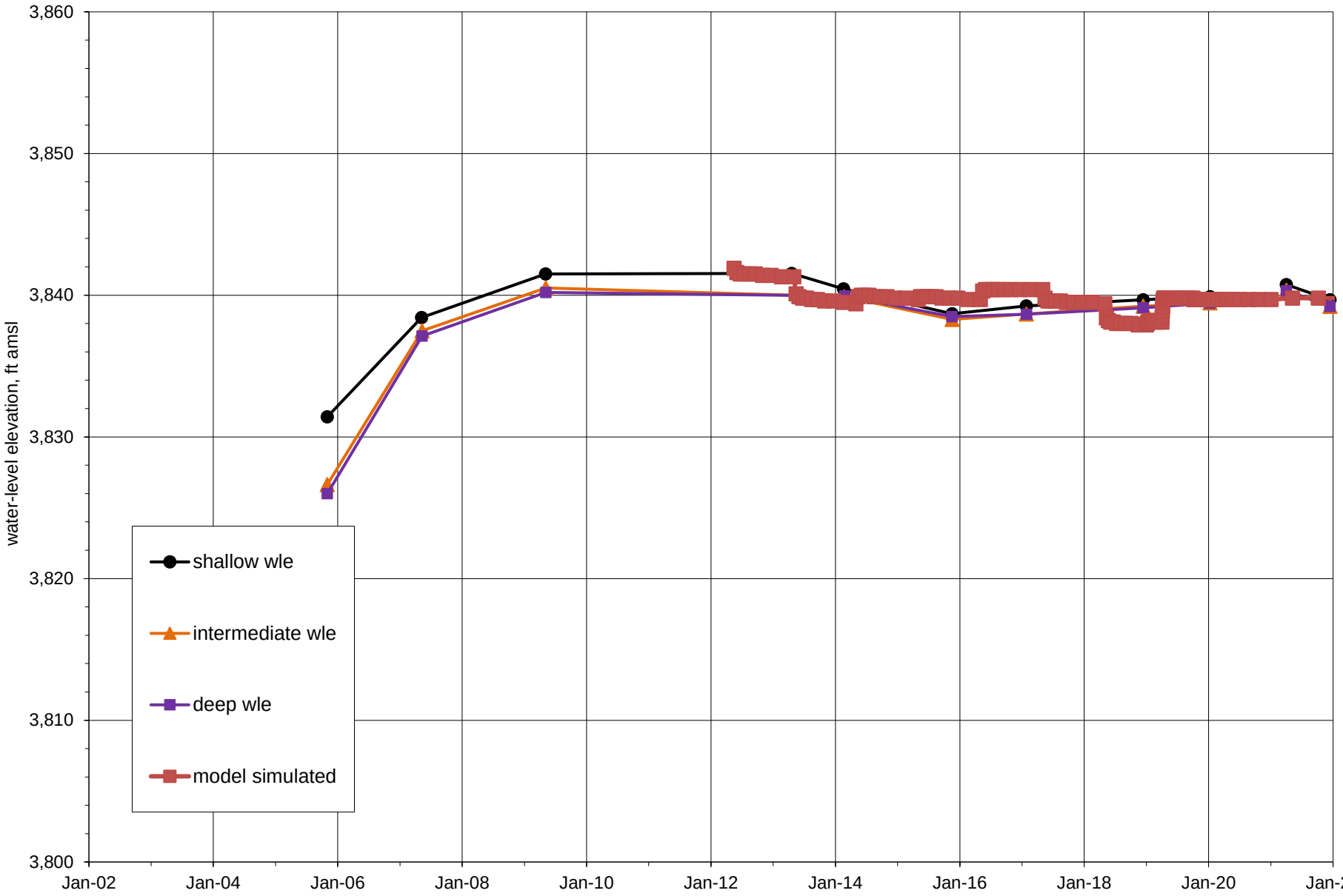


Figure E5. Graph of GWMW15 (shallow, intermediate, and deep) observed and model-simulated water levels, Griggs and Walnut site.

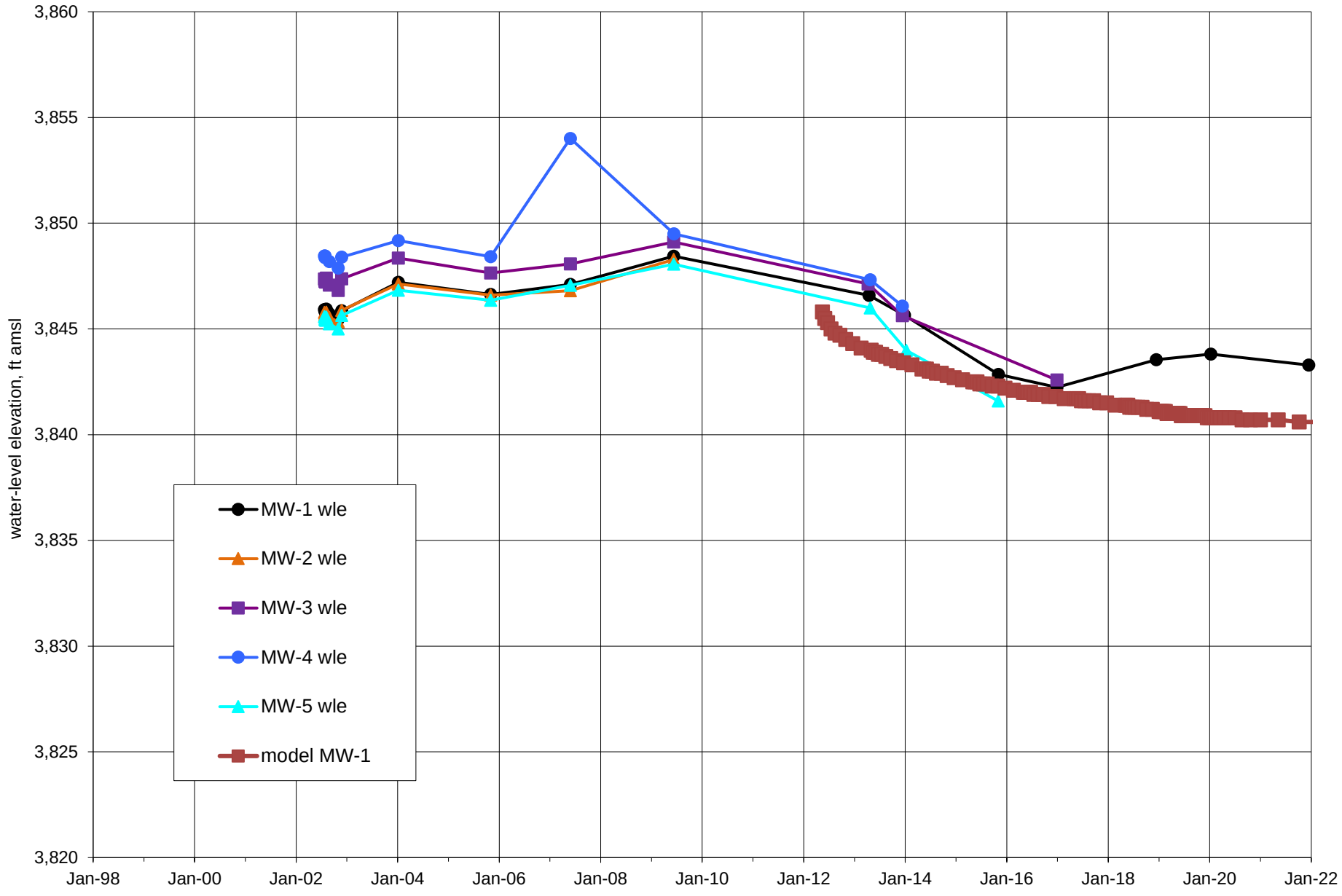


Figure E6. Graph of MW-1 through MW-5 observed and model simulated water levels, Griggs and Walnut site.

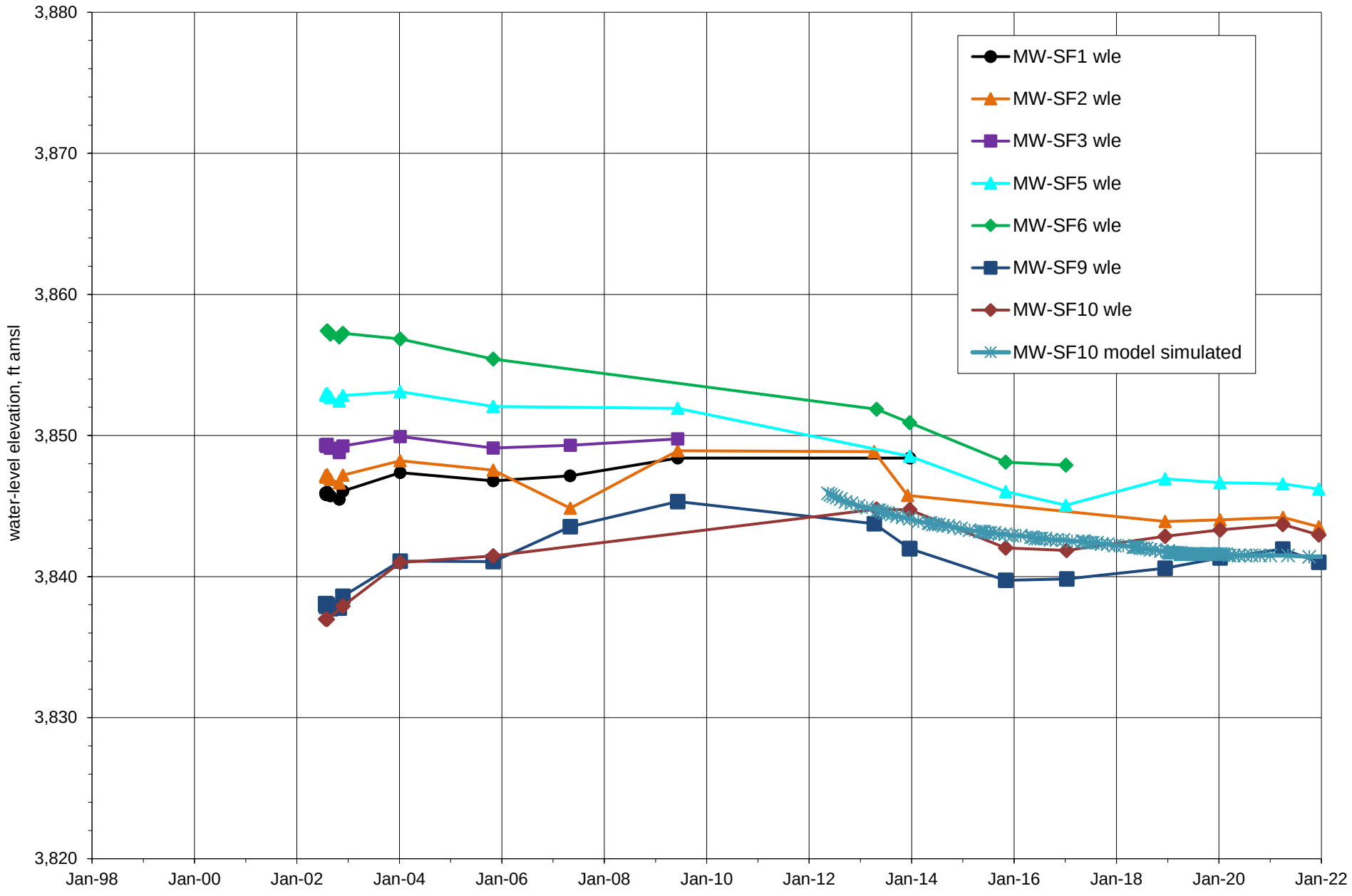


Figure E7. Graph of MW-SF1 through MW-SF10 observed and model-simulated water levels, Griggs and Walnut site.

Appendix B

Groundwater Remediation Optimization Report

DBS&A
Daniel B. Stephens & Associates, Inc.

JUNE 2022
REVISED OCTOBER 2022

CALENDAR YEAR 2021

OPTIMIZATION ASSESSMENT REPORT

GRIGGS AND WALNUT GROUNDWATER PLUME SUPERFUND SITE

LAS CRUCES, NEW MEXICO

prepared for

JSAI

JOHN SHOMAKER & ASSOCIATES, INC.
WATER-RESOURCE AND ENVIRONMENTAL CONSULTANTS
ALBUQUERQUE, NM * www.shomaker.com * 505-345-3407

CALENDAR YEAR 2021
OPTIMIZATION ASSESSMENT REPORT
GRIGGS AND WALNUT GROUNDWATER PLUME SUPERFUND SITE
LAS CRUCES, NEW MEXICO

prepared by

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CALENDAR YEAR 2021 OPTIMIZATION ASSESSMENT REPORT 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 Joint Superfund Project (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, 2020).

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 first sampling event from the FLUTe well replacement program has also confirmed that the plume is decreasing in mass and remedial progress is being made. The capture efficiency for extraction well CLC 18 has been optimized to capture the Shallow Zone (formerly known as the Upper Hydrogeologic Zone) plume. Tetrachloroethene (PCE) concentrations from CLC 18 have consistently shown a decreasing trend in captured plume concentration, along with monitoring from the Shallow Zone showing declining PCE concentrations. PCE concentrations from CLC 27 have been relatively consistent (12 to 18 µg/L) as the pumping rate is maintained at around 229 gallons per minute (gpm).

As a result of optimization, CLC 18 was operated from 2014 to August 2021 based on the recommended pumping schedule (Fig. 2). Additional hydraulic analysis indicates that CLC 18, which is completed in the Intermediate and Deep Zones (formerly known as the Lower Hydrogeologic Zone) also captures groundwater from the Shallow Zone with optimized pumping cycles. As of August 2021, CLC 18 has entirely removed the Shallow Zone PCE plume around CLC 18.

Results from the performance analysis presented in Table 2, show that CLC 27 is capable of pumping at rates up to 400 gpm for the duration of the remedial cleanup period, if needed. Therefore, CLC 27 is able to accommodate an increased pumping rate if needed for containment and capture of the PCE plume. No additional extraction wells are needed for containment and capture of the PCE plume.

Extraction well CLC 27 has a mass removal rate of 6.1 kg/yr under the current optimization pumping program. This mass removal rate is expected to decline as the PCE plume shrinks and decreases in concentration.

The updated groundwater modeling predicts the extraction system capturing sufficient PCE to reach the remediation goals within the 14-year time period. With relatively constant PCE concentrations and pumping, CLC 27 is well suited for plume containment, capture, and cleanup within the remaining time period. Based on the assessment of 2021 operational data, John Shomaker & Associates, Inc. (JSAI) recommends decreased pumping from CLC 18 to 8 hrs/day at 90 gpm for 1 day/week, and maintaining an average pumping rate between 225 and 240 gpm from CLC 27.

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ABBREVIATIONS

ac-ft/yr	acre-feet per year
CLC	City of Las Cruces
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 feet
JSAI	John Shomaker & Associates, Inc.
JSP	Joint Superfund Project
LCU	Las Cruces Utilities
LHZ	Lower Hydrogeologic Zone (Intermediate and Deep Zones)
kg	kilograms
ME	mean error
PCE	tetrachloroethene
Q/s	specific capacity
RI/FS	EPA Remedial Investigation and Feasibility Study
ROD	Record of Decision
SOW	Statement of Work
TMR	telescope mesh refinement
UHZ	Upper Hydrogeologic Zone (Shallow Zone)
µg/L	micrograms per liter

CALENDAR YEAR 2021 OPTIMIZATION ASSESSMENT 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 the 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 the City of Las Cruces (CLC). The primary project goals were to evaluate calendar year 2021 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 nearly continuously for the last 9 years. As defined in the EPA, 2020 Statement of Work (SOW), the remediation goals are to be measured 14 years from the Effective Date of the SOW (July 30, 2020 to June 7, 2034).

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, 2020). 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, 2020).

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 that pumping would focus on removal of the plume mass observed in the upper screen sections (JSAI, 2011).

The extraction well performance analysis uses the current definition of the Site conceptual model hydrogeologic zones and corresponding elevations (DBS&A, 2021), which is as follows:

- Shallow wells: screened-interval elevation range 3,800 to 3,850 feet above mean sea level (ft amsl), also referred to as the Upper Hydrogeologic Zone (UHZ)
- Intermediate wells: screened-interval elevation range 3,685 to 3,800 ft amsl, also referred to as the Upper portion of the Lower Hydrogeologic Zone (LHZ)
- Deep wells: screened-interval elevation range 3,475 to 3,685 ft amsl, also referred to as the Lower portion of the LHZ

Time-series graphs of PCE concentrations and pumping rates from CLC 18 and CLC 27 are presented as Figures 2 and 3, respectively. CLC 18 was actively pumped and water was 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 EPA Remedial Investigation and Feasibility Study (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 present (Figs. 2 and 3). CLC 18 captures the Shallow Zone PCE plume (Fig. 4), and CLC 27 captures the Intermediate and Deep Zone PCE plume where the intervening clay layer is present, and from the Shallow, Intermediate, and Deep Zones where the clay layer is absent (Fig. 5).

2.1 CLC 18

After 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 (µg/L) to 2.3 µg/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 in CLC 18. It was determined that PCE concentrations from CLC 18 are influenced by well hydraulics, and the CLC 18 pumping rate and pumping schedule. Through testing, it was determined that the higher-PCE groundwater at CLC 18 originated from the Shallow Zone, which recharges the Intermediate and Deep Zones 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 Shallow Zone to the Intermediate and Deep Zones adjacent to the well. In the vicinity of CLC 18, the Shallow Zone has a much higher specific conductance than the Intermediate or Deep Zones. Use of the more frequently collected specific conductance measurements as a surrogate for the PCE plume in the Shallow Zone allowed the optimization of the CLC 18 pumping schedule to maximize capture from the Shallow Zone. The correlations between PCE and specific conductance for 2014, 2017-2018, 2019, and 2020 are shown graphically as Figure 6. It was determined through testing that the Deep Zone at CLC 18 did not contain PCE concentrations greater than 5 µg/L.

Since 2016, groundwater produced by CLC 18 has shown a significant decline in PCE concentrations, similar to past results from the neighboring MW-series monitoring wells. CLC 18 PCE concentrations have been below 5 µg/L since June 2021 (Fig. 2).

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 Shallow Zone. Between 2013 and 2018, CLC 18 was 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 the operating rate was reduced to 90 gpm with an 8 hrs/day pumping cycle, and averaged about 30 gpm as before.

Specific conductance measurements were used to determine the pumping cycle that would capture groundwater resembling that of the Shallow Zone. Figure 7 is a graph of specific conductance measured during the 8-hr pumping cycle at 90 gpm for August 1, 2021 and the 6-hr pumping cycle at 90 gpm for August 31, 2021. CLC 18 had been operated at an average rate of about 45 acre-feet per year (ac-ft/yr) (Fig. 2), but the pumping duration was reduced during August 2021 to optimize capture of the Shallow Zone.

Year 2021 sampling results from GWMW-01(I) indicates the PCE plume in the Intermediate Zone is near CLC 18 (see Fig. 4). Winter 2021 samples indicate GWMW-01(I) PCE concentrations are decreasing since the April 2021 monitoring event, and that the Intermediate Zone PCE plume at GWMW-01(I) is contained and captured by CLC 27. Sampling results indicates that pumping from CLC 18 is not interfering with the capture of the Intermediate Zone PCE plume. It will be important to maintain CLC 18 as the primary extraction well for the Shallow Zone and CLC 27 as the primary extraction well for the Intermediate, and Deep Zones, and for the Shallow Zone where the clay layer is more permeable to the east of CLC 18 and GWMW-16.

2.1.2 Performance Analysis

Even with the optimized pumping schedule to maximize mass removal from the Shallow Zone, the PCE concentrations from CLC 18 have decreased as the plume has been remediated (Fig. 2; Table 1). PCE concentrations have dropped from 70 µg/L in 2012 to 3.9 µg/L in October 2021 (Fig. 2; Table 1). Correlation between specific conductance and PCE concentrations indicates the shift to lower PCE concentrations. The corresponding PCE concentration for a given specific conductance has decreased steadily (Fig. 6). The 2021 dataset indicates the PCE concentration is less than or equal to 5 µg/L but the shallow zone-specific conductance value as not significantly changed.

CLC 18 pumping and non-pumping water levels show a consistent 12-ft drawdown during the 90 gpm pumping cycles. Specific capacity of CLC 18 has averaged about 7.5 gpm/ft of drawdown. A hydrograph of CLC 18 year-2020 water levels is presented as Figure 8.

CLC 18 is located in a low spot of the clay layer (JSAI, 2019), and will capture the Shallow Zone PCE plume in the vicinity of the well until the Shallow Zone is dewatered or PCE concentration is below the EPA Drinking Water Standard of 5 µg/L. The 2021 data indicates the PCE plume cleanup for the Shallow zone in the vicinity of CLC 18 is complete. The 2021 monitoring network data shows the remaining Shallow Zone PCE plume is moving east of CLC 18 to the CLC 27 capture area.

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 of PCE concentrations (µg/L)	average PCE concentration (µg/L)	range of 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
2019	7.2	5.9 to 7.7	15.0	13.0 to 17.0
2020 [a]	5.8	5.0 to 6.2	15.3	13.0 to 18.0
2021	4.6	3.9 to 5.3	13.4	12.0 to 16.0

[a] includes January 2021
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 in the Intermediate and Deep Zones. PCE concentrations in water extracted from CLC 27 remained fairly constant at about 12 µg/L during the first 2 years of system operation. From 2012 to 2015, the PCE concentration continued to slowly increase as the pumping rate was increased (Fig. 3; Table 1). CLC 27 PCE concentrations have been fairly stable since 2016 (Fig. 3) with PCE concentrations ranging from 12 to 18 µg/L. The highest PCE concentration detected in the 2021 monitoring network was 23 µg/L at GWMW-16D.

CLC 27 is adequately capturing the PCE plume in the Intermediate and Deep Zones, as indicated by the cone of depression (JSAI, 2022). 2021 PCE concentrations at CLC 27 are slightly higher than the average concentration of the plume mass (< 14 µg/L).

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 (355 ac-ft/yr; Fig. 3). In October 2019, the pumping rate was increased to 240 gpm. CLC 27 pumping in 2021 averaged 230 gpm (371 ac-ft/yr).

2.2.2 Performance Analysis

Pumping tests were performed in CLC 27 in 2010 after partial plugback and conversion to a remedial extraction well. The specific capacity was 7.6 gpm/ft of drawdown 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 water levels is presented as Figure 9. Year 2021 pumping water level was 275 ft bgl while pumping 230 gpm, which resulted in an average specific capacity of about 4.6 gpm/ft of drawdown at 230 gpm.

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 in view of a maximum pump setting depth of 425 ft bgl, and 25 ft of head above the pump intake needed for maintaining pump operation. A summary of updated calculated maximum pumping water 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 PCE plume. No additional extraction wells are needed for containment and capture of the PCE plume at this time based on available data and groundwater modeling.

Table 2. Calculated extraction well CLC 27 pumping water level at the end of 2034 for a given pumping rate.

pumping rate (gpm)	non-pumping water level [1] (ft bgl)	specific capacity [2] (gpm/ft)	short-term drawdown [3] (ft)	long-term drawdown [4] 14 years (ft)	regional water-level [5] decline (ft)	calculated pumping water level for 2034 (ft bgl)
200	225	4.8	42.0	25.0	14.0	306
230	225	4.6	50.0	28.2	14.0	317
250	225	4.4	56.8	31.3	14.0	327
300	225	4.0	75.0	37.5	14.0	352
350	225	3.8	92.1	43.8	14.0	375
400	225	3.6	111.1	50.1	14.0	400

2021 estimated non-pumping water level for 2020
[2] specific capacity for each pumping rate based on 2020 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 Las Cruces Utilities (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) as of years 2005 to 2007 (EPA, 2006).

3.1 CLC 18 PCE Mass Removal Rate

During 2021, CLC 18 was pumping at an average rate of 29 gpm until August 2021, and then the pumping rate declined as PCE concentrations declined. Past 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 were available (Fig 6). As the Shallow Zone plume is removed and only water with lower PCE concentrations remains, the correlation between specific conductance and PCE becomes less reliable (Fig. 6). 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 the more frequent specific-conductance data measurement (Fig. 7). Mass removal calculations using Method 1 are presented in DBS&A (2022) and are also used in this report.

During 2021, CLC 18 had an average PCE mass removal rate of 0.023 kg/month until August (Fig. 10; Table 3). After August 2021, the pumping rate was reduced in an effort to increase PCE concentrations, however the PCE concentrations stayed below 5 µg/L regardless of the optimized pumping cycles. The decrease in PCE mass removal rates during 2021 were a result of the decreasing Shallow PCE plume concentrations and reduced pumping. A total of 0.182 kg PCE was removed during 2021 from pumping at CLC 18 (Table 4).

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

month	extraction well CLC 18		extraction well CLC 27	
	PCE removed (kg)	average pumping rate (gpm)	PCE removed (kg)	average pumping rate (gpm)
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
Jan-19	0.034	25	0.306	223
Feb-19	0.051	30	0.720	225
Mar-19	0.047	31	0.657	219
Apr-19	0.046	30	0.730	229
May-19	0.038	30	0.524	228
Jun-19	0.034	29	0.577	227
Jul-19	0.034	30	0.547	227
Aug-19	0.044	29	0.688	221
Sep-19	0.034	30	0.715	226
Oct-19	0.029	30	0.554	240
Nov-19	0.022	30	0.386	238
Dec-19	0.028	30	0.462	240
Jan-20	0.030	29.4	0.535	235.3
Feb-20	0.032	30.4	0.549	247.5
Mar-20	0.029	29.7	0.580	237.0
Apr-20	0.031	29.5	0.594	233.7
May-20	0.031	29.3	0.580	237.7
Jun-20	0.026	29.2	0.562	237.0
Jul-20	0.027	28.2	0.576	235.1
Aug-20	0.027	28.3	0.535	234.5
Sep-20	0.026	28.9	0.526	237.4
Oct-20	0.029	28.9	0.694	235.2
Nov-20	0.029	29.2	0.590	233.4
Dec-20	0.026	29.3	0.544	238.0
Jan-21	0.024	28.3	0.523	238.1
Feb-21	0.020	28.1	0.435	237.5
Mar-21	0.024	28.2	0.525	238.8
Apr-21	0.024	29.7	0.502	236.4
May-21	0.025	27.5	0.518	235.9
Jun-21	0.021	27.6	0.481	226.4
[1]Jul-21	0.020	27.3	0.487	221.8
[1]Aug-21	0.012	16.6	0.525	221.8
[1]Sep-21	0.003	4.2	0.508	221.8
Oct-21	0.002	3.6	0.494	225.0
Nov-21	0.003	4.4	0.507	221.7
Dec-21	0.003	4.3	0.596	220.6

PCE – tetrachloroethene kg – kilograms gpm – gallons per minute

[1] CLC 27 monthly average pumping rates for July, August, and September 2021 were based the average for the time-period

Table 4. Summary of annual PCE mass removal from extraction wells CLC 18 and CLC 27 for years 2017 through 2021

PCE removed (kg)		
	CLC 18	**CLC 27**
2017 total	0.441 [a]	4.395
2018 total	0.536 [a]	6.002
2019 total	0.440 [a]	6.866
2020 total	0.344	6.866
2021 total	0.182	6.102

[a] - total for CLC 18 calculated using the previously reported Method 2
PCE - tetrachloroethene
kg - kilograms

3.2 CLC 27 PCE Mass Removal Rate

During 2021, CLC 27 was pumped nearly 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 2021, CLC 27 had an average PCE mass removal rate of 0.52 kg/month (Fig. 11; Table 3). The consistency of the mass removal rate is due to the continuous pumping and relatively 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 annual PCE mass removal rate from 2017 (Table 4). A total of 6.102 kg PCE was removed during 2021 pumping (Table 4). In comparison, the PCE mass removal was about 6.86 kg for 2019 and 2020.

Pumping at an average annual rate of 230 gpm with a PCE concentration of 13 µg/L would result in a PCE mass removal rate of about 6.0 kg/yr. Decommissioning CLC 18 will not significantly change the mass removal rate.

4.0 TMR NUMERICAL MODEL

Details regarding the telescope mesh refinement (TMR) model, model update, and calibration are available in the companion JSAI (2022) report. The TMR model was calibrated to the available groundwater-level data and reflects 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 current), and a future period (remainder of the 14-year cleanup period specified in the EPA Record of Decision (ROD) and SOW (EPA, 2020). Particle tracking was simulated for the historical and for the future period. Future pumping simulation considers 0 gpm from CLC 18 and 240 gpm from CLC 27. Model-simulated results are presented in Figures 13 through 16.

4.1 Plume Containment Analysis

Model simulations indicate that the northern and western extents of the Shallow, Intermediate, and Deep Zone PCE plumes are well contained through the use of the existing capture system. The southern and eastern extents of the Shallow plume are also contained as CLC 27 captures what lies outside of the CLC 18 zone of influence (Figs. 14 through 16). Particle tracking indicates the PCE plume at GWMW-15 is contained by CLC 27 pumping.

Model simulations indicate that the eastern extent of the lower plume is also well contained, although modeled groundwater velocities in this area are low, averaging approximately 0.12 ft/day; this reduces the capture system's effectiveness and leaves the area susceptible to being influenced by the effects of pumping from other wells in the area. It should be noted that the eastern extent of the Intermediate plume at GWMW-15 is located across a channel of relatively high hydraulic 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.

Modeling simulations indicated that pumping of CLC 61 previously had an effect on the capture system's efficiency at the eastern and southern extents of the lower plume (JSAI, 2019). However, cessation of pumping CLC 61 (March 2019) has minimized the potential for vertical and southern movement of the lower PCE plume. The cessation of pumping CLC 61 has also contributed to rebound of the water level in the areas of GWMW-15 and GWMW-11 so that the plume will be hydraulically pushed upward and be more readily captured at CLC 27.

PCE measurements collected in December 2021 indicate that concentrations in GWMW-09D2 (D) are decreasing from April 2021 values as the eastern and southern extents of the lower plume are now more easily captured by CLC 27.

4.2 Plume Capture Analysis

The modeled capture zone of CLC 27 was approximately 2,200 ft to the northeast and 1,200 ft to the southwest from the well in 2021 (JSAI, 2020). By 2029, the capture zone increases east to west. For 2021, CLC 18 has no significant influence on the modeled capture zone, primarily due to the reduction in pumping and removal of the Shallow PCE plume.

The Shallow plume in 2021 measured approximately 600 ft from north to south and 2,000 ft from east to west (JSAI, 2021), and is completely within the capture zone created by extraction well CLC 27. The Intermediate plume measures approximately 1,200 ft from north to south and 3,200 ft from east to west, with the eastern extent outside of CLC 27's immediate capture zone. The Deep Zone plume is approximately 800 ft north to south, and over 4,600 ft in length from west to east. Particle tracking shows that the eastern extent of the plume is still progressing towards CLC 27 in 2029, but not yet captured due to the slow groundwater velocities in that area. Additional time-series PCE data from GWMW-15(I,D) would help understand if the plume is still moving vertically or if it is beginning to increase in horizontal movement towards drawdown caused by CLC 27 pumping. Nevertheless, increased CLC 27 pumping rate may be required to achieve capture within the 14-year cleanup period.

4.3 Optimization Analysis

Optimization includes removing the mass of contaminants in the aquifer in an effective and efficient manner. CLC 18 has been optimized with the current pumping schedule, and monitoring data suggest the Shallow Zone PCE plume has been removed from the CLC 18 capture area. It is recommended to reduce the pumping from CLC 18 to 1 day/week with each daily pumping cycle of 8 hrs at 90 gpm. It may be appropriate to discontinue pumping at CLC 18 altogether if PCE concentrations remain below 5 micrograms per liter (µg/L) for six consecutive months and no upward trend in concentration is observed.

The PCE removal rate for CLC 27 increases with increased pumping rate (see Table 4). However, it is possible that further increasing the pumping from CLC 27 could increase the capture of clean groundwater. Therefore, JSAI recommends maintaining the CLC 27 pumping rate implemented over the last two years which is within the recommended range of 225 to 240 gpm.

5.0 EFFECTIVENESS OF EXTRACTION WELLS

The updated groundwater modeling indicates that the extraction system is meeting RAO#2: Maintain capture of the PCE-contaminated groundwater plume above the MCL (5 *u*g/L). The updated groundwater modeling indicates that the GWP site plume will be flushed (i.e. one pore volume removed) in the next 5 to 10 years providing progress towards RAO #3: Restore groundwater to its beneficial use as a drinking water supply with PCE concentrations no greater than the MCL (5 *u*g/L).

5.1 Remedial Objectives

The general remedial objective is to remove the mass of PCE in the aquifer in an effective and efficient manner. Estimated current mass of PCE plume, calculated by estimating the plume volume from spatial extents and zone thickness, is approximately 46 kg and the current removal rate is about 6.8 kg/yr. The time to achieve restoration of the GWP site plume to below 5 *u*g/L is difficult given the variability with estimating plume mass. However, an estimate of restoration time can be provided utilizing two methods (i.e. mass removal rates and particle tracking analysis) as described below. Assuming similar levels of mass removal can be achieved through continued annual optimization of extraction form CLC 27, RAO#3 can be achieved in approximately seven years. However, mass removal rates will likely decline over time as the plume decreases in size and concentrations generally decrease which may lead to longer cleanup times. In addition, modeling simulations utilizing particle tracking for the shallow and deep zones indicate that the GWP plume area will be flushed and one pore volume removed within the next 5 to 10 years (Figs. 14 and 16). The particle tracking in the intermediate zone is complicated by the simulated clay zone in that model layer. Particles placed in the intermediate zone are slowed by the assigned lower hydraulic conductivity and do not represent the faster velocity that particles placed in the coarser portions of the intermediate zone would travel. Additional data from GWMW-15(I,D) are needed to better calibrate the model in the eastern plume area and to determine when the RAO #3 will be achieved for this portion of the PCE plume. Monitoring data provide evidence that the concentrations across the Site are decreasing as the system continues to operate (JSAI, 2021).

5.2 Remedial Goals

RAO#3 is to achieve cleanup of PCE concentrations to below 5 *u*g/L in the groundwater within the 14-year time period measured from the effective date of the revised SOW (June 7, 2020). There are approximately an additional 12 years to achieve the remedial goals.

The majority of the plume mass is in an area where the Shallow, Intermediate, and Deep Zones are hydraulically connected with downward flow and the PCE plume is captured by extraction well CLC 27. CLC 18 has captured the part of the remaining plume, on top of the clay layer in the Shallow Zone, that does not flow eastward into the extraction CLC 27 capture zone. CLC 18 PCE concentrations were around 70 µg/L during startup (2012), and have decreased to about 5 µg/L or less, which indicates the Shallow Zone in the vicinity of CLC 18 has achieved the cleanup concentration of 5 µg/L. Cleanup time under the current system operation is difficult to estimate due to the variability with estimating PCE plume mass. The replacement of the rejected FLUTe wells has helped better define the PCE plume mass. As the plume decreases in size, mass removal rates will likely decline over time, and the improved monitoring network will help better evaluate cleanup time.

The updated Site Conceptual Model (JSAI, 2019) coupled with a significant decrease in local pumping has changed the system requirements to achieve the remedial goals. With increasing PCE concentrations and with increased pumping, extraction well 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). Remediation of the Shallow PCE plume in the vicinity of CLC 18 is complete or near complete (Figs. 2 and 4).

Results from the updated 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. There is no other pumping in the area to compete with extraction well pumping, which allows for better hydraulic controls for plume capture. Nevertheless, CLC 27 is able to accommodate increased pumping rate if needed for containment and capture of the PCE plume. No additional extraction wells are needed for containment and capture of the PCE at this time. No changes to CLC 27 are recommended until at least three sampling events have been completed for the FLUTe well replacement network.

Pumping at an average annual rate of 230 gpm with a PCE concentration of 13 µg/L would result in a PCE mass removal rate of 6.0 kg/yr. A model simulated average pumping rate of 240 gpm for extraction well CLC 27 results in achieving the remedial objective for the primary PCE plume mass within the next 5 to 10 years.

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 from extraction well CLC 27 is optimized every year to maintain or increase PCE mass removal. The ability to capture the PCE plume at GWMW-15(I) is difficult to determine from the monitoring data and the model analysis. Additional time-series PCE data from GWMW-15(I) would help understand if the plume is still moving vertically at the same rate and if it is beginning to increase in horizontal movement towards the drawdown caused by CLC 27 pumping. Additional water level data from GWMW-15 and GWMW-09 will also confirm if the vertical hydraulic gradient remains small. With increased pumping, CLC 27 continues to capture groundwater with PCE concentrations that resembling the plume mass. Extraction well 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 the 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 SOW (EPA, 2020). The following recommendations are for the year 2021.

1. Reduce the CLC 18 pumping schedule. Specific conductance and PCE concentration data would suggest the daily pumping duration can be reduced to one day per week with each day pumping 90 gpm for 8 hours.

2. Maintain an average pumping rate between 225 to 240 gpm for extraction well CLC 27. The existing pump should be able to sustain an average rate of 230 to 240 gpm.

8.0 REFERENCES

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[JSAI] John Shomaker & Associates, Inc., 2021, Calendar year 2020 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, June 2021.

ILLUSTRATIONS

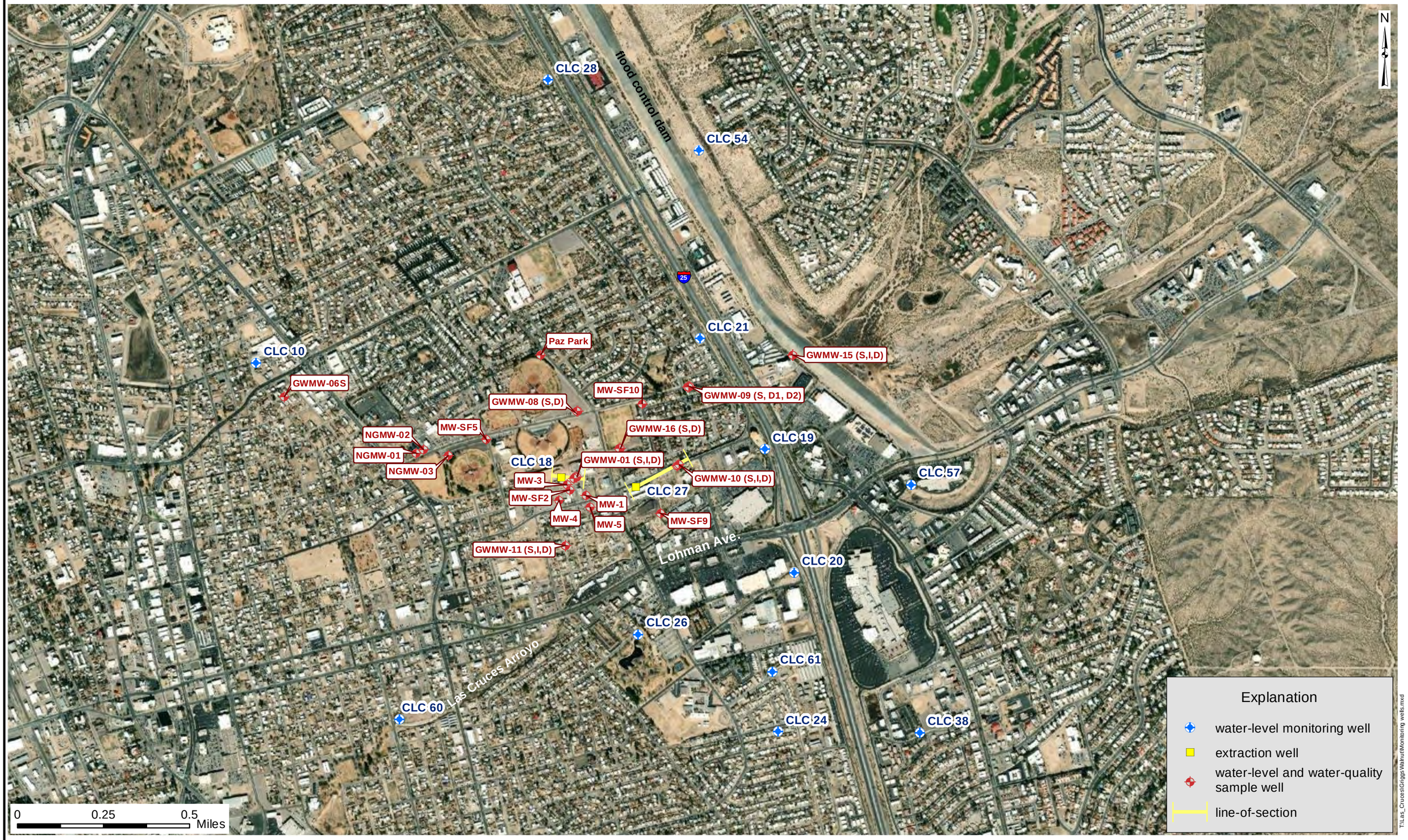


Figure 1. Aerial photograph of the Griggs and Walnut Site showing monitoring network, City of Las Cruces, New Mexico.

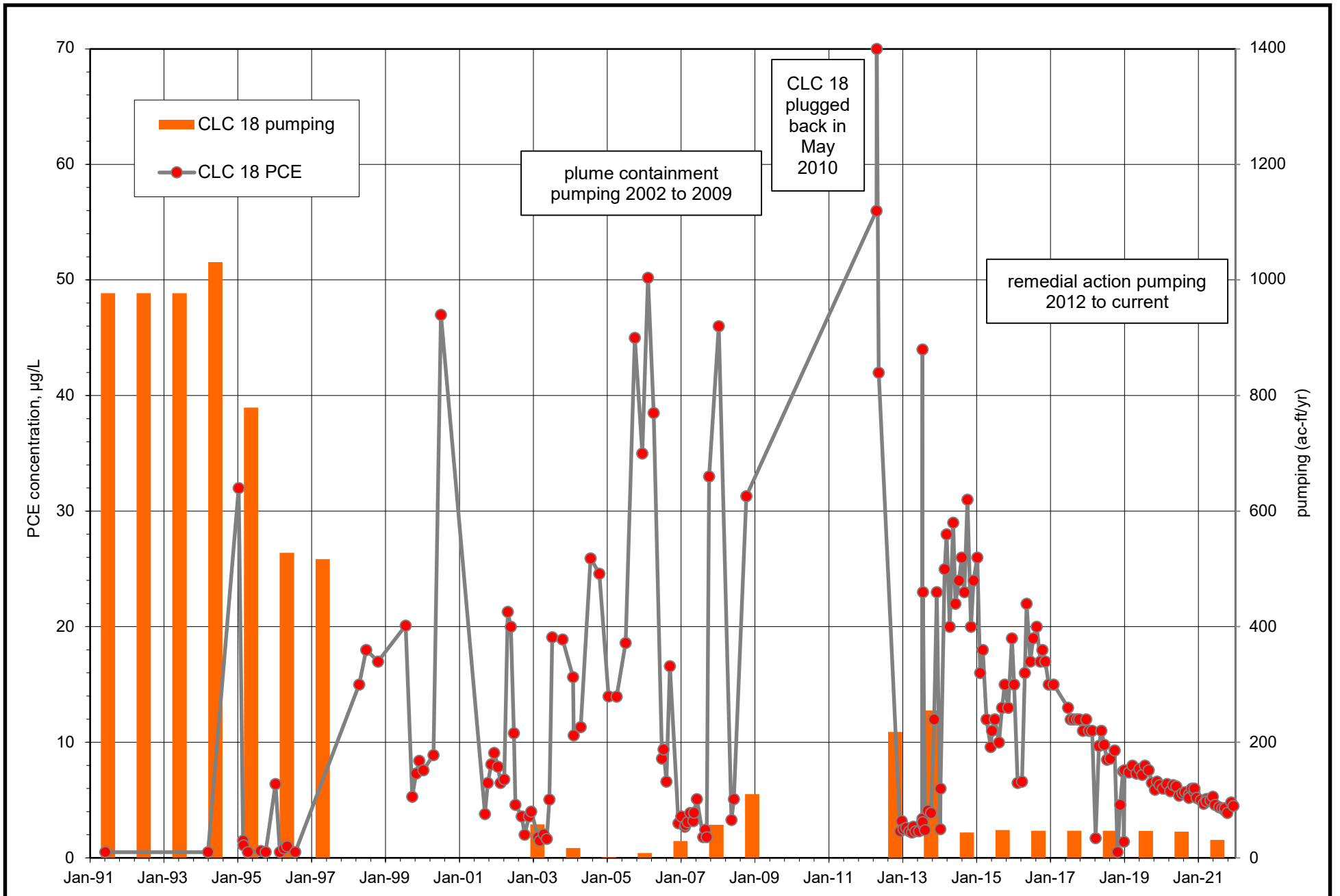


Figure 2. Graph showing PCE concentrations and pumping versus time for CLC 18, Griggs and Walnut Site, Las Cruces, New Mexico.

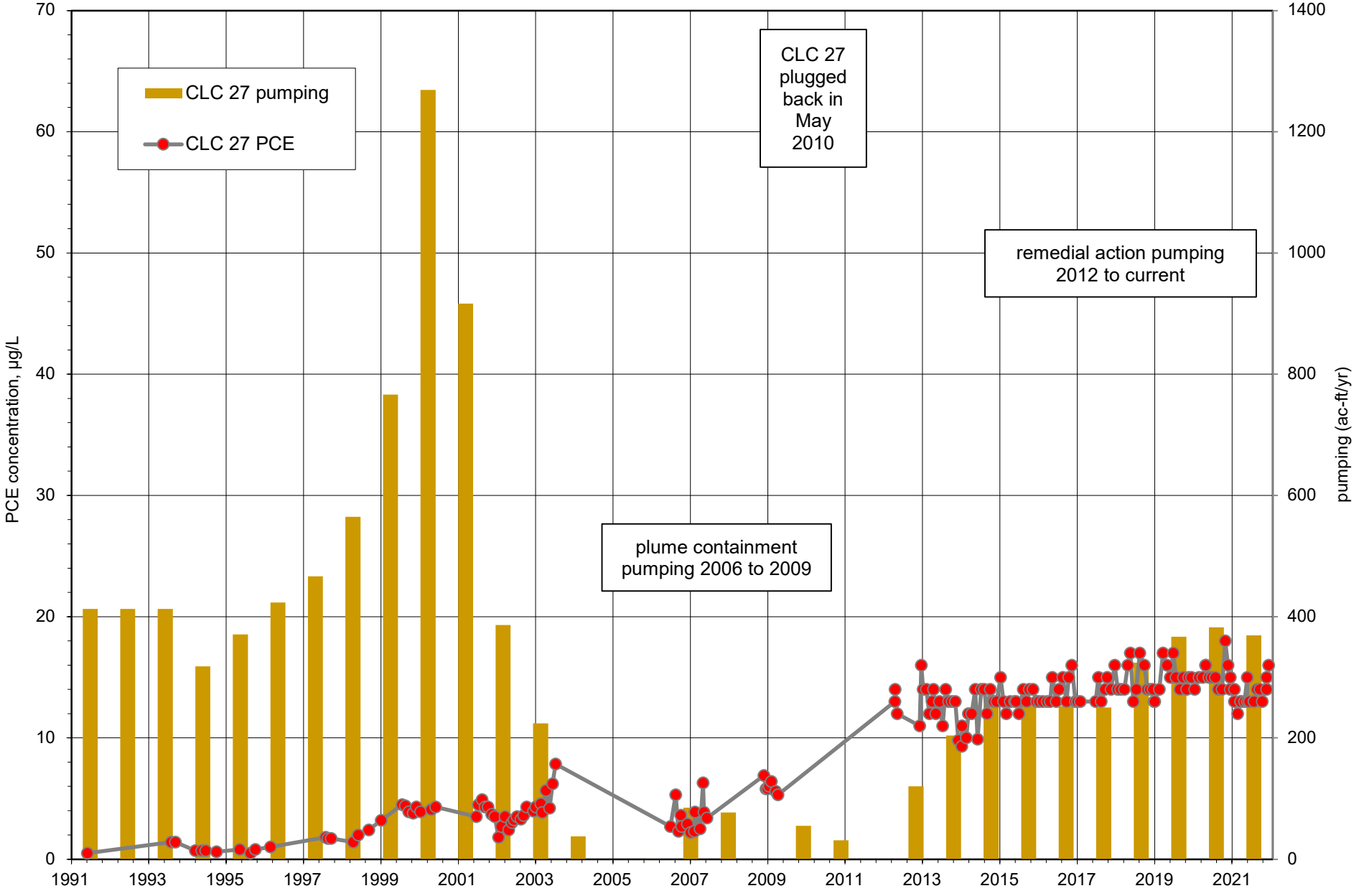


Figure 3. Graph showing PCE concentrations and pumping versus time for CLC 27, Griggs and Walnut Site, Las Cruces, New Mexico.

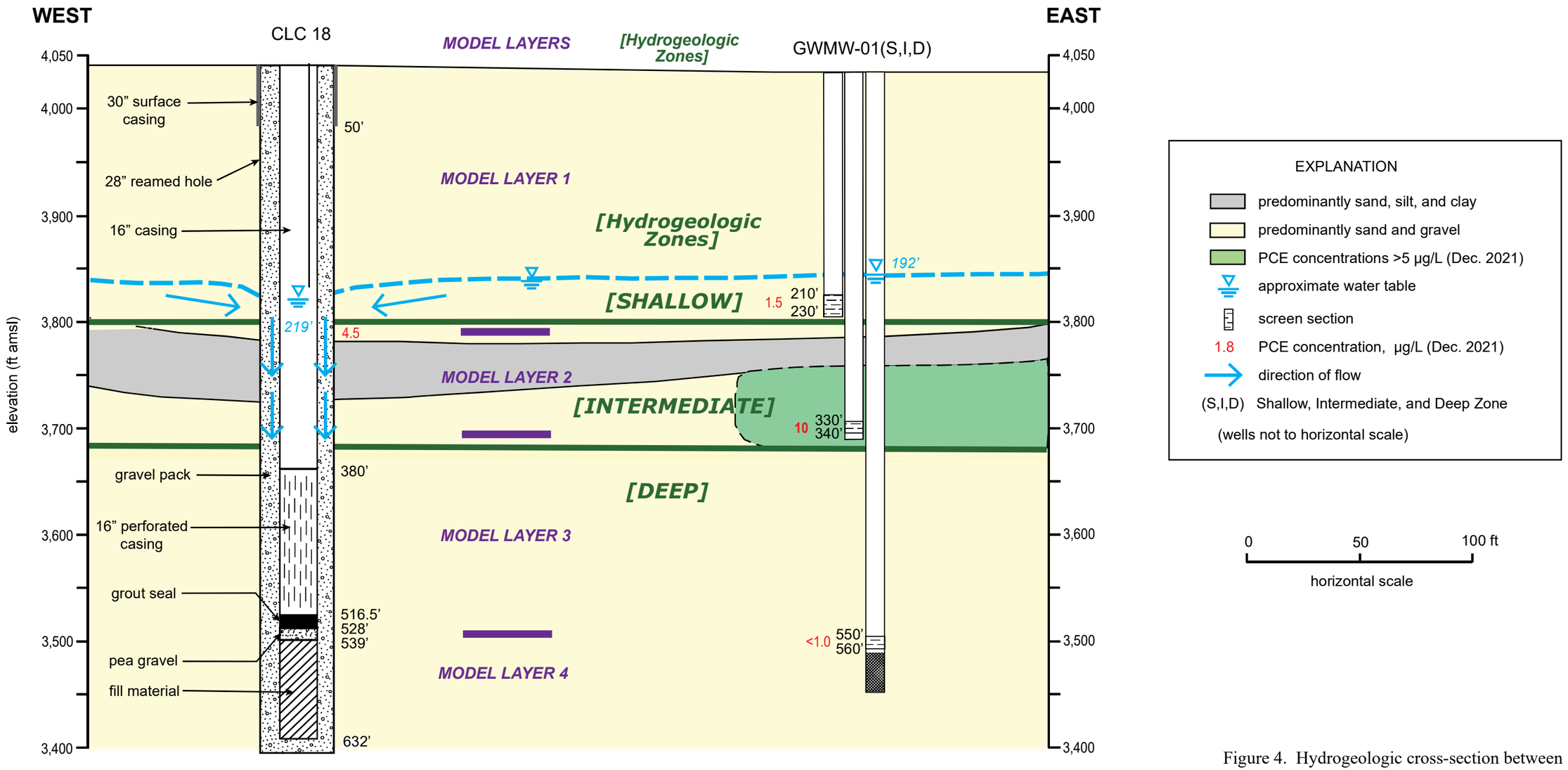


Figure 4. Hydrogeologic cross-section between CLC 18 and GWMW-01 showing well completion details and distribution of December 2021 PCE concentrations, Griggs and Walnut Site, Las Cruces, New Mexico.

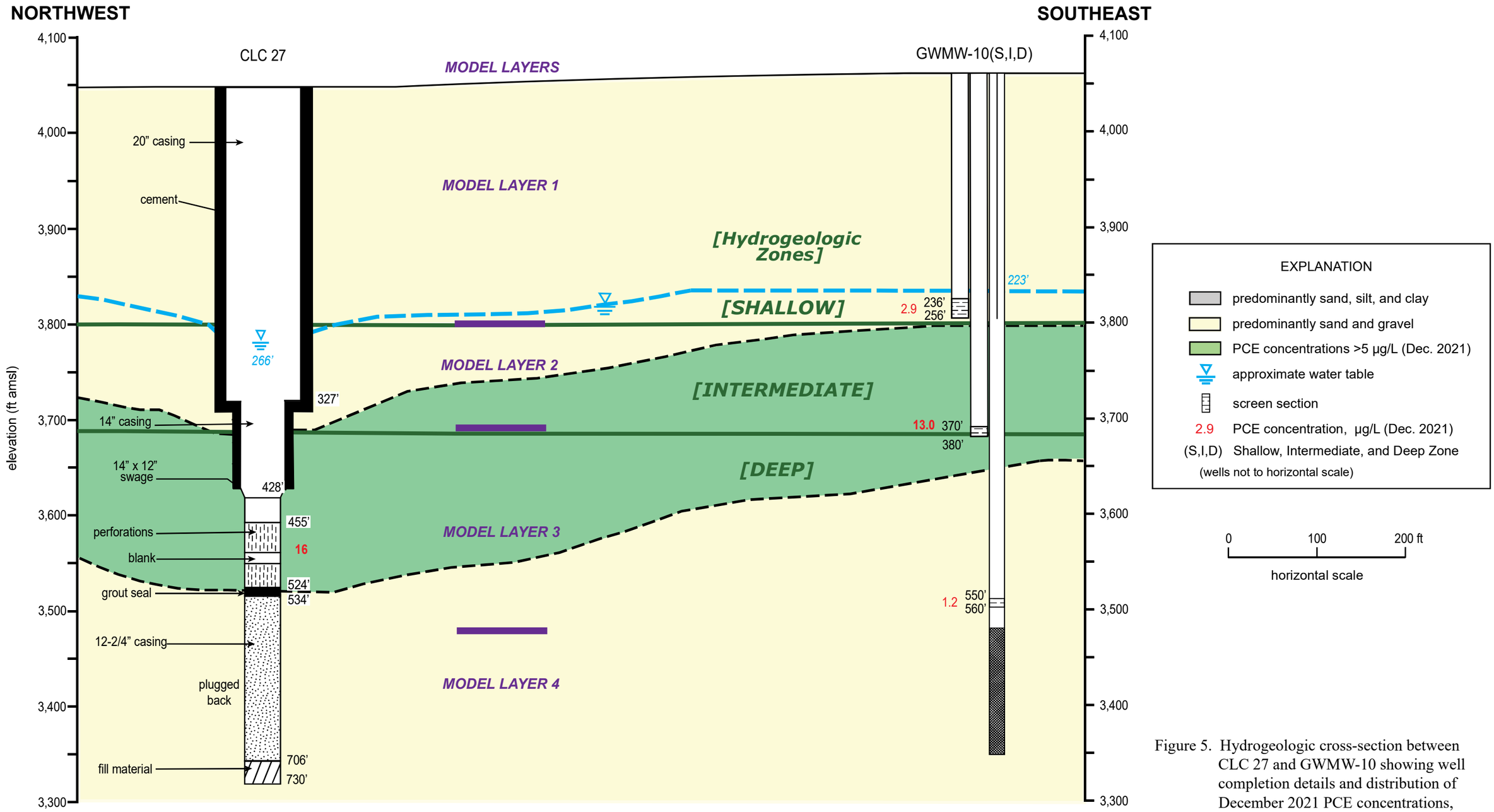


Figure 5. Hydrogeologic cross-section between CLC 27 and GWMW-10 showing well completion details and distribution of December 2021 PCE concentrations, Griggs and Walnut Site, Las Cruces, New Mexico.

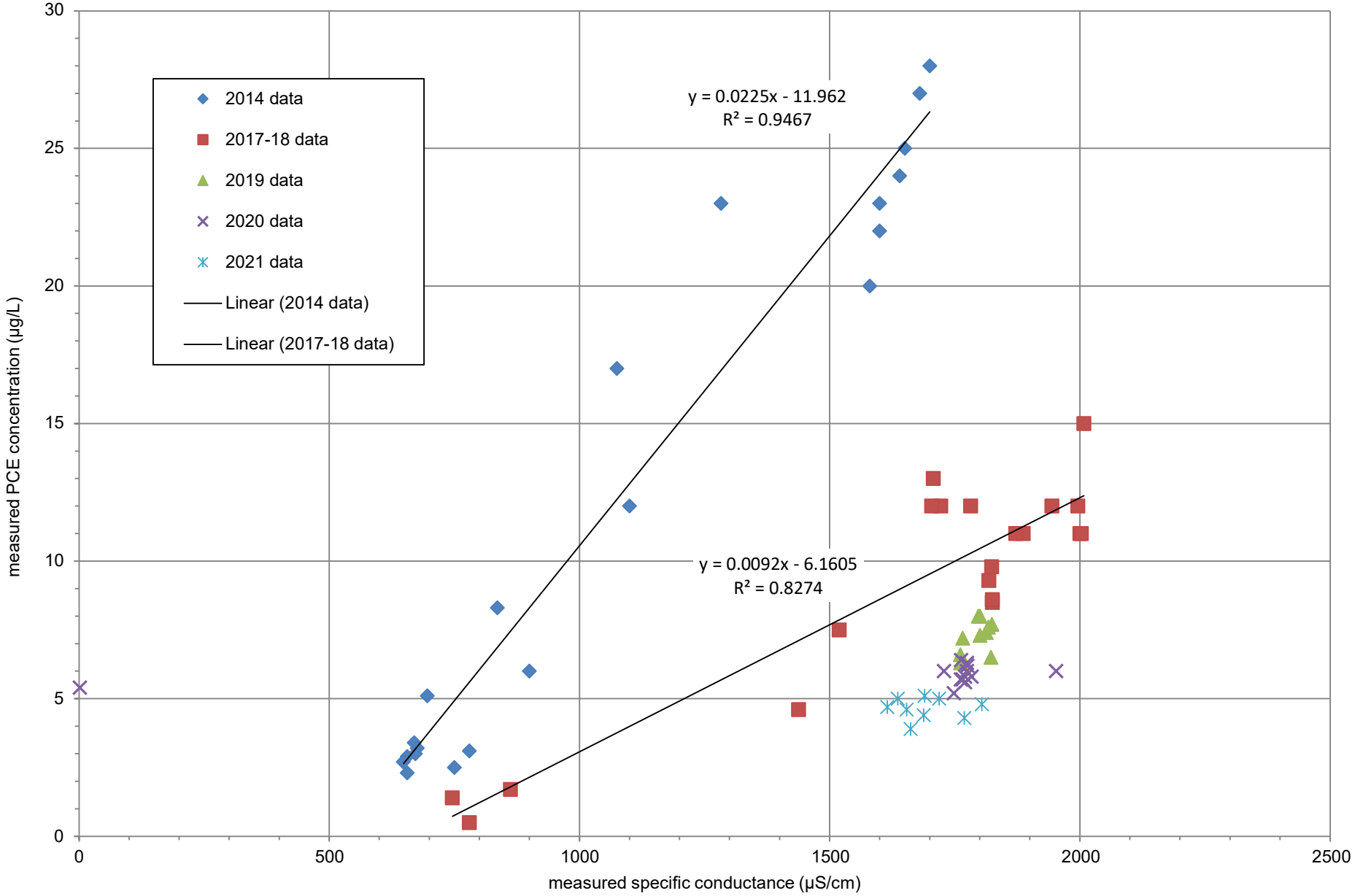


Figure 6. Graph showing correlation between specific conductance and PCE at extraction well CLC 18, Griggs and Walnut Site, Las Cruces, New Mexico.

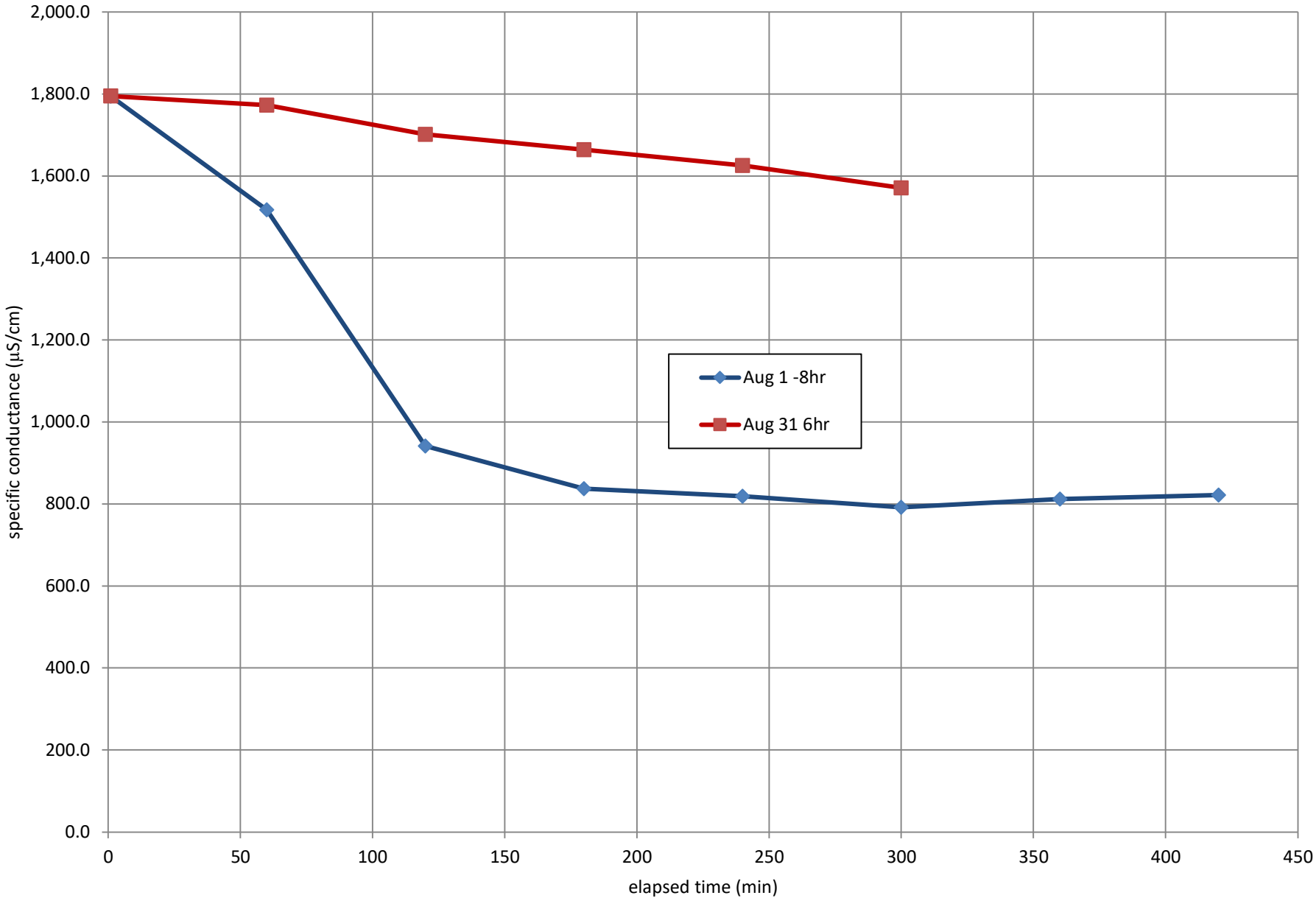


Figure 7. Graph of CLC 18 measured specific conductance verse time for an 8-hour pumping duration and for a 6-hour pumping duration, Griggs and Walnut Site, Las Cruces, New Mexico.

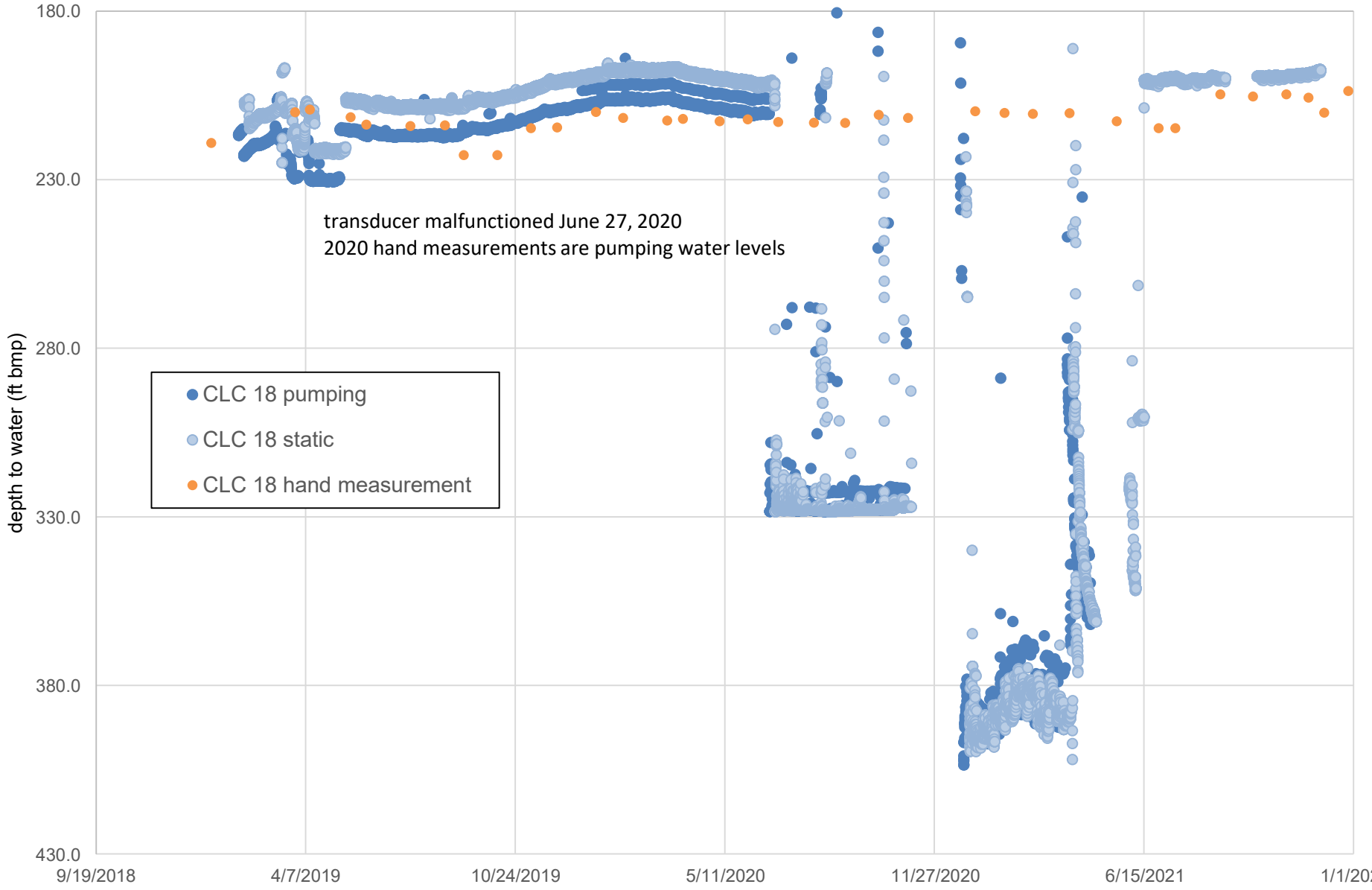


Figure 8. Graph showing non-pumping and pumping water levels for extraction well CLC 18, Griggs and Walnut Site, Las Cruces, New Mexico.

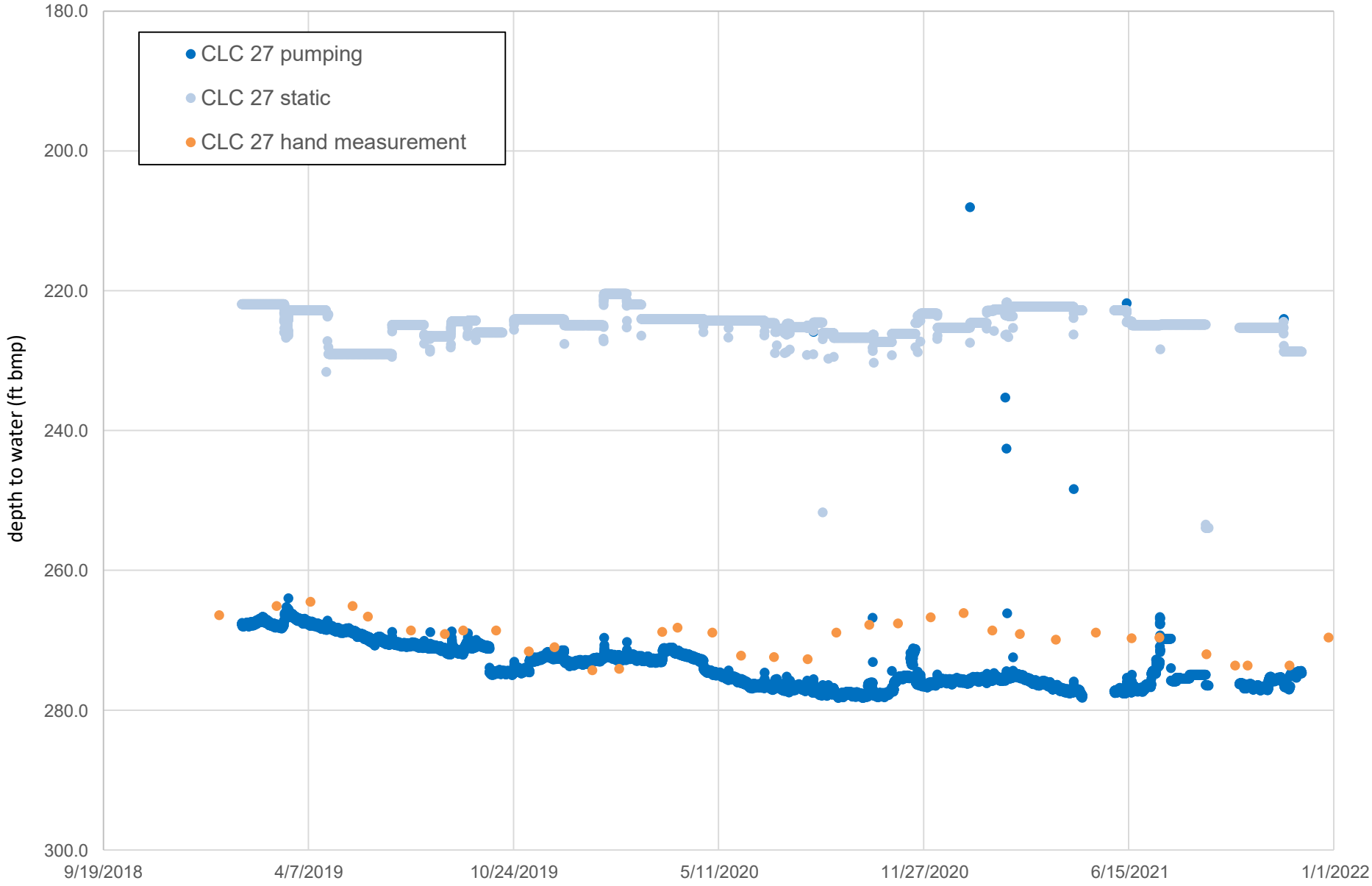


Figure 9. Graph showing non-pumping and pumping water levels for extraction well CLC 27, Griggs and Walnut Site, Las Cruces, New Mexico.

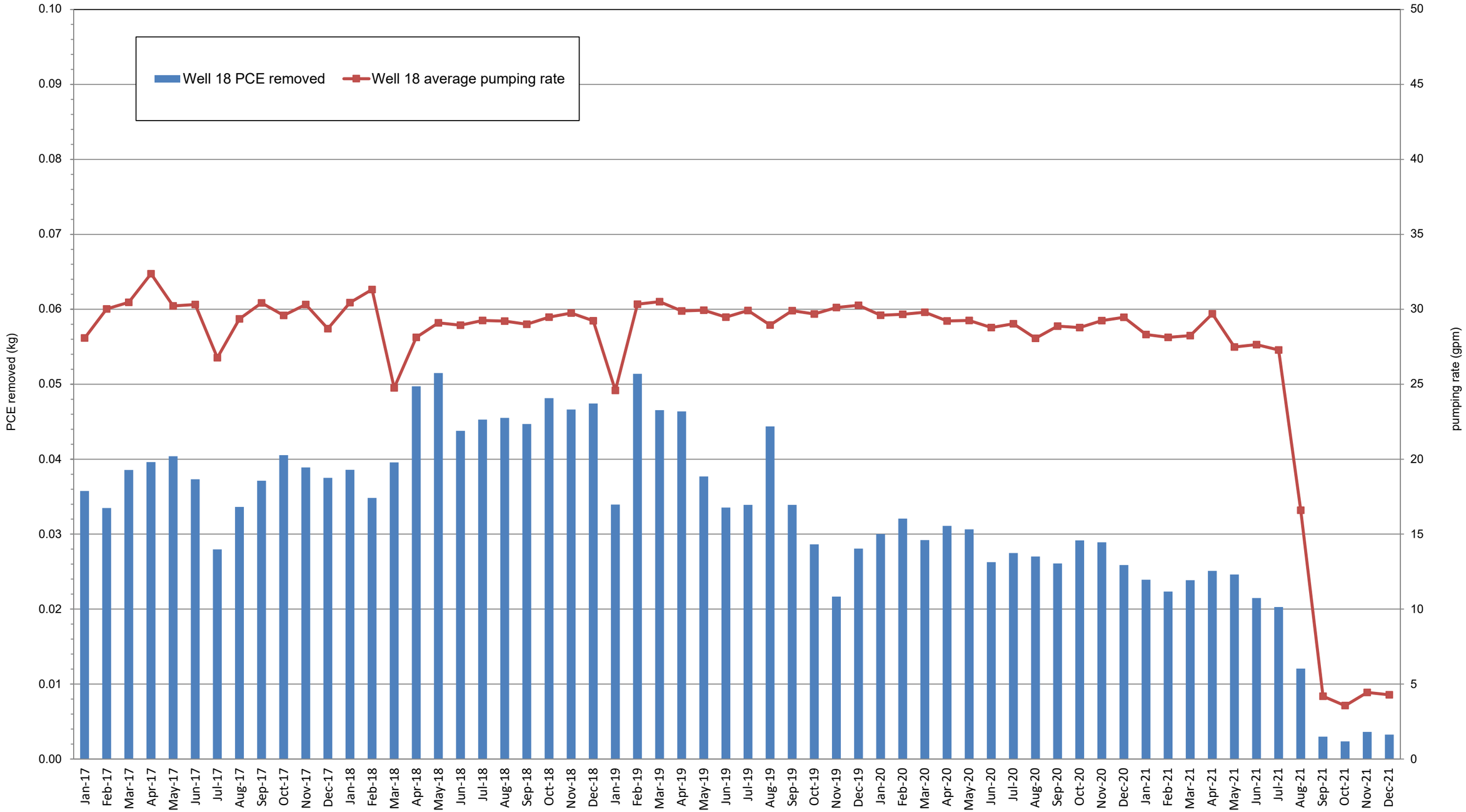


Figure 10. Graph of extraction well CLC 18 monthly pumping from 2017 through 2021 and PCE mass removal rate, Griggs and Walnut Site, Las Cruces, New Mexico.

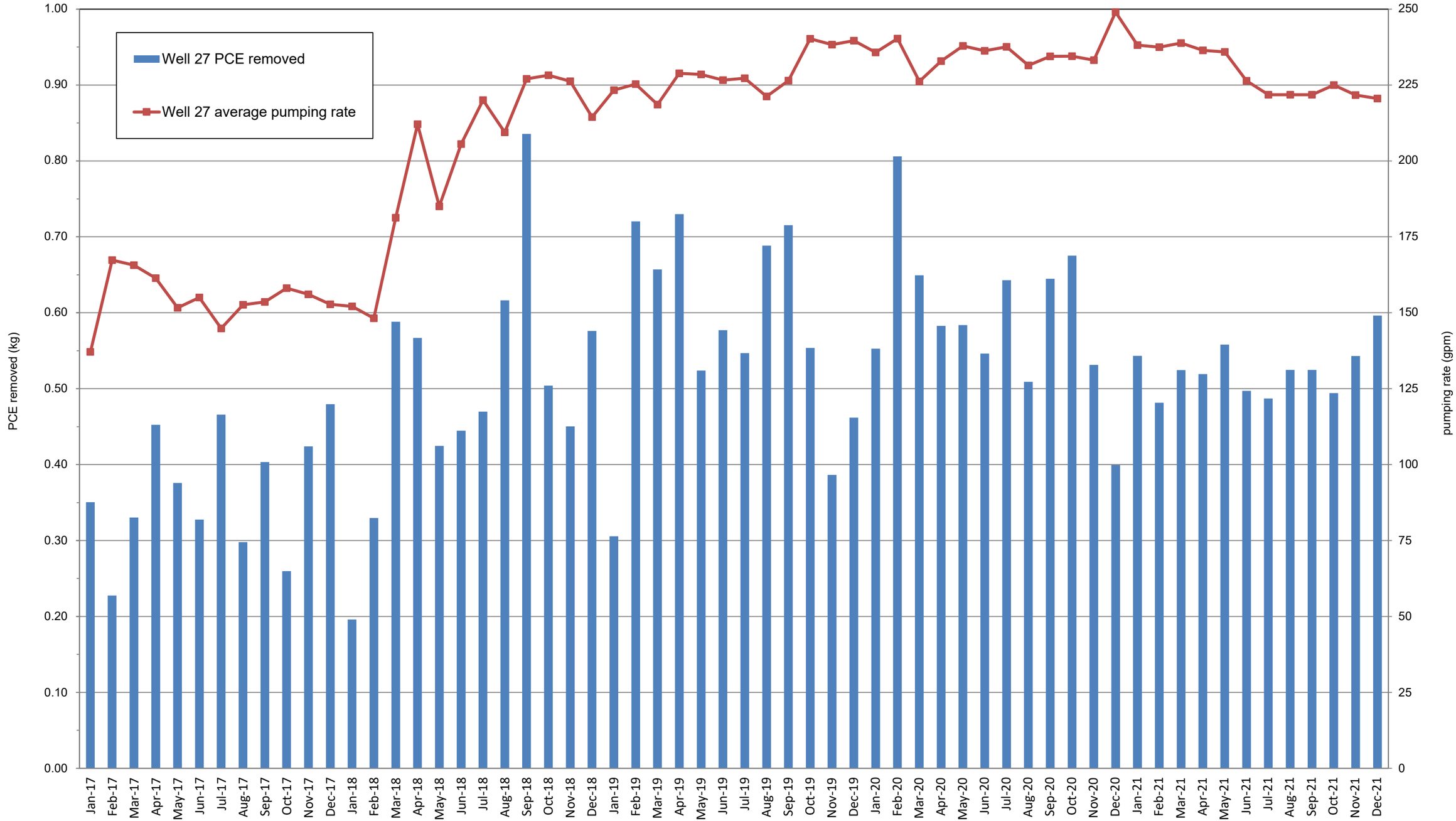


Figure 11. Graph of extraction well CLC 27 monthly pumping from 2017 through 2021 and PCE mass removal rate, Griggs and Walnut Site, Las Cruces, New Mexico.

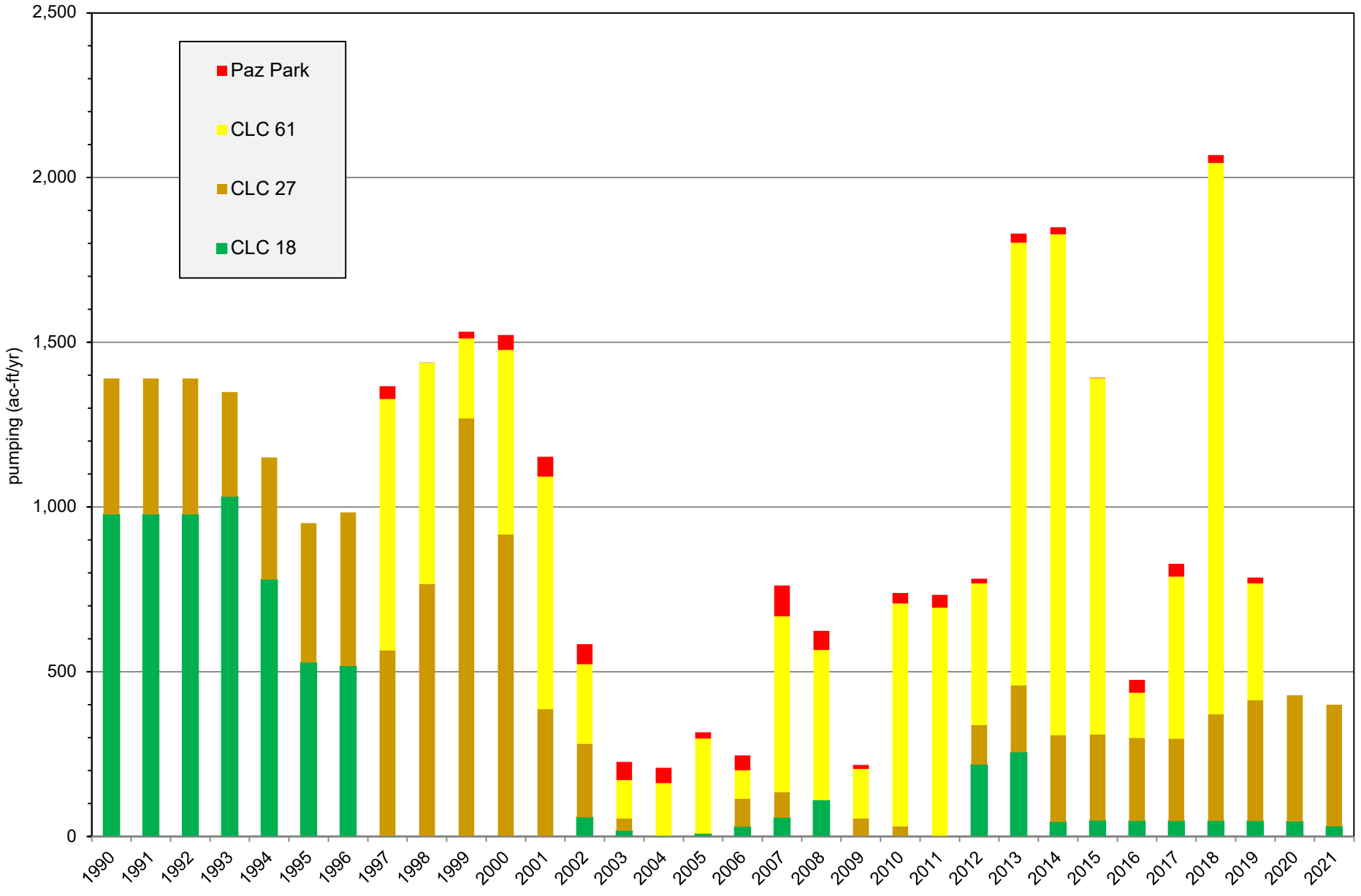


Figure 12. Bar graph of model-simulated annual pumping from 2012 to current, Griggs and Walnut Site, Las Cruces, New Mexico.

N

K ≥ 10 ft/day

K < 10 ft/day

K < 10 ft/day

N Walnut St

S Walnut St

CLC 18

CLC 27

Shallow

Deep

Intermediate

W Griggs Ave

E Griggs Ave

E Lohman Ave

Las Cruces

25

W Picacho Ave

Explanation

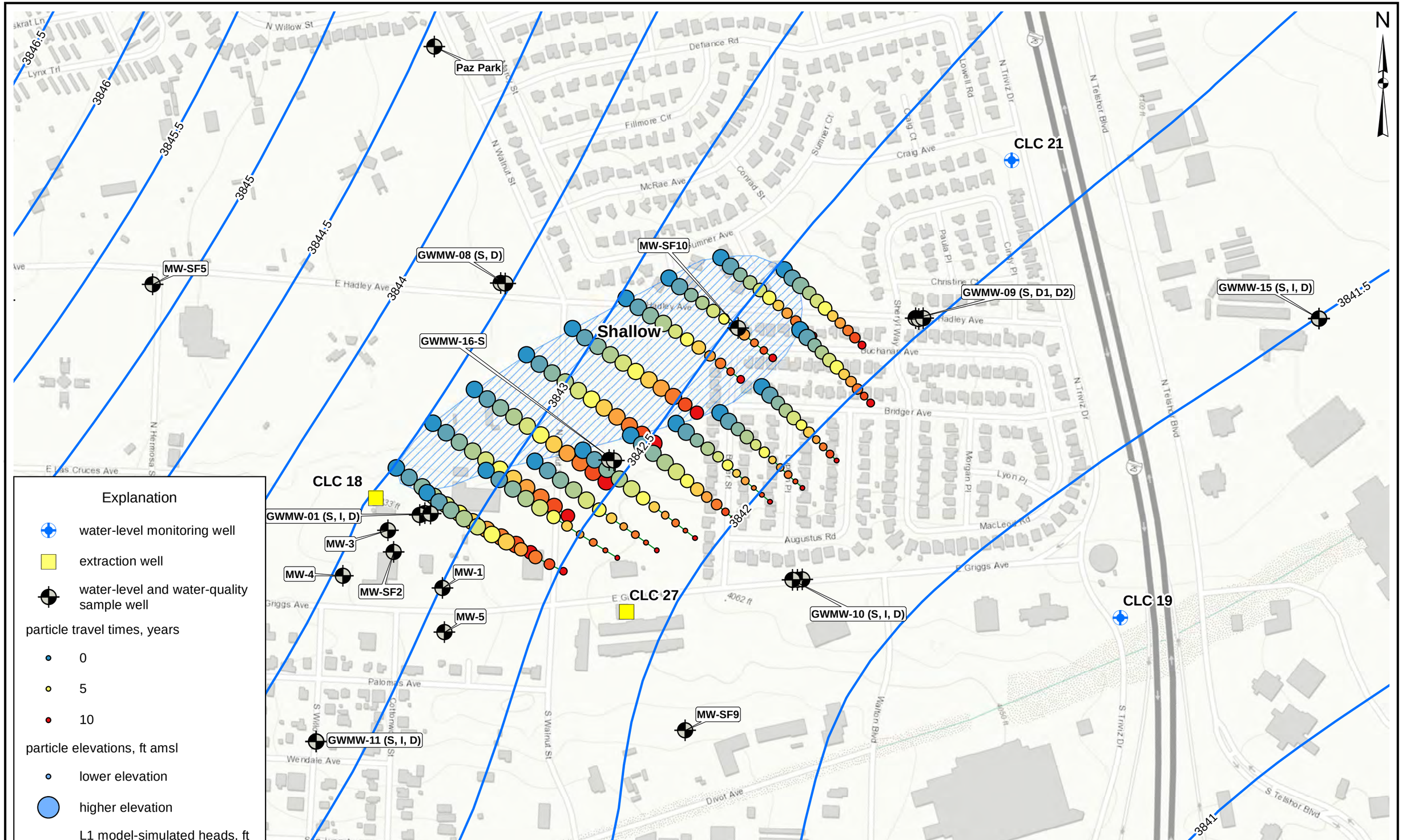
- December 2021 Shallow PCE plume
- December 2021 Intermediate PCE plume
- December 2021 Deep PCE plume
- K < 10 ft/day
- K ≥ 10 ft/day

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Figure 13. Map showing December 2021 Shallow, Intermediate, and Deep PCE plumes and Model Layer 3 hydraulic conductivity zones, Griggs and Walnut Site, Las Cruces, New Mexico.

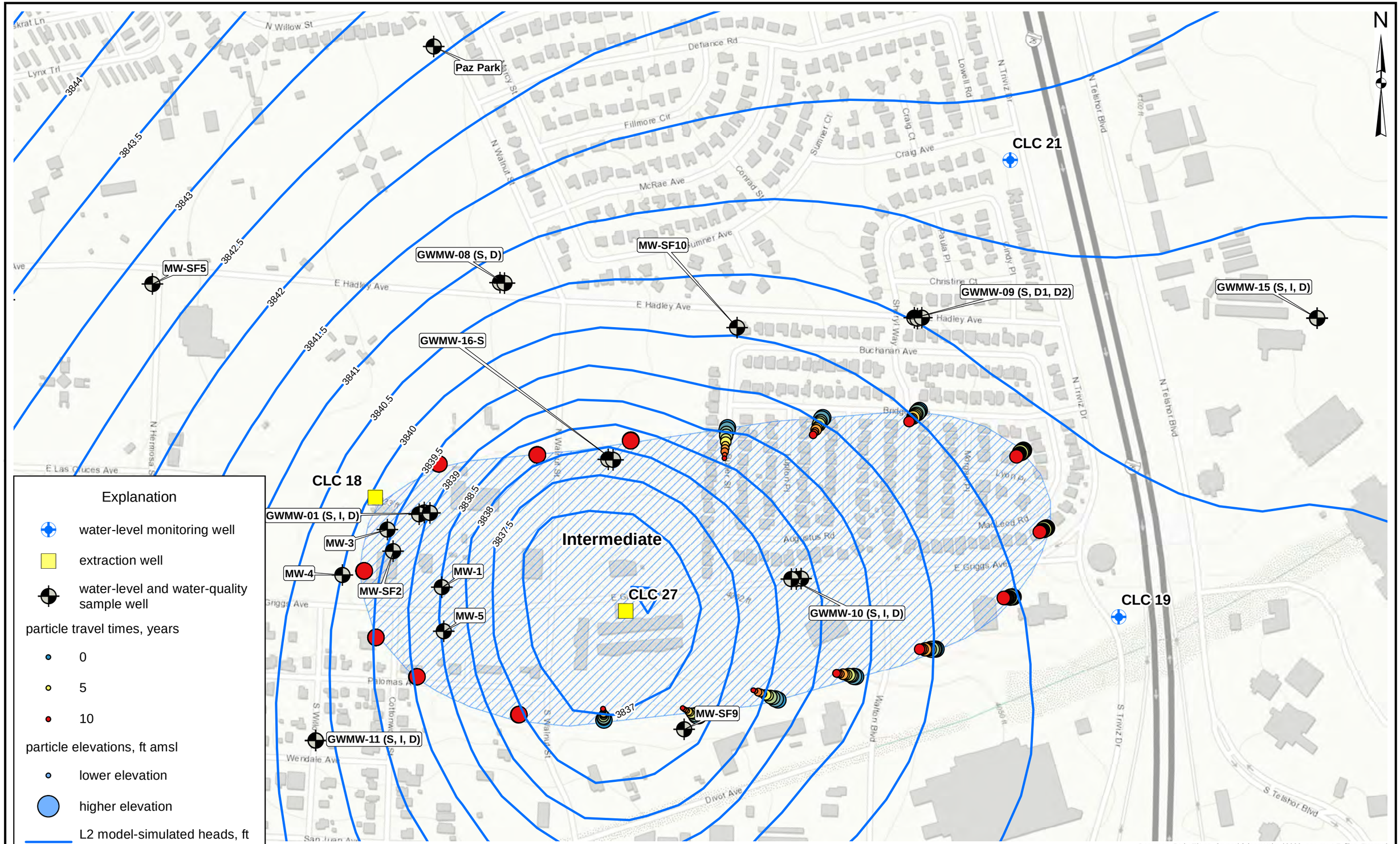
0 2,000 4,000 8,000 Feet

JOHN SHOMAKER & ASSOCIATES, INC.



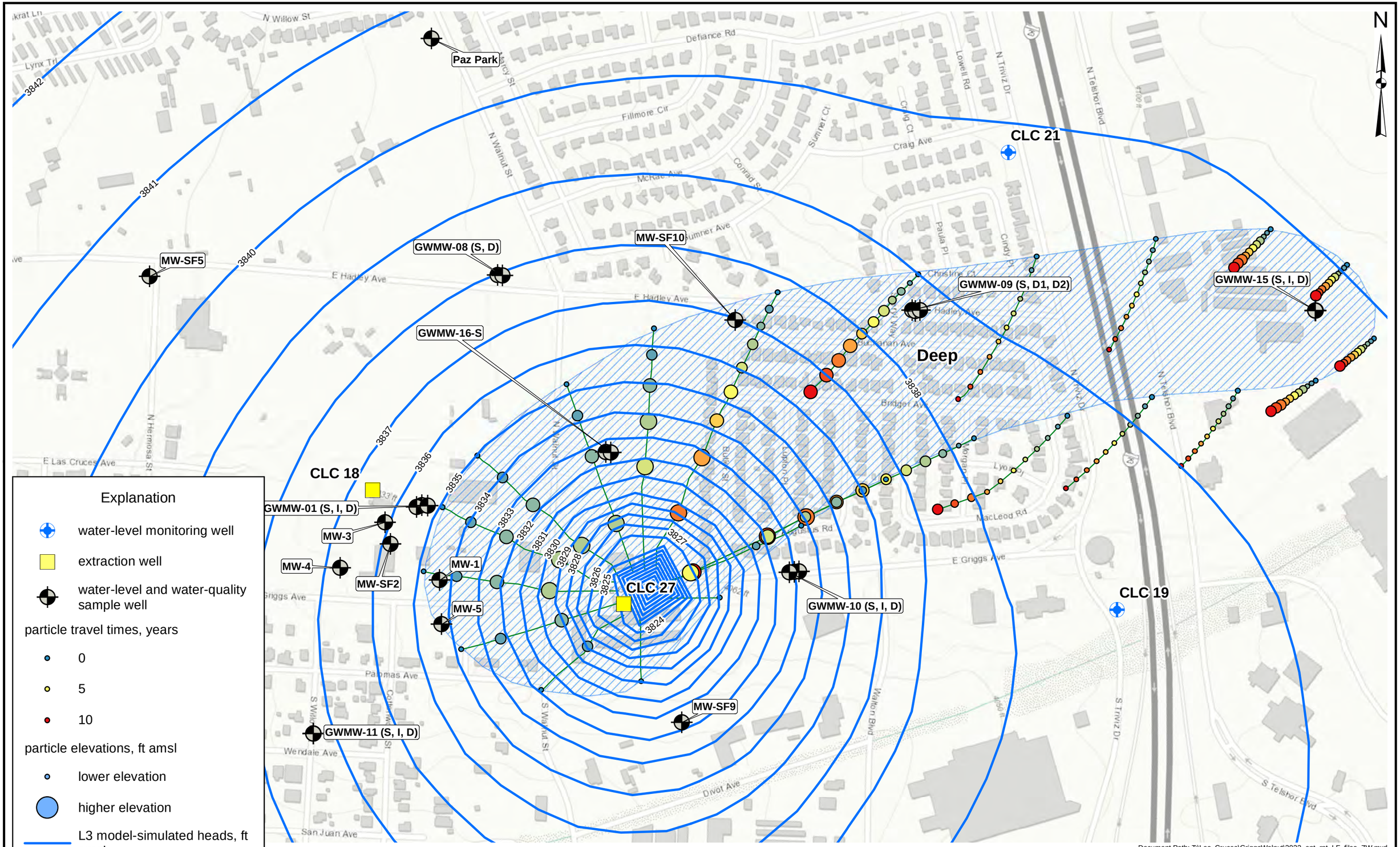
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Figure 14. Map showing December 2021 PCE plume and Model Layer 1 (Shallow zone) 2031 simulated heads and 10 year particle tracking (2021 to 2031), Griggs and Walnut Site, Las Cruces, New Mexico.



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Figure 15. Map showing December 2021 PCE plume and Model Layer 2 (Intermediate zone) 2031 simulated heads and 10 year particle tracking (2021 to 2031), Griggs and Walnut Site, Las Cruces, New Mexico.



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Figure 16. Map showing December 2021 PCE plume and Model Layer 3 (Deep zone) 2031 simulated heads and 10 year particle tracking (2021 to 2031), Griggs and Walnut Site, Las Cruces, New Mexico.

Appendix C

Sampling Report with Laboratory Reports for Annual Groundwater Monitoring Event

DBS&A
Daniel B. Stephens & Associates, Inc.

Appendix C. Groundwater Sampling Activities, December 2021

This appendix provides summarizes the groundwater monitoring and groundwater sampling activities that took place in December 2021 for inclusion in the 2021 annual report for the Griggs-Walnut Ground Water Plume Superfund Site (the GWP site).

C.1 Groundwater Sampling Methods and Water Levels

Daniel B. Stephens & Associates, Inc. (DBS&A) measured groundwater elevations and collected groundwater samples from wells at the GWP site on December 13 through 17, 2021 in accordance with the current sampling and analysis plan (SAP) dated April 26, 2021 (DBS&A, 2021). Groundwater samples were also collected from additional wells, as requested by the U.S. Environmental Protection Agency (EPA) in comments related to the 2020 annual report.

Groundwater elevations were measured site-wide on December 13 through 16, 2021, and groundwater samples were collected on December 13 through 17, 2021. A total of 31 wells were sampled (Table C-1). Only water levels were measured in CLC 26, GWMW-06S, MW-1, MW-3, and MW-4. MW-5 was on the list for sampling, but was dry. The sampling methods are provided in Table C-2.

C.2 Sampling Requirements and Documentation

In compliance with the SAP (DBS&A, 2021), equipment blanks were collected at a frequency of 1 per day when non-dedicated sampling equipment was used (i.e., when the bladder pump was used for sampling). Field blanks were filled using deionized water. Trip blanks were included in each cooler that was delivered to the analytical laboratory (Hall Environmental Analysis Laboratory [HEAL] in Albuquerque, New Mexico).

Table C-1. Groundwater Samples Collected, December 2021

Sample Type	Number of Samples	Analyses [a]	Well ID
Monitor wells	31	VOCs by EPA method 8260B	GWMW-01S, GWMW-01I, GWMW-01D, GWMW-08S, GWMW-08D, GWMW-09S, GWMW-09D1, GWMW-09D2, GWMW-10S, GWMW-10I, GWMW-10D, GWMW-11S, GWMW-11I, GWMW-11D, GWMW-15S, GWMW-15I, GWMW-15D, GWMW-16S, GWMW-16D, MW-SF2, MW-SF5, MW-SF9, MW-SF10, NGMW-01, NGMW-02, and NGMW-03
City of Las Cruces production wells	4	VOCs by EPA method 8260B	CLC 19, CLC 20, and CLC 21
City of Las Cruces production wells	2	Arsenic (total and dissolved), uranium (total and dissolved), and field parameters	CLC 18 and CLC 27
Duplicate	6	VOCs by EPA method 8260B	CLC 20, GWMW-10S, GWMW10D, GWMW-11I, GWMW-11D, and NGMW03
MS/MSD	4	VOCs by EPA method 8260B	GWMW-09D1 (1 MS and 1 MSD), and GWMW-15I (1 MS and 1 MSD)
Field blank	4	VOCs by EPA method 8260B	Not applicable
Equipment blank	2	VOCs by EPA method 8260B	Not applicable
Trip blank	2	VOCs by EPA method 8260B	Not applicable

[a] Field parameters measured included pH, temperature, and specific conductance (provided in Table C-4).

VOCs = Volatile organic compounds
CLC = City of Las Cruces
EPA = U.S. Environmental Protection Agency
MS = Matrix spike
MSD = Matrix spike duplicate

Table C-2. Sampling Methods, December 2021

Sampling Method	Number of Samples	Well ID
Hydrasleeve	31	GWMW-01S, GWMW-01I, GWMW-01D, GWMW-08S, GWMW-08D, GWMW-09S, GWMW-09D1, GWMW-09D2, GWMW-10S, GWMW-10I, GWMW-10D, GWMW-11S, GWMW-11I, GWMW-11D, GWMW-15S, GWMW-15I, GWMW-15D, GWMW-16S, GWMW-16D, MW-SF2, MW-SF5, MW-SF9, MW-SF10, NGMW-01, NGMW-02, and NGMW-03
Grab (dedicated pump)	1	CLC 18 and CLC 27
Bladder pump	4	CLC 19, CLC 20, and CLC 21

Sampling was documented on field sheets (Attachment C-1) that note date, well identification, sample identification, sample time, field personnel, casing diameter/type, depth to water, water level indicator, water quality meter, sampling method/equipment type, comments, and field parameter values (temperature, pH, and specific conductance). Measured water levels are summarized in Table C-3. Field parameter measurements are summarized in Table C-4. Project activities were also recorded in the project's bound field notebook (Attachment C-2). Sample identification numbers from the SAP were used (e.g., GWMW-11I). The laboratory report generated by HEAL is provided as Attachment C-3.

Per manufacturer guidance, all Hydrasleeves were deployed at least 24 hours prior to sampling to enable groundwater re-equilibration within the water column. Following a minimum 24-hour re-equilibration period, samples were collected by pulling each Hydrasleeve at a rate of more than 1 foot per second to ensure opening of the sleeve's check valve, allowing groundwater from the targeted screen interval to enter the sleeve. Purge water was put into a labeled container on-site, and was later disposed of at the City's wastewater treatment plant (WWTP). The graduated rope and weights were lowered back into the monitor wells after sampling to be used again during the next sampling event.

Table C-3. Groundwater Level Measurements and Elevations, December 2021
Page 1 of 2

Well ID	Date	Depth to Water (feet)	Hydrologic Zone	Total Well Depth (feet)	Surveyed Measuring Point Elevation [a] (feet msl)	Groundwater Elevation (feet msl)
CLC 18	12/16/2021	210.10	S/I/D [b]	516.5	4,039.59	3,829.49
CLC 19	12/16/2021	227.00	D	675	4,064.77	3,837.77
CLC 20	12/14/2021	237.73	I/D	680	4,074.51	3,836.78
CLC 21	12/14/2021	238.10	I/D	682	4,075.25	3,837.15
CLC 26	12/14/2021	177.63	D	700	4,014.15	3,836.52
CLC 27	12/16/2021	271.56	D	524	4,057.12	3,785.56
GWMW-01S	12/13/2021	194.84	S	230	4,038.69	3,843.85
GWMW-01I	12/13/2021	201.65	I	346	4,038.96	3,837.31
GWMW-01D	12/13/2021	201.48	D	560	4,038.29	3,836.81
GWMW-06S	12/15/2021	96.68	S	130	3,946.78	3,850.10
GWMW-08S	12/13/2021	175.17	S	210	4,020.09	3,844.92
GWMW-08D	12/13/2021	181.67	D	506	4,019.85	3,838.18
GWMW-09S	12/15/2021	209.55	S	228	4,051.10	3,841.55
GWMW-09D1	12/15/2021	211.91	D	426	4,050.79	3,838.88
GWMW-09D2	12/15/2021	212.56	D	565	4,051.11	3,838.55
GWMW-10S	12/15/2021	222.63	S	257	4,063.84	3,841.21
GWMW-10I	12/15/2021	226.85	I	386	4,063.95	3,837.10
GWMW-10D	12/15/2021	228.03	D	575	4,064.60	3,836.57
GWMW-11S	12/13/2021	179.11	S	205	4,022.72	3,843.61

[a] Provided by John Shomaker & Associates, Inc. based on City of Las Cruces records.

[b] Screen is in deep zone, but thick gravel envelope allows for comingling of shallow and intermediate zones.

msl = Above mean sea level NM = Not measured

Table C-3. Groundwater Level Measurements and Elevations, December 2021
Page 2 of 2

Well ID	Date	Depth to Water (feet)	Hydrologic Zone	Total Well Depth (feet)	Surveyed Measuring Point Elevation [a] (feet msl)	Groundwater Elevation (feet msl)
GWMW-11I	12/13/2021	185.53	I	314	4,022.74	3,837.21
GWMW-11D	12/13/2021	185.74	D	540	4,022.67	3,836.93
GWMW-15S	12/13/2021	241.36	I	304	4,081.03	3,839.67
GWMW-15I	12/13/2021	241.85	D	475	4,081.06	3,839.21
GWMW-15D	12/13/2021	241.822	D	595	4,081.03	3,839.21
GWMW-16S	12/14/2021	189.87	S	205	4,033.07	3,843.20
GWMW-16D	12/14/2021	194.55	D	370	4,032.73	3,838.18
MW-1	12/13/2021	193.85	S	NM	4,037.14	3,843.29
MW-3	12/14/2021	Dry	S	189.7	4,034.56	Dry
MW-4	12/14/2021	Dry	S	185.7	4,031.59	Dry
MW-5	12/14/2021	Dry	S	191.8	4,036.24	Dry
MW-SF2	12/14/2021	192.18	S	200	4,035.71	3,843.53
MW-SF5	12/13/2021	149.43	S	152.73	3,995.63	3,846.20
MW-SF9	12/14/2021	191.33	S	203.1	4,032.35	3,841.02
MW-SF10	12/13/2021	195.71	S	204.4	4,038.66	3,842.95
NGMW-01	12/13/2021	128.10	S	170	3,975.48	3,847.38
NGMW-02	12/13/2021	133.43	S	170	3,980.79	3,847.36
NGMW-03	12/13/2021	138.21	S	170	3,985.11	3,846.90

[a] Provided by John Shomaker & Associates, Inc. based on City of Las Cruces records.

[b] Screen is in deep zone, but thick gravel envelope allows for comingling of shallow and intermediate zones.

msl = Above mean sea level NM = Not measured

Table C-4. Field Parameter Data, December 2021
Page 1 of 2

Well ID	Date	Time	pH	Specific Conductance (µS/cm)	Temperature (°C)
CLC 18	12/16/2021	8:25	6.3	1,802	18.2
CLC 19	12/14/2021	13:15	8.27	869	21.7
CLC 20	12/14/2021	13:55	8.5	927	23.1
CLC 21	12/14/2021	16:25	7.68	1,828	20.8
CLC 27	12/16/2021	8:53	6.92	1,136	20.9
GWMW-01S	12/13/2021	12:49	7.29	2,023	20.8
GWMW-01I	12/13/2021	12:38	7.38	1,646	20.5
GWMW-01D	12/13/2021	12:18	7.42	1,487	21.1
GWMW-08S	12/15/2021	8:20	6.52	2,217	17.8
GWMW-08D	12/15/2021	9:00	7.31	1,842	18
GWMW-09S	12/15/2021	13:55	7.52	1,832	20.3
GWMW-09D1	12/15/2021	13:20	7.48	2,053	21.1
GWMW-09D2	12/15/2021	13:40	7.6	1,538	21.9
GWMW-10S	12/16/2021	10:30	7.32	1,952	19.8
GWMW-10I	12/16/2021	10:58	7.28	1,752	20.7
GWMW-10D	12/16/2021	11:15	7.4	1,428	21.4
GWMW-11S	12/17/2021	8:52	6.87	1,317	18.4
GWMW-11I	12/17/2021	9:08	7.07	1,051	19.1
GWMW-11D	12/17/2021	8:18	6.75	580.7	17.1
GWMW-15S	12/16/2021	16:40	7.86	1,033	20.4

µS/cm = Microsiemens per centimeter

Table C-4. Field Parameter Data, December 2021
Page 2 of 2

Well ID	Date	Time	pH	Specific Conductance (µS/cm)	Temperature (°C)
GWMW-15I	12/15/2021	17:00	7.77	1,616	18.7
GWMW-15D	12/15/2021	17:17	7.67	892	19.7
GWMW-16S	12/16/2021	10:00	6.95	1,852	19.3
GWMW-16D	12/16/2021	9:43	6.95	1,455	19.3
MW-5	12/14/2021	Dry			
MW-SF2	12/14/2021	13:00	7.83	1,182	19
MW-SF5	12/15/2021	9:25	7.32	1,931	19
MW-SF9	12/15/2021	13:24	7.94	998	20.6
MW-SF10	12/15/2021	13:50	7.63	1,847	20.5
NGMW-01	12/15/2021	10:20	7.45	2,887	20.3
NGMW-02	12/15/2021	12:35	7.63	2,405	20.3
NGMW-03	12/15/2021	9:42	7.31	2,477	18.8

µS/cm = Microsiemens per centimeter

At the request of the EPA based on comments on the 2020 annual report, CLC 19, CLC 20, and CLC 21 were sampled. These wells are inactive supply wells. It is important to note that supply wells often have long or multiple screened intervals that pull water from across multiple layers within an aquifer. In contrast, wells that are designed for the purpose of groundwater monitoring are typically constructed with small, discrete screened intervals to provide a more distinct sense of water quality within a specific area of the aquifer. Potential data quality limitations related to the longer screened intervals in CLC supply wells include the following:

- *Dilution:* The primary limitation in collecting groundwater samples from supply wells is dilution of contaminants. A supply well will extract water from throughout the aquifer at a high rate of flow, mixing water from potentially contaminated intervals with water from uncontaminated intervals.
- *Preferential flow from low pressure zones:* It is conceivable that a portion of the aquifer exhibiting higher contaminant concentrations may pass unobserved due to uncontaminated water flowing from portions of the aquifer with higher hydraulic conductivity.
- *Proximity to known contamination:* CLC 26 is not located near the observed and assumed boundaries of the PCE plume, and has not historically exhibited detectable concentrations of PCE.

The SAP calls for sampling wells in order from the least to most contaminated. With the use of dedicated Hydrasleeves, sampling in this order is less important. DBS&A attempted to follow this directive, but many limitations (e.g., traffic control availability, site accessibility limitations, unknown anticipated PCE concentrations in new wells, coordination with others to access wells, bladder pump difficulties) made sampling from least to most contaminated across the entire plume difficult. At a minimum, well clusters (e.g., GWMW-01S/I/D) were sampled from anticipated least to most contaminated. With the exception of the bladder pump used to sample wells CLC 19, CLC 20, and CLC 21, no sampling equipment was reused during the December 2021 sampling event. After oil was discovered in CLC 21, the equipment was decontaminated to the extent possible, and the bladder was replaced prior to sampling CLC 19.

C.3 Sampling Difficulties and Well Conditions

Well-specific notes from the sampling event include the following:

- The dedicated weight for GWMW-08S was rusted at the hanger fitting and appears to have fallen off and into the well.

- There was difficulty deploying the Hydrasleeve into GWMW-08D. CLC was notified to see if investigating with a camera is necessary in the future.
- Based on recommendation from Hydrasleeve support staff, braided rope, rather than Herculine tether, was used for Hydrasleeve sampling in GWMW-01I, GWMW-01D, GWMW-09D1, GWMW-11I, and GWMW-11D. Both braided tether and Herculine were used at GWMW-09D2.
- GWMW-11S, GWMW-11I, and GWMW-11D were paved over. Sampling staff broke through pavement to uncover the wells.
- MW-5 was difficult to unlock and required use of a pry-bar and needle nose vise-grip pliers to open. DBS&A recommends that this well be abandoned after next year's annual sampling event if it continues to be dry.
- An obstruction was observed in CLC 20 at 380 feet below ground surface.

CLC 21 was observed to have 1.21 feet of oil at the top of the groundwater. CLC staff indicated that food grade oil was used to lubricate the pump in the past. The oil made the handling of the tubing, rope, and pump significantly more difficult and required multiple iterations of decontamination. Equipment, including some field staff clothing, needed to be disposed of. Upon inspection of the pump, it was also determined that the pump bladder required replacement.

Attachment C-1

Sampling Field Sheets

DBS&A
Daniel B. Stephens & Associates, Inc.

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12-16-21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
~~HydraSleeve~~ Deploy Date/Time: N/A
Sample Time: 0825

Well #: CLC 18
Well Diameter: _____(inches)
Depth to Water: 210.10 (feet btoc)
Total Depth of Well: 565 (feet)

Height of Water Column: _____(feet)
Purge Volume: 10 (gal)
Purge Method: ~~HydraSleeve~~ Bladder Pump
1.66"

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
0820 Initial	6.30	18.2	1817	164.2	1.49	None
0816 1 Dedicated Meter →			1801.65			
2						
3						

Sample Description: ~~3 VOA Vials preserved w/ HgCl2~~ 2 Plastic, No odor
Clear, No odor

Physical Observations: Pumping 87.31 GPM since 0700
City's dedicated pump

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs - Walnut
Project #: 0021.1359.00
Project Manager: J. Rocco

Sampler: Tm & IT
Sample Date: 12-17-21
Sample Time: 1315

Well #: CLC 19 402 - 675' - Screen
Well Diameter: ~16" (can't see entirely) (inches)
Depth to NAPL: N/A (feet btoc)
Depth to Water: 227.00 (feet btoc)
Total Depth of Well: 675 (feet)

Height of Water Column: _____ (feet)
Casing Volume: _____ (gal)
Purge Volume: 3.0 (gal)
Purge Method: Bladder pump 1.66"

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

	Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
1241	Initial 0.1 gal	7.95	22.4	872	15.7	1.26	None
1246	1 0.5 gal	8.10	21.9	869	29.8	1.49	Slightly - dark particles
1300	2	8.24	21.7	871	+/- 18.5	0.48	Turbid - Gray w/ sheen
1308	3	8.26	21.6	869	-38.3	0.31	"
1315		8.27	21.7	869	-40.4	0.31	"

Sample Description: 3 VOA vials, Turbid, dark gray, light sheen
90 second Fill, 35 second discharge 260 psi
* Tubing/pump set @ ~350' BLS
Physical Observations: Tried to set Bladder pump @ 540' but obstruction @ ~350' prevented pump from going down. Tried 5X. Discharge 90 seconds Fill 35 seconds 260 psi
Analytical Method(s): 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Sampler: Y. Morgan & I. Torres
Project #: DB21.1359.00 Ph 1 Task 2
H.Sleeve Deploy Date/Time: N/A
Sample Date: 12.14.21
Sample Time: 1355
Project Manager: J. Raucci
Bladder Pump well
BP set @ ~~526' BLS~~ 400' BLS → obstruction
Well #: CLC-20 + CLC20_DUP screen 380-673
Well Diameter: 15 (inches)
Height of Water Column: _____ (feet)
Depth to Water: 237.73 (feet btoc)
Purge Volume: 3.0 (gal)
Total Depth of Well: 680 (feet)
Purge Method: ~~HydraSleeve~~ Bladder pump 1.66

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

	Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
1335	Initial 1 gallon	7.34	21.5	932	136.2	1.15	Non-turbid
1337	1.25 gal	7.79	22.2	930	99.9	1.07	"
1343	2.0 gal	8.46	22.5	932	-2.8	0.87	"
1349	2.5 gal	8.54	23.1	930	-20.5	0.71	"
1355	3.0 gal	8.50	23.4	927	-13.9	0.64	"

Sample Description: 3 VOA Vials preserved w/ HgCl2 - CLC20

90-Second Fill 35-Second Discharge - Bladder Pump - 260psi

Physical Observations: Jan 2020 - Pedro's Tar Canon & Found horizontal obstruction @ 380'. Lowering tubing today (12.14.21) got stuck (would not go deeper) @ ~400'

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12-14-21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: N/A
Sample Time: 1625

screen 366-612
Tubing set @ 490' BLS

Well #: CLC-~~7~~ 21
Well Diameter: 15"-16" (inches)
Depth to Water: ~~237.06~~ 238.10 (feet btoc)
Total Depth of Well: 682 (feet)

Depth to oil 236.89

Height of Water Column: _____ (feet)
Purge Volume: 2.0 Gal ~~(gal)~~
Purge Method: ~~HydraSleeve~~ Bladder Pump

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

	Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
1558	Initial 0.25 Gal	8.55	21.3	1274	-5.5	1.07	Non turbid
1606	1 0.50 gal	8.70	21.1	1267	-52.5	1.15	"
1613	~~1.25 gal 2 gal~~	8.04	20.9	1789	-61.4	0.65	"
1620	3 1.5 gal	7.71	20.9	1830	-50.6	0.60	"
↑1625	2.0	7.68	20.8	1808	-46.2	0.57	"

Sample Description: 3 VOA Vials preserved w/ HgCl2

90-second Fill, 35-second discharge, 260 psi

Physical Observations: Steve (CLC) said oil on water (1.21') is food grade used to lubricate pumps in past.

Ran out of Nitrogen - sampled early

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: ~~DB21.1068.00~~ Ph 1 Task 2
Project Manager: ~~K. Jayne~~ J. Lucci

Sampler: Y. Morgan & I. Torres
Sample Date: 12.16.21
Sample Time: 0853

Well #: CLC 27

Well Diameter: _____(inches)
Depth to NAPL: —(feet btoc)
Depth to Water: 271.56 (feet btoc)
Total Depth of Well: _____(feet)

Height of Water Column: _____(feet)
Casing Volume: _____(gal)
Purge Volume: 1 gal / pumping (gal)
Purge Method: Pumping

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	6.92	20.9	1136	110.5	1.04	None
1						
2						
3						

Sample Description: 2 Plastic, No odor, Clear

CLC's dedicated pump

Physical Observations: Pumping since 0700 ~ 220.4 GPM
Totalizer = 758908.9 US KG
Clear odorless

Analytical Method(s): _____

~~to Cross barricades & R2 traffic control~~

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12.6.21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 12-13-21 1457
Sample Time: 1249

Well #: GWMW05
Well Diameter: 4" (inches)
Depth to Water: 194.84 (feet btoc)
Total Depth of Well: 230 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 2L ~~(gal)~~
Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.29	20.8	2023	77.5	10.8	Very turbid
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

HS-4.2L

Physical Observations: Very turbid, Rust color, odorless

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12-6-21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 12-13-21 14:40
Sample Time: 1038

Well #: 4 GWMW01I
Well Diameter: 5" (inches)
Depth to Water: 201.65 (feet btoc)
Total Depth of Well: 346 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 1 L (gal)
Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.38	20.5	11646	103.7	.64	Clear
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

HS-4-12"

Physical Observations: Clear, odorless

Tether 551' + 335' = 992'

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12.16.21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 12-13-21 ~~14:~~ 13:00
Sample Time: 1218

Well #: GWMW04D
Well Diameter: 3" (inches)
Depth to Water: 201.48 (feet btoc)
Total Depth of Well: 560 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 1L ~~(gal)~~
Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.42	21.1	1487	92.9	.84	Clear
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

HS-2-1L

Physical Observations: New 555' tether w/ braided rope
557+335=992 Clear, odorless

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12-15-21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 12-13-21 0905
Sample Time: 0820

Well #: ~~GW MW-08S~~ GWMW08-S

Well Diameter: 4" (inches)
Depth to Water: 175.17 (feet btoc)
Total Depth of Well: 210 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 2 Liters (~~gal~~)
Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	6.52	17.8	2148	221.7	0.75	Non-turb 6.6
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

Physical Observations: Note decreased weight noted @ hanger and fell to bottom of well. Hydrasleeve had turbid water in lower half. Collected sample from non-turbid upper half. HS-4-2L. Disposed of dedicated

Analytical Method(s): VOCs 8260B Horizontal tether - because it does not submerge readily

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12.15.21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 12.13.21 11:00
HS-2-12
Sample Time: 09:00

Well #: ~~MW-08D~~ GWMW08-D
Well Diameter: 3" (inches)
Depth to Water: 181.67 (feet btoc)
Total **Depth** of Well: 506 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 1 L ~~(gal)~~
Purge Method: HydraSleeve

Note:
One **casing volume** (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.31	18.0	1942	-83.2	.64	Slight
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

Physical Observations: Difficulties deploying sleeve. Hs stuck to side of well. Clear odor less. Slightly turbid

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12.16.21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 12.15.21/12:00
Sample Time: 1355

Well #: GWMW09-~~D~~S
Screen 210 - 228
Well Diameter: 4" (inches)
Depth to Water: 209.55 (feet btoc)
Total Depth of Well: 228 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 2L ~~(gal)~~
Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.52	20.3	1832	43.3	1.16	Turbid
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

HS-4-2L

Physical Observations: Turbid, Rust colored, odorless

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut

Project #: DB21.1359.00 Ph 1 Task 2

Sample Date: 12-16-21

Project Manager: J. Raucci

GWMW09-D1_MS GWMW09-D1_MSD

Well #: GWMW09-D1 Screen 410 - 420

Sampler: Y. Morgan & I. Torres

H.Sleeve Deploy Date/Time: 12-15-21 / ~~10:58~~ 11:15

Sample Time: 1320

Well Diameter: 5" (inches)

Depth to Water: 211.91 (feet btoc)

Total Depth of Well: 426 (feet)

Height of Water Column: _____ (feet)

Purge Volume: 6L ~~(gal)~~

Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.48	21.1	2053	92.7	.75	Slightly Turbid
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2 + 3 for MS + 3 for MSD = 9 VOAs total

175-4-2L

Physical Observations: Removed Herculine tether (declined) & replaced w/ braided Set @ 415' BLS. Slightly turbid, odorless.

Analytical Method(s): VOCs 8260B

1355 + 415 = 1770'

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12.16.21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 12-15-21 / 1146
Sample Time: 13:40

~~* GWMW09-D2_Dup~~ (1st)

Well #: GWMW09-D2
Screen 550-560
Well Diameter: 3" (inches)
Height of Water Column: _____ (feet)
Depth to Water: 212.56 (feet btoc)
Purge Volume: 1L ~~(gal)~~
Total Depth of Well: 565 (feet)
Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.60	20.8	1538	-84.0	.71	Clear odorless
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

HS-2-1L - deployed w/ braided rope tether.

Physical Observations: Clear odorless.

Analytical Method(s): VOCs 8260B

2000 - 1771 229' Braided
336' Hercules

585 - 229 = 336
650 + 336 = 986

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12-16-21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 12-15-21 1417
Sample Time: 1030

Well #: GWMW10-S + GWMW10-S_DUP Screen 247-257
Well Diameter: 4" (inches)
Depth to Water: 222.63 (feet btoc)
Total Depth of Well: 257 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 2L ~~(gal)~~
Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.32	19.8	1952	67.1	1.27	Very turbid
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2 X 2 (3 vials for Duplicate)

MS-4-2L

Physical Observations: Very turbid, odorless, Rust colored.

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12-16-21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 12-15-21 1442
Sample Time: 1058

Screen 320-330

Well #: GWMW10-I
Well Diameter: 5" (inches)
Depth to Water: 296.85 (feet btoc)
Total Depth of Well: 386 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 2L (gal)
Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.28	20.7	1753	105.4	.94	~~3+~~ turbid slightly
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

HS-4-2L sets @ 330' sleeve turbid at bottom, slightly at top

Physical Observations: Dispose of old dedicated Herculine. Deploy new/dry Herculine
Slightly turbid, odorless

Analytical Method(s): VOCs 8260B

1000 - 696 = 304 863 + 26 = 889

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12/16/21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 15:25 12-15-21
Sample Time: 1115

Screen 370'-380'

Well #: GWMW10-D
Well Diameter: 3" (inches)
Depth to Water: 228.03 (feet btoc)
Total Depth of Well: 575 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 1L ~~(gal)~~
Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.40	21.4	1428	101.4	.79	Clear
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

HS-2-1L set @ 380'

Physical Observations: Clear odorless

Analytical Method(s): VOCs 8260B

~~1000 - 791 = 209~~ ~~917 + 171 = 988~~ 228 + 162

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12-17-21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 12-13-21 1540
Sample Time: 0852

Well #: GWMW11-S
Well Diameter: 3" (inches)
Depth to Water: 179.11 (feet btoc)
Total Depth of Well: 205 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 1L ~~(gal)~~
Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	6.87	18.4	1317	-126.7	1.24	Clear
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

HS-2-1L

Physical Observations: Clear odorless

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project **Name**: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12-17-21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 12-13-21 1546
Sample Time: 0908

Well #: GWMW11-I
Well Diameter: 3" (inches)
Depth to Water: 185.53 (feet btoc)
Total Depth of Well: 314 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 1L ~~(gal)~~
Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.07	19.1	1051	-195.4	1.12	Slightly Turbid
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

Physical Observations: Clear, to slight turbid w/ organic particles, septic smell.

Analytical Method(s): VOCs 8260B

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GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12-17-21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 12-13-21 1538 ~~1539~~
Sample Time: 0818

Well #: GWMW11-D GWMW11-D_Dup
Well Diameter: 3" (inches)
Depth to Water: 185.74 (feet btoc)
Total Depth of Well: 540 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 1L ~~(gal)~~
Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	6.75	17.1	500.7	-72.3	1.19	clear
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

HS-2-1L

Physical Observations: Black fetter-stained. Anoxic malodor, Non turbid
Added 3 weights so tether would sink after HS sample)

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut

Project #: DB21.1359.00 Ph 1 Task 2

Sample Date: ~~12.15.21~~ 12-16-21

Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres

H.Sleeve Deploy Date/Time: 12.13.21 16:40

Sample Time: ~~16:40~~ Redeploy 12-15-21 @ 16:50 1640

Well #: GWMW15-5 ~~GWMW15-5_MS GWMW15-5_MSD~~

Well Diameter: 3" (inches)

Depth to Water: 241.36 (feet btoc)

Total Depth of Well: 304.2 (feet)

Height of Water Column: _____ (feet)

Purge Volume: 1 L ~~(gal)~~

Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.86	~~[redacted]~~ 20.4	1033	~~[redacted]~~ -25.8	.92	Clear
1				-25.8		
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2 ~~+ 3 Matrix spike + 3 Matrix Spike Duplicate = 9 VOA total~~

Physical Observations: 12-15-21 - pull HS and weight fell off before our arrival - lower 1" of HS broke off. Clear, odorless
Redeployed w/ new weight attached

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12.15.21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 12-13-21 1645
Sample Time: 17:00

Well #: GWMW15-I & fbGWMW15-I_MS & fbGWMW15-I_MSD
Well Diameter: 3" (inches)
Depth to Water: 241.85 (feet btoc)
Total Depth of Well: 475 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 1 L (~~gal~~)
Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.77	18.7	1616	78.1	.84	None
1						
2						
3						

Sample Description: ~~2~~ 9 VOA Vials preserved w/ HgCl2 (3 sample, 3 MS, 3 MSD)
HS-2-1L
Physical Observations: Clear odorless

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12.15.21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 12.13.21 1658
Sample Time: 17:17

Well #: GWMW15-D
Well Diameter: 3" (inches)
Depth to Water: 241.82 (feet btoc)
Total Depth of Well: 595 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 1L ~~(gal)~~
Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.47	19.7	892	-202.1	.44	None
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

1 of 3 2.1L

Physical Observations: Dark tether, anoxic odor
Sample turns dark as it reacts with HgCl2

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: ~~12.15.21~~ 12.16.21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 12.14.21/0955
Sample Time: 1000

Well #: GWMW16-5
Well Diameter: 4" (inches)
Depth to Water: 189.87 (feet btoc)
Total Depth of Well: 205 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 2L (~~gal~~)
Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	~~6.52~~	~~17.8~~	~~2148~~	~~221.7~~	~~.75~~	(VM)
1	6.95	19.3	1852	91.9	1.52	turbid
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

~~HG~~ HS-4.2L - very turbid e bottom, not 100% full

Physical Observations: ~~Clear odorless.~~ turbid, odorless

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12-16-21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 12-14-21 0948
Sample Time: 0943

Well #: GWMW 16-D
Well Diameter: 4" (inches)
Depth to Water: 194.55 (feet btoc)
Total Depth of Well: 370 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 2L ~~(gal)~~
Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	6.95	19.3	1455	71.6	1.00	Clear
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

HS-4-2L

Physical Observations: Clear odorless.

Analytical Method(s): VOCs 8260B

994 + 360 = 1354' on roll

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs- Walnut
Project #: AB21.1359.00
Project Manager: J. Ranch

Sampler: YR & IT
Sample Date: No sample 12.14.21
Sample Time: Dry

Well #: MW-5

Well Diameter: _____(inches)
Depth to NAPL: _____(feet btoc)
0850 Depth to Water: Dry (feet btoc)
Total Depth of Well: _____(feet)

Height of Water Column: _____(feet)
Casing Volume: _____(gal)
Purge Volume: _____(gal)
Purge Method: _____

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial						
1						
2						
3						

Sample Description: None

Physical Observations: _____

Analytical Method(s): _____

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12.15.21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 12-14-21 0801
Sample Time: 1300

Well #: MWSF2
Well Diameter: 2" (inches)
Depth to Water: 192.18 (feet btoc)
Total Depth of Well: 200 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 100 ml ~~(gal)~~
Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.83	19.0	1181	95.5	.87	Slight
1						
2						
3						

Sample Description: 2 ~~3~~ VOA Vials preserved w/ HgCl2 - Not enough Sample to fill 3 VOAs
HS-2-18" - partially filled

Physical Observations: Clear odorless, Slight turbid.

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12·15·21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 12/13/21 12:00
Sample Time: 0925

Well #: MW5F5
Well Diameter: 2" (inches)
Depth to Water: 149.43 (feet btoc)
Total Depth of Well: 152.73 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 0.5 L ~~(gal)~~
Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.32	19.0	1931	177.3	.75	Non turbid
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2
MS-2-18"

Physical Observations: Clear, odorless,

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12-15-21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 12-14-21, 0912
Sample Time: 1324

Well #: MWSF~~10~~ 9 MWSF9

Well Diameter: 2" (inches)
Depth to Water: 191.33 (feet btoc)
Total Depth of Well: 203.1 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 1L (gal)
Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.94	20.16	998	84.8	.64	slight
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

Physical Observations: Slightly turbid to clear, odorless.

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12-15-21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 12-13-21 - 1615
Sample Time: 1350

Well #: MW-5F10 MW5F10
Well Diameter: 2" (inches)
Depth to Water: 195.71 (feet btoc)
Total Depth of Well: 204.4 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 0.5L (gal)
Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.63	20.5	1847	111.1	.58	Slight
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

1.75" x 18" 1t5

Physical Observations: Clear to Slightly turbid, odorless

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12-15-21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 12-13-21 12:25
Sample Time: 10:20

Well #: NGMW01
Well Diameter: 4" (inches)
Depth to Water: 128.10 (feet btoc)
Total Depth of Well: 170 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 2L ~~(gal)~~
Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.45	20.3	2087	184.5	.72	Slight
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

Slightly turbid, No odor

Physical Observations: HS-4-2L was turbid @ bottom, slightly turbid @ top. Dispose of PPEs that were in well

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12-15-21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 12-13-21 1244 12:14
Sample Time: 12:35

Well #: NGMW02
Well Diameter: 4" (inches)
Depth to Water: 133.43 (feet btoc)
Total Depth of Well: 170 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 2L ~~(gal)~~
Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.63	20.3	2405	111.8	.67	slightly
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

Physical Observations: Clear to slightly turbid odorless. very light yellow to brown flue. Disposal of PPEs that were in well

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB21.1359.00 Ph 1 Task 2
Sample Date: 12-15-21
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 12-13-21 / 11:37
Sample Time: 0942

Well #: NGmw03 & NGmw03_DUP
Well Diameter: 4" (inches)
Depth to Water: 138.21 (feet btoc)
Total Depth of Well: 170 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 2L ~~(gal)~~
Purge Method: HydraSleeve

Note:
One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.31	18.8	2477	176.4	.71	Non turbid
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

Non turbid, No odor Sample. H2S was turbid @ bottom, Non turbid @ top

Physical Observations: Disposal of PDBs that were in well

Analytical Method(s): VOCs 8260B

Attachment C-2

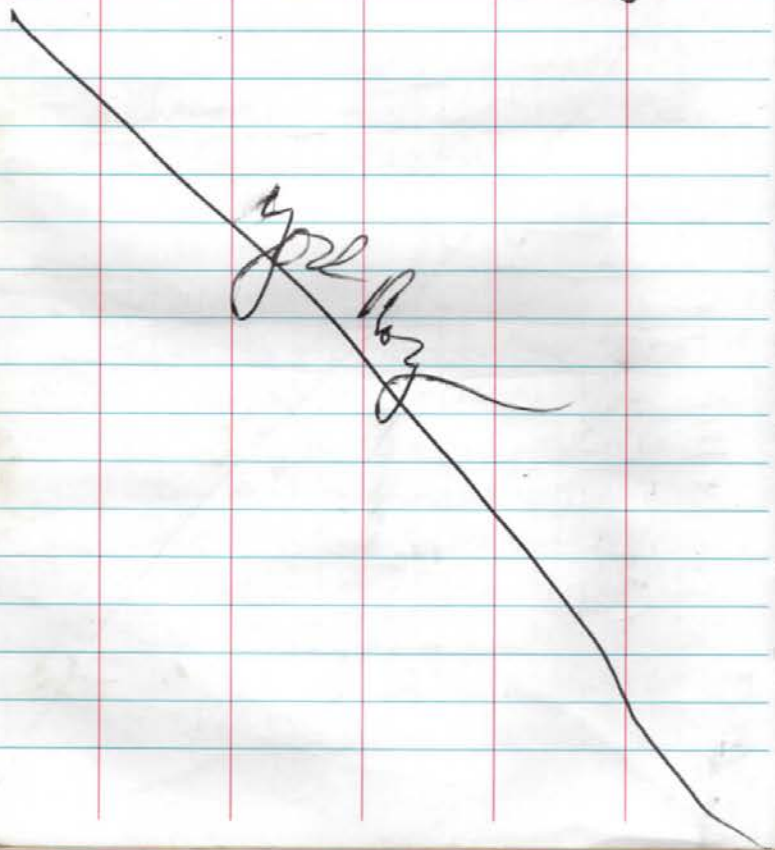
Field Notes

DBS&A
Daniel B. Stephens & Associates, Inc.

Griggs · Walnut Y. Morgan I. Torres 4-3-21

75°, clear, 10 mph wind

- 0730 - ice, check out hotel
- 0800 - meet Israel in parking lot to QA labels on samples & to complete chains. Split gear. He will return load ups & take samples to Hall
- 1030 - Leave hotel
- 1230 - Arrive Silver City



Griggs - Walnut Y. Morgan, I. Torres 12-13-21

41° - 67°, clear & Smph

0600 - Ken Leave Silver City

0800 - meet @ site. Tailgate Safety

0905 - Deploy new HS-4 on dedicated tether @ GWMW03S. Note dedicated weight rusted @ hanger fitting and apparently fell off in well.

0924 - Deploy new HS-2-12 on dedicated tether @ GWMW08A - Stuck in well. Tried w/ 3 different weight sizes. Retried w/ 1.75" x 18" sleeve & 2 weights - Stuck Tried 4 sleeves, no hardware 3 sizes of weight. Finally got sleeve to lower to bottom by shaking it as it went down - 2 long weights MIXED inside new sleeve, hanging w/ no hardware - only tether. 1.75" x 18". Call J. Rucci - he will ask CLC if they want to run a camera down.

11:00 - Finally deploy HS @ MW08A

11:37 - Deploy HS-4-24 @ NGMW03 - Dispose of PDBs that were in well.

1200 Deploy HS-2-18" @ MW5F5 to bottom of well. Short water column. Tied Knot in sleeve to shorten

1214 - Deploy HS-4-24 @ NGMW02 - Dispose of PDBs

Griggs-Walnut Y. Morgan, I. Torres 12-13-21 (cont.)

1235 - Deploy HS-4-2L @ NGMW01. Necessary to jig rope so HS sunk to depth @ NGMW01 & NGMW02

1300 - Deploy HS-2-1L @ GWMW01D

13 - Calls w/ Hydroscove tech support - Brad 770-480-2443 used braided rope NOT Herculine Plaus

GWMW01I - 5" well Herculine tether did not go down. Used braided & it went fine 1440 HS-2-2L

1457 GWMW01S - 4" well HS-2-2L

1539 - Deploy HS @ GWMW11-D
1542 - " " @ GWMW11-S
1546 - " " @ GWMW11-I
} Paired ord. broke w/ hammer

Note D & I had braided rope - easy deployment. S had Herculine - sinking very slowly or not at all. D & I - anoxic meadow

1615 - Deploy 18" x 1.75" HS @ MWSF10

1640 - Deploy HS @ GWMW15-S

1645 - " " @ GWMW15-I

1658 - " " @ GWMW15-D

1730 - Check in hotel - See Field Notes & Forms

Griggs-Walnut Y. Morgan I. Torres 12-14-21

Weather: 51-70° Partly Cloudy, 5-10mph wind

0715 - Tailgate safety, ice, Planning

0750 - Arrive on site

0801 - Depl HS-2 (short) @ MWSF2

0850 - MW-5 - difficult to unlock - cro-bar & needle-nose vice grips - dry

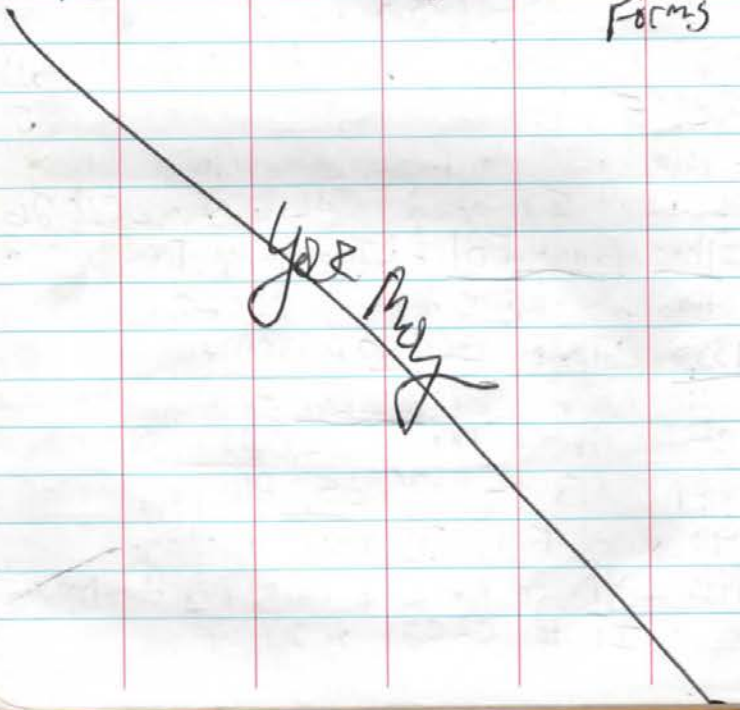
0912 - Depl HS-2-1L @ MWSF9

- CLC Pascual retired. New poc is Paul Gamboa 575-202-8033 or Jseeds 575-635-1259
- Steve w/ CLC points us @ GWMW16 - will help us today 575-405-1750
- 0948 - Deploy HS-4-2L @ GWMW16D
- 0955 " " " S
- 1010 - YM to Praxair for N refill while IT gauges WL w/ Steve @ CLC 26
- 11:00 Collect FB1 - DI on pump from Geotech before deploying CLC20
- 1355 Collect CLC20 - 3VOA & CLC20_Dup - 3VOA
- obstruction @ 330' in CLC20 - set pump @ 380-400' BLS, 260 psi, 90 seconds Fill, 35 second Discharge
- 1430 - YM to Praxair - more N2 Home Depot IT to CLC21 to set up

(cont.)

Griggs-Walnut Y. Moya, I. Torres 12-14-21

- 1500 - offsite - Steve (CLC)
Note CLC21 has 1.21' oil on top of gw. Steve said it is food grade used to lubricate pump in past
- CLCCO & 21 Bladder pump's N cylinder ran low - Sample before GW parameters were stable
- 1625 - collect CLC21
- NAPL made big mess on tubing, rope, clothing, truck. Take trash to City dumpster.
- 1730 - Hotel - See Field Notes & Forms



Griggs. Walnut Y. Moya, I. Torres 12-15-21

- Weather: 36°-64°, Mostly clear, 10-20 mph
- 0700 - Y.M attempting to clean oil from gear & truck From CLC21.
- Southwest Safety (Traffic control) not onsite @ 08:00. Call George - guy will arrive around 10:00
- Not enough time to do CLC 19
- Start pulling sleeves Placed 12-13-21
- Calibrate YSI
- 0820 Collect GWMW08-5 - 3VOA
- 0855 Collect FB1 - DI From lab (Hall Env) 3VOAs
- 0900 Collect GWMW08-D - 3VOA
- 0925 collect MW5F5 - 3VOA
- 0942 collect NGMW03 & NG MW03_DUP From HS-4.24
- 1020 Collect NGMW01 From HS.4.2L
- Southwest Safety onsite - set up First @ GWMW09 - trio wells
- 1115 deploy HS-4-2L @ GWMW09-D1 on braided tether, Dispose of Herculine
- 1146 deploy HS-2-1L @ GWMW09-D2 on mix of braided & Herculine. (Ran out of braided)
- 1200 deploy HS-4-2L @ GWMW09-S using dedicated Herculine tether
- 1215 SW Safety moves to Griggs

(Cont'd)

Griggs-Walnut Y.Mogyn, I. Torres 12-15-21

1235 - Collect NGMW02 3 VOA

1300 - Collect MWSF2 - only 2 VOA. Small sample yield in HS-2-18"

1324 - Collect MWSF9 - 3 VOA Vials

1350 - Collect MWSF10 @ 1350 - 3 VOA.

1417 - Deploy HS-4-2L @ GWMW10-S

- SW Safety set up Automated Flagger Assistance Device (AFAD) on Griggs - seems to be working well despite drivers ignoring signage at times

- 1442 - Deploy HS-4-2L @ GWMW10-I

- 1505 - " HS-2-1L @ GWMW10-D

- 1650 - Redeploy HS-2-1L @ GWMW15-S after pulling deployed sleeve & discovery no weight or water. Lower 1" of sleeve broke off after deployment

- 1635 - Amy Ewing on site

- 1700 - Collect GWMW15-I
  GWMW15-I_MS
  GWMW15-I_MSD
  } 3 VOAs

- 1717 Collect GWMW15-D - 3 VOAs Anoxic odor & gray color later dark gray in 100' interval but not at bottom

- 1745 - Leave site - See Field Sheets

Griggs-Walnut Y. Mogyn, I. Torres 12-16-21

Weather: 37-61°, Mostly Cloudy, 5-10 mph

0715: YM start safety Form & notes Tailgate Safety w/ Amy Ewing, IT, YM

0800 - meet Steve CLC @ CLC 18

0825: Collect 2 Plastic @ CLC 18 Josh w/ CLC says system running only Tues & Thurs now because containment bed is down

- Ty has Cones Barricades & R2 can do barricades but not flagging

- 0853 Collect CLC 27 - 2 Plastic

- SW Safety set up & ready on Griggs

- 0912 Collect FB2 - DI D

- 0943 Collect GWMW16-D - 3 VOA.

- 1000 Collect GWMW16-S - 3 VOA very turbid at bottom half of HS

- 1030 Collect GWMW10-S & GWMW10-S_DUP. 3 VOA each

- 1058 Collect GWMW10-I - 3 VOA

- 1115 Collect GWMW10-D - 3 VOA

- 1155 - A. Ewing off site

- 1218 - collect GWMW01D - 3 VOA HS-2-1L

- 1238 - collect GWMW01-I 3 VOA HS-2 4-18"

- 1249 - Collect GWMW01-S

- Traffic control ready @ Hadley

Griggs-Walnut Y. Morgan I. Torres (Cont.) 12-16-21

1320 - collect GWMW09-D1 3 VOAs
GWMW09-D1_MS
GWMW09-D1_MSD

1340 - Collect GWMW09-D2 3 VOAs

1355 - Collect GWMW09-S 3 VOAs
HS-4-2L

1410 - Leave Healy trio to Peak Air for more Nitrogen. IT to CLC 19
SWS - removing barricades & Cones

1445 - @ CLC19 w/ Steve (CLC).
Well has welded Steel Plate on top. Both 4" ports are bolted down. one has 1" PVC Sounder tube going down ? degs ? No room for our 1.66" pump. Other 4" port has transducer (?) cable inside Sounder tube (1" PVC). No space for a pump. J. Ranucci calls w/ Adrienne to determine course of action
- Josh (CLC) back @ CLC 19 said Contractor will be onsite tomorrow morning to get access to well.
- 1640 - collect GWMW15-S, 3 VOA, HS-2-2L
- 1645 - Collect FB3, 3 VOA
- 1720 - To hotel - leave site

Griggs-Walnut Y. Morgan I. Torres 12-17-21

0710 - Check out of hotel
0735 - Arrive @ GWMW11 trio
- tailgate safety
- rode past CLC19 - No activity
- Calibrate YSI
0800 - Collect FB4 - DI water From lab - all Field blanks (4) Filled w/ DI From HEAL.
0818 Collect GWMW11-D & GWMW11-D_Dup 3 VOA vials each. Tether
0852 Collect GWMW11-S - 3 VOA vials
0908 Collect GWMW11-I - 3 VOA vials
0930 - @ CLC19 - city personnel removed transducer. Hydro Resources onsite - pulled roof off building. waiting for equipment. Art onsite @ 1005 - boss @ Hydro. Was here w/ Rodgers 2 years ago when pump was stuck, crew will pull both Sounder tubes
1045 - residual ~~oil~~ oil inside and on bladder / pump From decon of equipment after CLC 21. Could not get clear w/ DI + Liquinox. Decon 1st time on 12-14-21 after CLC21. 2nd time today 3rd time today. Changed old bladder for new. Collected Equipment Blank

(cont.)
Griggs-Weikart Y. Morgan, I. Torres 12-17-21
From 3 parts of pump - after Liquinox, DI & scrubbing.
LLLO - Collect EB2 w/ DI from HEAL poured through new bladder (1 rOA), through decon'd screen from end of pump (1 rOA), & from outer pump steel casing (1 rOA)
1125 - Hydro Finished removing sounding tubes
1315 - Collect sample @ CLC19-3 Water via bladder pump. Water was oily w/ sheen, dark color, turbidity. Hoses very oily. Remove tubing
1400 - Decon pump and fittings - Dispose of tubing
1440 - To WWTP to dispose of purge water
1510 - Review/QA labels on samples, Fill out Chains of custody, buy ice.
1545 - IT offsite. YM to UPS Store - ship pump & controller back to Geotech.
1620 - YM leave Las Cruces
1830 - Arrive Silver City

Yael Roy

Attachment C-3

Laboratory Analytical Reports

DBS&A
Daniel B. Stephens & Associates, Inc.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

January 25, 2022

Jason Raucci

Daniel B. Stephens & Assoc.
6020 Academy NE Suite 100
Albuquerque, NM 87109
TEL: (505) 822-9400
FAX: (505) 822-8877

RE: Griggs Walnut OrderNo.: 2112B80

Dear Jason Raucci:

Hall Environmental Analysis Laboratory received 48 sample(s) on 12/20/2021 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,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** CLC18
Project: Griggs Walnut **Collection Date:** 12/16/2021 8:25:00 AM
Lab ID: 2112B80-001 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst: **bcv**	
Arsenic	0.0017	0.0010		mg/L	1	12/22/2021 3:57:45 PM	B84739
Uranium	0.022	0.0025		mg/L	5	12/27/2021 6:14:19 PM	A84799

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: CLC27
Project: Griggs Walnut
Collection Date: 12/16/2021 8:53:00 AM
Lab ID: 2112B80-002
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst: **bcv**	
Arsenic	0.0015	0.0010		mg/L	1	12/22/2021 4:00:26 PM	B84739
Uranium	0.020	0.0025		mg/L	5	12/27/2021 6:17:00 PM	A84799

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** CLC19
Project: Griggs Walnut **Collection Date:** 12/17/2021 1:15:00 PM
Lab ID: 2112B80-003 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
Toluene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
Ethylbenzene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
Naphthalene	ND	2.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
1-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
2-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
Acetone	ND	10		µg/L	1	12/24/2021 6:21:09 AM	R84783
Bromobenzene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
Bromodichloromethane	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
Bromoform	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
Bromomethane	ND	3.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
2-Butanone	ND	10		µg/L	1	12/24/2021 6:21:09 AM	R84783
Carbon disulfide	ND	10		µg/L	1	12/24/2021 6:21:09 AM	R84783
Carbon Tetrachloride	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
Chlorobenzene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
Chloroethane	ND	2.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
Chloroform	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
Chloromethane	ND	3.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
2-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
4-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
cis-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
Dibromochloromethane	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
Dibromomethane	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
1,1-Dichloroethane	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
1,1-Dichloroethene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
1,2-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
1,3-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
2,2-Dichloropropane	ND	2.0		µg/L	1	12/24/2021 6:21:09 AM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: CLC19
Project: Griggs Walnut
Collection Date: 12/17/2021 1:15:00 PM
Lab ID: 2112B80-003
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
Hexachlorobutadiene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
2-Hexanone	ND	10		µg/L	1	12/24/2021 6:21:09 AM	R84783
Isopropylbenzene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
4-Isopropyltoluene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
4-Methyl-2-pentanone	ND	10		µg/L	1	12/24/2021 6:21:09 AM	R84783
Methylene Chloride	ND	3.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
n-Butylbenzene	ND	3.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
n-Propylbenzene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
sec-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
Styrene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
tert-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
trans-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
Trichlorofluoromethane	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
Vinyl chloride	ND	1.0		µg/L	1	12/24/2021 6:21:09 AM	R84783
Xylenes, Total	ND	1.5		µg/L	1	12/24/2021 6:21:09 AM	R84783
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	12/24/2021 6:21:09 AM	R84783
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	12/24/2021 6:21:09 AM	R84783
Surr: Dibromofluoromethane	98.3	70-130		%Rec	1	12/24/2021 6:21:09 AM	R84783
Surr: Toluene-d8	103	70-130		%Rec	1	12/24/2021 6:21:09 AM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** CLC20
Project: Griggs Walnut **Collection Date:** 12/14/2021 1:55:00 PM
Lab ID: 2112B80-004 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
Toluene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
Ethylbenzene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
Naphthalene	ND	2.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
1-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
2-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
Acetone	ND	10		µg/L	1	12/24/2021 6:49:51 AM	R84783
Bromobenzene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
Bromodichloromethane	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
Bromoform	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
Bromomethane	ND	3.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
2-Butanone	ND	10		µg/L	1	12/24/2021 6:49:51 AM	R84783
Carbon disulfide	ND	10		µg/L	1	12/24/2021 6:49:51 AM	R84783
Carbon Tetrachloride	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
Chlorobenzene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
Chloroethane	ND	2.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
Chloroform	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
Chloromethane	ND	3.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
2-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
4-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
cis-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
Dibromochloromethane	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
Dibromomethane	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
1,1-Dichloroethane	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
1,1-Dichloroethene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
1,2-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
1,3-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
2,2-Dichloropropane	ND	2.0		µg/L	1	12/24/2021 6:49:51 AM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: CLC20
Project: Griggs Walnut
Collection Date: 12/14/2021 1:55:00 PM
Lab ID: 2112B80-004
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
Hexachlorobutadiene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
2-Hexanone	ND	10		µg/L	1	12/24/2021 6:49:51 AM	R84783
Isopropylbenzene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
4-Isopropyltoluene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
4-Methyl-2-pentanone	ND	10		µg/L	1	12/24/2021 6:49:51 AM	R84783
Methylene Chloride	ND	3.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
n-Butylbenzene	ND	3.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
n-Propylbenzene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
sec-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
Styrene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
tert-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
trans-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
Trichlorofluoromethane	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
Vinyl chloride	ND	1.0		µg/L	1	12/24/2021 6:49:51 AM	R84783
Xylenes, Total	ND	1.5		µg/L	1	12/24/2021 6:49:51 AM	R84783
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	12/24/2021 6:49:51 AM	R84783
Surr: 4-Bromofluorobenzene	96.3	70-130		%Rec	1	12/24/2021 6:49:51 AM	R84783
Surr: Dibromofluoromethane	99.0	70-130		%Rec	1	12/24/2021 6:49:51 AM	R84783
Surr: Toluene-d8	104	70-130		%Rec	1	12/24/2021 6:49:51 AM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: CLC20_Dup
Project: Griggs Walnut
Collection Date: 12/14/2021 1:55:00 PM
Lab ID: 2112B80-005
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
Toluene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
Ethylbenzene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
Naphthalene	ND	2.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
1-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
2-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
Acetone	ND	10		µg/L	1	12/24/2021 7:18:33 AM	R84783
Bromobenzene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
Bromodichloromethane	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
Bromoform	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
Bromomethane	ND	3.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
2-Butanone	ND	10		µg/L	1	12/24/2021 7:18:33 AM	R84783
Carbon disulfide	ND	10		µg/L	1	12/24/2021 7:18:33 AM	R84783
Carbon Tetrachloride	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
Chlorobenzene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
Chloroethane	ND	2.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
Chloroform	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
Chloromethane	ND	3.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
2-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
4-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
cis-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
Dibromochloromethane	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
Dibromomethane	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
1,1-Dichloroethane	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
1,1-Dichloroethene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
1,2-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
1,3-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
2,2-Dichloropropane	ND	2.0		µg/L	1	12/24/2021 7:18:33 AM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: CLC20_Dup
Project: Griggs Walnut
Collection Date: 12/14/2021 1:55:00 PM
Lab ID: 2112B80-005
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
Hexachlorobutadiene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
2-Hexanone	ND	10		µg/L	1	12/24/2021 7:18:33 AM	R84783
Isopropylbenzene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
4-Isopropyltoluene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
4-Methyl-2-pentanone	ND	10		µg/L	1	12/24/2021 7:18:33 AM	R84783
Methylene Chloride	ND	3.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
n-Butylbenzene	ND	3.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
n-Propylbenzene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
sec-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
Styrene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
tert-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
trans-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
Trichlorofluoromethane	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
Vinyl chloride	ND	1.0		µg/L	1	12/24/2021 7:18:33 AM	R84783
Xylenes, Total	ND	1.5		µg/L	1	12/24/2021 7:18:33 AM	R84783
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	12/24/2021 7:18:33 AM	R84783
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/24/2021 7:18:33 AM	R84783
Surr: Dibromofluoromethane	101	70-130		%Rec	1	12/24/2021 7:18:33 AM	R84783
Surr: Toluene-d8	104	70-130		%Rec	1	12/24/2021 7:18:33 AM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** CLC21
Project: Griggs Walnut **Collection Date:** 12/14/2021 4:25:00 PM
Lab ID: 2112B80-006 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
Toluene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
Ethylbenzene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
Methyl tert-butyl ether (MTBE)	1.8	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
Naphthalene	ND	2.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
1-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
2-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
Acetone	ND	10		µg/L	1	12/24/2021 7:47:13 AM	R84783
Bromobenzene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
Bromodichloromethane	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
Bromoform	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
Bromomethane	ND	3.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
2-Butanone	ND	10		µg/L	1	12/24/2021 7:47:13 AM	R84783
Carbon disulfide	ND	10		µg/L	1	12/24/2021 7:47:13 AM	R84783
Carbon Tetrachloride	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
Chlorobenzene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
Chloroethane	ND	2.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
Chloroform	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
Chloromethane	ND	3.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
2-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
4-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
cis-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
Dibromochloromethane	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
Dibromomethane	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
1,1-Dichloroethane	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
1,1-Dichloroethene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
1,2-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
1,3-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
2,2-Dichloropropane	ND	2.0		µg/L	1	12/24/2021 7:47:13 AM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** CLC21
Project: Griggs Walnut **Collection Date:** 12/14/2021 4:25:00 PM
Lab ID: 2112B80-006 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
Hexachlorobutadiene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
2-Hexanone	ND	10		µg/L	1	12/24/2021 7:47:13 AM	R84783
Isopropylbenzene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
4-Isopropyltoluene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
4-Methyl-2-pentanone	ND	10		µg/L	1	12/24/2021 7:47:13 AM	R84783
Methylene Chloride	ND	3.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
n-Butylbenzene	ND	3.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
n-Propylbenzene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
sec-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
Styrene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
tert-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
trans-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
Trichlorofluoromethane	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
Vinyl chloride	ND	1.0		µg/L	1	12/24/2021 7:47:13 AM	R84783
Xylenes, Total	ND	1.5		µg/L	1	12/24/2021 7:47:13 AM	R84783
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	12/24/2021 7:47:13 AM	R84783
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	12/24/2021 7:47:13 AM	R84783
Surr: Dibromofluoromethane	99.5	70-130		%Rec	1	12/24/2021 7:47:13 AM	R84783
Surr: Toluene-d8	104	70-130		%Rec	1	12/24/2021 7:47:13 AM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW01-S
Project: Griggs Walnut **Collection Date:** 12/16/2021 12:49:00 PM
Lab ID: 2112B80-007 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
Toluene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
Ethylbenzene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
Naphthalene	ND	2.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
1-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
2-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
Acetone	ND	10		µg/L	1	12/24/2021 8:15:56 AM	R84783
Bromobenzene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
Bromodichloromethane	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
Bromoform	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
Bromomethane	ND	3.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
2-Butanone	ND	10		µg/L	1	12/24/2021 8:15:56 AM	R84783
Carbon disulfide	ND	10		µg/L	1	12/24/2021 8:15:56 AM	R84783
Carbon Tetrachloride	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
Chlorobenzene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
Chloroethane	ND	2.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
Chloroform	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
Chloromethane	ND	3.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
2-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
4-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
cis-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
Dibromochloromethane	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
Dibromomethane	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
1,1-Dichloroethane	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
1,1-Dichloroethene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
1,2-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
1,3-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
2,2-Dichloropropane	ND	2.0		µg/L	1	12/24/2021 8:15:56 AM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW01-S
Project: Griggs Walnut
Collection Date: 12/16/2021 12:49:00 PM
Lab ID: 2112B80-007
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
Hexachlorobutadiene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
2-Hexanone	ND	10		µg/L	1	12/24/2021 8:15:56 AM	R84783
Isopropylbenzene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
4-Isopropyltoluene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
4-Methyl-2-pentanone	ND	10		µg/L	1	12/24/2021 8:15:56 AM	R84783
Methylene Chloride	ND	3.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
n-Butylbenzene	ND	3.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
n-Propylbenzene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
sec-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
Styrene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
tert-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
Tetrachloroethene (PCE)	1.5	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
trans-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
Trichlorofluoromethane	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
Vinyl chloride	ND	1.0		µg/L	1	12/24/2021 8:15:56 AM	R84783
Xylenes, Total	ND	1.5		µg/L	1	12/24/2021 8:15:56 AM	R84783
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	12/24/2021 8:15:56 AM	R84783
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/24/2021 8:15:56 AM	R84783
Surr: Dibromofluoromethane	101	70-130		%Rec	1	12/24/2021 8:15:56 AM	R84783
Surr: Toluene-d8	104	70-130		%Rec	1	12/24/2021 8:15:56 AM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW01-I
Project: Griggs Walnut
Collection Date: 12/16/2021 12:38:00 PM
Lab ID: 2112B80-008
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
Toluene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
Ethylbenzene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
Naphthalene	ND	2.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
1-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
2-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
Acetone	ND	10		µg/L	1	12/24/2021 8:44:36 AM	R84783
Bromobenzene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
Bromodichloromethane	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
Bromoform	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
Bromomethane	ND	3.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
2-Butanone	ND	10		µg/L	1	12/24/2021 8:44:36 AM	R84783
Carbon disulfide	ND	10		µg/L	1	12/24/2021 8:44:36 AM	R84783
Carbon Tetrachloride	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
Chlorobenzene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
Chloroethane	ND	2.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
Chloroform	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
Chloromethane	ND	3.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
2-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
4-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
cis-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
Dibromochloromethane	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
Dibromomethane	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
1,1-Dichloroethane	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
1,1-Dichloroethene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
1,2-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
1,3-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
2,2-Dichloropropane	ND	2.0		µg/L	1	12/24/2021 8:44:36 AM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW01-I
Project: Griggs Walnut
Collection Date: 12/16/2021 12:38:00 PM
Lab ID: 2112B80-008
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
Hexachlorobutadiene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
2-Hexanone	ND	10		µg/L	1	12/24/2021 8:44:36 AM	R84783
Isopropylbenzene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
4-Isopropyltoluene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
4-Methyl-2-pentanone	ND	10		µg/L	1	12/24/2021 8:44:36 AM	R84783
Methylene Chloride	ND	3.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
n-Butylbenzene	ND	3.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
n-Propylbenzene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
sec-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
Styrene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
tert-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
Tetrachloroethene (PCE)	10	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
trans-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
Trichlorofluoromethane	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
Vinyl chloride	ND	1.0		µg/L	1	12/24/2021 8:44:36 AM	R84783
Xylenes, Total	ND	1.5		µg/L	1	12/24/2021 8:44:36 AM	R84783
Surr: 1,2-Dichloroethane-d4	99.8	70-130		%Rec	1	12/24/2021 8:44:36 AM	R84783
Surr: 4-Bromofluorobenzene	99.7	70-130		%Rec	1	12/24/2021 8:44:36 AM	R84783
Surr: Dibromofluoromethane	94.4	70-130		%Rec	1	12/24/2021 8:44:36 AM	R84783
Surr: Toluene-d8	103	70-130		%Rec	1	12/24/2021 8:44:36 AM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW01-D
Project: Griggs Walnut **Collection Date:** 12/16/2021 12:18:00 PM
Lab ID: 2112B80-009 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	49	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
Toluene	5.7	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
Ethylbenzene	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
Naphthalene	2.8	2.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
1-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
2-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
Acetone	ND	10		µg/L	1	12/24/2021 9:13:17 AM	R84783
Bromobenzene	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
Bromodichloromethane	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
Bromoform	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
Bromomethane	ND	3.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
2-Butanone	ND	10		µg/L	1	12/24/2021 9:13:17 AM	R84783
Carbon disulfide	ND	10		µg/L	1	12/24/2021 9:13:17 AM	R84783
Carbon Tetrachloride	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
Chlorobenzene	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
Chloroethane	ND	2.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
Chloroform	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
Chloromethane	ND	3.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
2-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
4-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
cis-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
Dibromochloromethane	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
Dibromomethane	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
1,1-Dichloroethane	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
1,1-Dichloroethene	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
1,2-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
1,3-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
2,2-Dichloropropane	ND	2.0		µg/L	1	12/24/2021 9:13:17 AM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW01-D
Project: Griggs Walnut
Collection Date: 12/16/2021 12:18:00 PM
Lab ID: 2112B80-009
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
Hexachlorobutadiene	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
2-Hexanone	ND	10		µg/L	1	12/24/2021 9:13:17 AM	R84783
Isopropylbenzene	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
4-Isopropyltoluene	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
4-Methyl-2-pentanone	ND	10		µg/L	1	12/24/2021 9:13:17 AM	R84783
Methylene Chloride	ND	3.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
n-Butylbenzene	ND	3.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
n-Propylbenzene	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
sec-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
Styrene	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
tert-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
trans-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
Trichlorofluoromethane	ND	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
Vinyl chloride	1.5	1.0		µg/L	1	12/24/2021 9:13:17 AM	R84783
Xylenes, Total	ND	1.5		µg/L	1	12/24/2021 9:13:17 AM	R84783
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	12/24/2021 9:13:17 AM	R84783
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	12/24/2021 9:13:17 AM	R84783
Surr: Dibromofluoromethane	98.6	70-130		%Rec	1	12/24/2021 9:13:17 AM	R84783
Surr: Toluene-d8	103	70-130		%Rec	1	12/24/2021 9:13:17 AM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW08-S
Project: Griggs Walnut
Collection Date: 12/15/2021 8:20:00 AM
Lab ID: 2112B80-010
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
Toluene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
Ethylbenzene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
Naphthalene	ND	2.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
1-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
2-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
Acetone	ND	10		µg/L	1	12/24/2021 9:41:59 AM	R84783
Bromobenzene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
Bromodichloromethane	2.8	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
Bromoform	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
Bromomethane	ND	3.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
2-Butanone	ND	10		µg/L	1	12/24/2021 9:41:59 AM	R84783
Carbon disulfide	ND	10		µg/L	1	12/24/2021 9:41:59 AM	R84783
Carbon Tetrachloride	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
Chlorobenzene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
Chloroethane	ND	2.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
Chloroform	1.1	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
Chloromethane	ND	3.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
2-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
4-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
cis-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
Dibromochloromethane	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
Dibromomethane	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
1,1-Dichloroethane	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
1,1-Dichloroethene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
1,2-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
1,3-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
2,2-Dichloropropane	ND	2.0		µg/L	1	12/24/2021 9:41:59 AM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW08-S
Project: Griggs Walnut
Collection Date: 12/15/2021 8:20:00 AM
Lab ID: 2112B80-010
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
Hexachlorobutadiene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
2-Hexanone	ND	10		µg/L	1	12/24/2021 9:41:59 AM	R84783
Isopropylbenzene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
4-Isopropyltoluene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
4-Methyl-2-pentanone	ND	10		µg/L	1	12/24/2021 9:41:59 AM	R84783
Methylene Chloride	ND	3.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
n-Butylbenzene	ND	3.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
n-Propylbenzene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
sec-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
Styrene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
tert-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
trans-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
Trichlorofluoromethane	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
Vinyl chloride	ND	1.0		µg/L	1	12/24/2021 9:41:59 AM	R84783
Xylenes, Total	ND	1.5		µg/L	1	12/24/2021 9:41:59 AM	R84783
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	12/24/2021 9:41:59 AM	R84783
Surr: 4-Bromofluorobenzene	99.4	70-130		%Rec	1	12/24/2021 9:41:59 AM	R84783
Surr: Dibromofluoromethane	99.2	70-130		%Rec	1	12/24/2021 9:41:59 AM	R84783
Surr: Toluene-d8	105	70-130		%Rec	1	12/24/2021 9:41:59 AM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW08-D
Project: Griggs Walnut
Collection Date: 12/15/2021 9:00:00 AM
Lab ID: 2112B80-011
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	4.8	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
Toluene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
Ethylbenzene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
Naphthalene	ND	2.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
1-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
2-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
Acetone	ND	10		µg/L	1	12/24/2021 10:10:42 AM	R84783
Bromobenzene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
Bromodichloromethane	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
Bromoform	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
Bromomethane	ND	3.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
2-Butanone	ND	10		µg/L	1	12/24/2021 10:10:42 AM	R84783
Carbon disulfide	ND	10		µg/L	1	12/24/2021 10:10:42 AM	R84783
Carbon Tetrachloride	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
Chlorobenzene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
Chloroethane	ND	2.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
Chloroform	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
Chloromethane	ND	3.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
2-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
4-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
cis-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
Dibromochloromethane	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
Dibromomethane	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
1,1-Dichloroethane	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
1,1-Dichloroethene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
1,2-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
1,3-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
2,2-Dichloropropane	ND	2.0		µg/L	1	12/24/2021 10:10:42 AM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW08-D
Project: Griggs Walnut
Collection Date: 12/15/2021 9:00:00 AM
Lab ID: 2112B80-011
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
Hexachlorobutadiene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
2-Hexanone	ND	10		µg/L	1	12/24/2021 10:10:42 AM	R84783
Isopropylbenzene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
4-Isopropyltoluene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
4-Methyl-2-pentanone	ND	10		µg/L	1	12/24/2021 10:10:42 AM	R84783
Methylene Chloride	ND	3.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
n-Butylbenzene	ND	3.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
n-Propylbenzene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
sec-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
Styrene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
tert-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
trans-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
Trichlorofluoromethane	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
Vinyl chloride	ND	1.0		µg/L	1	12/24/2021 10:10:42 AM	R84783
Xylenes, Total	ND	1.5		µg/L	1	12/24/2021 10:10:42 AM	R84783
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	12/24/2021 10:10:42 AM	R84783
Surr: 4-Bromofluorobenzene	98.7	70-130		%Rec	1	12/24/2021 10:10:42 AM	R84783
Surr: Dibromofluoromethane	99.5	70-130		%Rec	1	12/24/2021 10:10:42 AM	R84783
Surr: Toluene-d8	104	70-130		%Rec	1	12/24/2021 10:10:42 AM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW09-S
Project: Griggs Walnut **Collection Date:** 12/16/2021 1:55:00 PM
Lab ID: 2112B80-012 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
Toluene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
Ethylbenzene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
Naphthalene	ND	2.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
1-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
2-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
Acetone	ND	10		µg/L	1	12/24/2021 10:39:24 AM	R84783
Bromobenzene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
Bromodichloromethane	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
Bromoform	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
Bromomethane	ND	3.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
2-Butanone	ND	10		µg/L	1	12/24/2021 10:39:24 AM	R84783
Carbon disulfide	ND	10		µg/L	1	12/24/2021 10:39:24 AM	R84783
Carbon Tetrachloride	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
Chlorobenzene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
Chloroethane	ND	2.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
Chloroform	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
Chloromethane	ND	3.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
2-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
4-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
cis-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
Dibromochloromethane	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
Dibromomethane	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
1,1-Dichloroethane	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
1,1-Dichloroethene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
1,2-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
1,3-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
2,2-Dichloropropane	ND	2.0		µg/L	1	12/24/2021 10:39:24 AM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW09-S
Project: Griggs Walnut **Collection Date:** 12/16/2021 1:55:00 PM
Lab ID: 2112B80-012 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
Hexachlorobutadiene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
2-Hexanone	ND	10		µg/L	1	12/24/2021 10:39:24 AM	R84783
Isopropylbenzene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
4-Isopropyltoluene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
4-Methyl-2-pentanone	ND	10		µg/L	1	12/24/2021 10:39:24 AM	R84783
Methylene Chloride	ND	3.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
n-Butylbenzene	ND	3.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
n-Propylbenzene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
sec-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
Styrene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
tert-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
trans-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
Trichlorofluoromethane	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
Vinyl chloride	ND	1.0		µg/L	1	12/24/2021 10:39:24 AM	R84783
Xylenes, Total	ND	1.5		µg/L	1	12/24/2021 10:39:24 AM	R84783
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	12/24/2021 10:39:24 AM	R84783
Surr: 4-Bromofluorobenzene	99.8	70-130		%Rec	1	12/24/2021 10:39:24 AM	R84783
Surr: Dibromofluoromethane	99.4	70-130		%Rec	1	12/24/2021 10:39:24 AM	R84783
Surr: Toluene-d8	106	70-130		%Rec	1	12/24/2021 10:39:24 AM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW09-D1
Project: Griggs Walnut
Collection Date: 12/16/2021 1:20:00 PM
Lab ID: 2112B80-013
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
Toluene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
Ethylbenzene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
Naphthalene	ND	2.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
1-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
2-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
Acetone	ND	10		µg/L	1	12/24/2021 11:08:05 AM	R84783
Bromobenzene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
Bromodichloromethane	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
Bromoform	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
Bromomethane	ND	3.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
2-Butanone	ND	10		µg/L	1	12/24/2021 11:08:05 AM	R84783
Carbon disulfide	ND	10		µg/L	1	12/24/2021 11:08:05 AM	R84783
Carbon Tetrachloride	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
Chlorobenzene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
Chloroethane	ND	2.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
Chloroform	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
Chloromethane	ND	3.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
2-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
4-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
cis-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
Dibromochloromethane	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
Dibromomethane	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
1,1-Dichloroethane	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
1,1-Dichloroethene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
1,2-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
1,3-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
2,2-Dichloropropane	ND	2.0		µg/L	1	12/24/2021 11:08:05 AM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW09-D1
Project: Griggs Walnut
Collection Date: 12/16/2021 1:20:00 PM
Lab ID: 2112B80-013
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
Hexachlorobutadiene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
2-Hexanone	ND	10		µg/L	1	12/24/2021 11:08:05 AM	R84783
Isopropylbenzene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
4-Isopropyltoluene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
4-Methyl-2-pentanone	ND	10		µg/L	1	12/24/2021 11:08:05 AM	R84783
Methylene Chloride	ND	3.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
n-Butylbenzene	ND	3.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
n-Propylbenzene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
sec-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
Styrene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
tert-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
Tetrachloroethene (PCE)	4.3	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
trans-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
Trichlorofluoromethane	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
Vinyl chloride	ND	1.0		µg/L	1	12/24/2021 11:08:05 AM	R84783
Xylenes, Total	ND	1.5		µg/L	1	12/24/2021 11:08:05 AM	R84783
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	12/24/2021 11:08:05 AM	R84783
Surr: 4-Bromofluorobenzene	97.6	70-130		%Rec	1	12/24/2021 11:08:05 AM	R84783
Surr: Dibromofluoromethane	97.0	70-130		%Rec	1	12/24/2021 11:08:05 AM	R84783
Surr: Toluene-d8	102	70-130		%Rec	1	12/24/2021 11:08:05 AM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW09-D2
Project: Griggs Walnut **Collection Date:** 12/16/2021 1:40:00 PM
Lab ID: 2112B80-016 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	2.3	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
Toluene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
Ethylbenzene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
Naphthalene	ND	2.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
1-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
2-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
Acetone	ND	10		µg/L	1	12/24/2021 12:34:14 PM	R84783
Bromobenzene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
Bromodichloromethane	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
Bromoform	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
Bromomethane	ND	3.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
2-Butanone	ND	10		µg/L	1	12/24/2021 12:34:14 PM	R84783
Carbon disulfide	ND	10		µg/L	1	12/24/2021 12:34:14 PM	R84783
Carbon Tetrachloride	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
Chlorobenzene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
Chloroethane	ND	2.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
Chloroform	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
Chloromethane	ND	3.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
2-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
4-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
cis-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
Dibromochloromethane	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
Dibromomethane	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
1,1-Dichloroethane	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
1,1-Dichloroethene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
1,2-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
1,3-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
2,2-Dichloropropane	ND	2.0		µg/L	1	12/24/2021 12:34:14 PM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW09-D2
Project: Griggs Walnut
Collection Date: 12/16/2021 1:40:00 PM
Lab ID: 2112B80-016
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
Hexachlorobutadiene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
2-Hexanone	ND	10		µg/L	1	12/24/2021 12:34:14 PM	R84783
Isopropylbenzene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
4-Isopropyltoluene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
4-Methyl-2-pentanone	ND	10		µg/L	1	12/24/2021 12:34:14 PM	R84783
Methylene Chloride	ND	3.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
n-Butylbenzene	ND	3.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
n-Propylbenzene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
sec-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
Styrene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
tert-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
Tetrachloroethene (PCE)	6.9	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
trans-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
Trichlorofluoromethane	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
Vinyl chloride	ND	1.0		µg/L	1	12/24/2021 12:34:14 PM	R84783
Xylenes, Total	ND	1.5		µg/L	1	12/24/2021 12:34:14 PM	R84783
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	12/24/2021 12:34:14 PM	R84783
Surr: 4-Bromofluorobenzene	99.0	70-130		%Rec	1	12/24/2021 12:34:14 PM	R84783
Surr: Dibromofluoromethane	102	70-130		%Rec	1	12/24/2021 12:34:14 PM	R84783
Surr: Toluene-d8	101	70-130		%Rec	1	12/24/2021 12:34:14 PM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW10-S
Project: Griggs Walnut **Collection Date:** 12/16/2021 10:30:00 AM
Lab ID: 2112B80-017 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
Toluene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
Ethylbenzene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
Methyl tert-butyl ether (MTBE)	1.2	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
Naphthalene	ND	2.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
1-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
2-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
Acetone	ND	10		µg/L	1	12/24/2021 1:02:55 PM	R84783
Bromobenzene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
Bromodichloromethane	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
Bromoform	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
Bromomethane	ND	3.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
2-Butanone	ND	10		µg/L	1	12/24/2021 1:02:55 PM	R84783
Carbon disulfide	ND	10		µg/L	1	12/24/2021 1:02:55 PM	R84783
Carbon Tetrachloride	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
Chlorobenzene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
Chloroethane	ND	2.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
Chloroform	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
Chloromethane	ND	3.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
2-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
4-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
cis-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
Dibromochloromethane	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
Dibromomethane	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
1,1-Dichloroethane	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
1,1-Dichloroethene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
1,2-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
1,3-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
2,2-Dichloropropane	ND	2.0		µg/L	1	12/24/2021 1:02:55 PM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW10-S
Project: Griggs Walnut
Collection Date: 12/16/2021 10:30:00 AM
Lab ID: 2112B80-017
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
Hexachlorobutadiene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
2-Hexanone	ND	10		µg/L	1	12/24/2021 1:02:55 PM	R84783
Isopropylbenzene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
4-Isopropyltoluene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
4-Methyl-2-pentanone	ND	10		µg/L	1	12/24/2021 1:02:55 PM	R84783
Methylene Chloride	ND	3.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
n-Butylbenzene	ND	3.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
n-Propylbenzene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
sec-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
Styrene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
tert-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
Tetrachloroethene (PCE)	2.9	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
trans-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
Trichlorofluoromethane	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
Vinyl chloride	ND	1.0		µg/L	1	12/24/2021 1:02:55 PM	R84783
Xylenes, Total	ND	1.5		µg/L	1	12/24/2021 1:02:55 PM	R84783
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	12/24/2021 1:02:55 PM	R84783
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	12/24/2021 1:02:55 PM	R84783
Surr: Dibromofluoromethane	99.6	70-130		%Rec	1	12/24/2021 1:02:55 PM	R84783
Surr: Toluene-d8	102	70-130		%Rec	1	12/24/2021 1:02:55 PM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW10-S_Dup
Project: Griggs Walnut
Collection Date: 12/16/2021 10:30:00 AM
Lab ID: 2112B80-018
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
Toluene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
Ethylbenzene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
Methyl tert-butyl ether (MTBE)	1.2	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
Naphthalene	ND	2.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
1-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
2-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
Acetone	ND	10		µg/L	1	12/24/2021 1:31:35 PM	R84783
Bromobenzene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
Bromodichloromethane	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
Bromoform	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
Bromomethane	ND	3.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
2-Butanone	ND	10		µg/L	1	12/24/2021 1:31:35 PM	R84783
Carbon disulfide	ND	10		µg/L	1	12/24/2021 1:31:35 PM	R84783
Carbon Tetrachloride	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
Chlorobenzene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
Chloroethane	ND	2.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
Chloroform	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
Chloromethane	ND	3.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
2-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
4-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
cis-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
Dibromochloromethane	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
Dibromomethane	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
1,1-Dichloroethane	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
1,1-Dichloroethene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
1,2-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
1,3-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
2,2-Dichloropropane	ND	2.0		µg/L	1	12/24/2021 1:31:35 PM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW10-S_Dup
Project: Griggs Walnut
Collection Date: 12/16/2021 10:30:00 AM
Lab ID: 2112B80-018
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
Hexachlorobutadiene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
2-Hexanone	ND	10		µg/L	1	12/24/2021 1:31:35 PM	R84783
Isopropylbenzene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
4-Isopropyltoluene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
4-Methyl-2-pentanone	ND	10		µg/L	1	12/24/2021 1:31:35 PM	R84783
Methylene Chloride	ND	3.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
n-Butylbenzene	ND	3.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
n-Propylbenzene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
sec-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
Styrene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
tert-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
Tetrachloroethene (PCE)	2.7	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
trans-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
Trichlorofluoromethane	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
Vinyl chloride	ND	1.0		µg/L	1	12/24/2021 1:31:35 PM	R84783
Xylenes, Total	ND	1.5		µg/L	1	12/24/2021 1:31:35 PM	R84783
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	12/24/2021 1:31:35 PM	R84783
Surr: 4-Bromofluorobenzene	96.9	70-130		%Rec	1	12/24/2021 1:31:35 PM	R84783
Surr: Dibromofluoromethane	101	70-130		%Rec	1	12/24/2021 1:31:35 PM	R84783
Surr: Toluene-d8	102	70-130		%Rec	1	12/24/2021 1:31:35 PM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW10-I
Project: Griggs Walnut **Collection Date:** 12/16/2021 10:58:00 AM
Lab ID: 2112B80-019 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
Toluene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
Ethylbenzene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
Naphthalene	ND	2.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
1-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
2-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
Acetone	ND	10		µg/L	1	12/24/2021 2:00:18 PM	R84783
Bromobenzene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
Bromodichloromethane	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
Bromoform	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
Bromomethane	ND	3.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
2-Butanone	ND	10		µg/L	1	12/24/2021 2:00:18 PM	R84783
Carbon disulfide	ND	10		µg/L	1	12/24/2021 2:00:18 PM	R84783
Carbon Tetrachloride	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
Chlorobenzene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
Chloroethane	ND	2.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
Chloroform	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
Chloromethane	ND	3.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
2-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
4-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
cis-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
Dibromochloromethane	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
Dibromomethane	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
1,1-Dichloroethane	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
1,1-Dichloroethene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
1,2-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
1,3-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
2,2-Dichloropropane	ND	2.0		µg/L	1	12/24/2021 2:00:18 PM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW10-I
Project: Griggs Walnut
Collection Date: 12/16/2021 10:58:00 AM
Lab ID: 2112B80-019
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
Hexachlorobutadiene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
2-Hexanone	ND	10		µg/L	1	12/24/2021 2:00:18 PM	R84783
Isopropylbenzene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
4-Isopropyltoluene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
4-Methyl-2-pentanone	ND	10		µg/L	1	12/24/2021 2:00:18 PM	R84783
Methylene Chloride	ND	3.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
n-Butylbenzene	ND	3.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
n-Propylbenzene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
sec-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
Styrene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
tert-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
Tetrachloroethene (PCE)	13	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
trans-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
Trichlorofluoromethane	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
Vinyl chloride	ND	1.0		µg/L	1	12/24/2021 2:00:18 PM	R84783
Xylenes, Total	ND	1.5		µg/L	1	12/24/2021 2:00:18 PM	R84783
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	12/24/2021 2:00:18 PM	R84783
Surr: 4-Bromofluorobenzene	97.7	70-130		%Rec	1	12/24/2021 2:00:18 PM	R84783
Surr: Dibromofluoromethane	100	70-130		%Rec	1	12/24/2021 2:00:18 PM	R84783
Surr: Toluene-d8	103	70-130		%Rec	1	12/24/2021 2:00:18 PM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW10-D
Project: Griggs Walnut
Collection Date: 12/16/2021 11:15:00 AM
Lab ID: 2112B80-020
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	5.1	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
Toluene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
Ethylbenzene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
Naphthalene	ND	2.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
1-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
2-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
Acetone	ND	10		µg/L	1	12/24/2021 2:29:00 PM	R84783
Bromobenzene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
Bromodichloromethane	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
Bromoform	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
Bromomethane	ND	3.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
2-Butanone	ND	10		µg/L	1	12/24/2021 2:29:00 PM	R84783
Carbon disulfide	ND	10		µg/L	1	12/24/2021 2:29:00 PM	R84783
Carbon Tetrachloride	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
Chlorobenzene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
Chloroethane	ND	2.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
Chloroform	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
Chloromethane	ND	3.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
2-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
4-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
cis-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
Dibromochloromethane	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
Dibromomethane	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
1,1-Dichloroethane	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
1,1-Dichloroethene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
1,2-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
1,3-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
2,2-Dichloropropane	ND	2.0		µg/L	1	12/24/2021 2:29:00 PM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW10-D
Project: Griggs Walnut
Collection Date: 12/16/2021 11:15:00 AM
Lab ID: 2112B80-020
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
Hexachlorobutadiene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
2-Hexanone	ND	10		µg/L	1	12/24/2021 2:29:00 PM	R84783
Isopropylbenzene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
4-Isopropyltoluene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
4-Methyl-2-pentanone	ND	10		µg/L	1	12/24/2021 2:29:00 PM	R84783
Methylene Chloride	ND	3.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
n-Butylbenzene	ND	3.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
n-Propylbenzene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
sec-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
Styrene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
tert-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
Tetrachloroethene (PCE)	1.2	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
trans-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
Trichlorofluoromethane	ND	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
Vinyl chloride	1.1	1.0		µg/L	1	12/24/2021 2:29:00 PM	R84783
Xylenes, Total	ND	1.5		µg/L	1	12/24/2021 2:29:00 PM	R84783
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	12/24/2021 2:29:00 PM	R84783
Surr: 4-Bromofluorobenzene	97.7	70-130		%Rec	1	12/24/2021 2:29:00 PM	R84783
Surr: Dibromofluoromethane	102	70-130		%Rec	1	12/24/2021 2:29:00 PM	R84783
Surr: Toluene-d8	101	70-130		%Rec	1	12/24/2021 2:29:00 PM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW11-S
Project: Griggs Walnut **Collection Date:** 12/17/2021 8:52:00 AM
Lab ID: 2112B80-021 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
Toluene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
Ethylbenzene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
Naphthalene	ND	2.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
1-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
2-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
Acetone	ND	10		µg/L	1	12/24/2021 2:57:44 PM	R84783
Bromobenzene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
Bromodichloromethane	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
Bromoform	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
Bromomethane	ND	3.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
2-Butanone	ND	10		µg/L	1	12/24/2021 2:57:44 PM	R84783
Carbon disulfide	ND	10		µg/L	1	12/24/2021 2:57:44 PM	R84783
Carbon Tetrachloride	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
Chlorobenzene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
Chloroethane	ND	2.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
Chloroform	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
Chloromethane	ND	3.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
2-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
4-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
cis-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
Dibromochloromethane	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
Dibromomethane	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
1,1-Dichloroethane	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
1,1-Dichloroethene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
1,2-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
1,3-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
2,2-Dichloropropane	ND	2.0		µg/L	1	12/24/2021 2:57:44 PM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW11-S
Project: Griggs Walnut
Collection Date: 12/17/2021 8:52:00 AM
Lab ID: 2112B80-021
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
Hexachlorobutadiene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
2-Hexanone	ND	10		µg/L	1	12/24/2021 2:57:44 PM	R84783
Isopropylbenzene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
4-Isopropyltoluene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
4-Methyl-2-pentanone	ND	10		µg/L	1	12/24/2021 2:57:44 PM	R84783
Methylene Chloride	ND	3.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
n-Butylbenzene	ND	3.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
n-Propylbenzene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
sec-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
Styrene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
tert-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
trans-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
Trichlorofluoromethane	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
Vinyl chloride	ND	1.0		µg/L	1	12/24/2021 2:57:44 PM	R84783
Xylenes, Total	ND	1.5		µg/L	1	12/24/2021 2:57:44 PM	R84783
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	12/24/2021 2:57:44 PM	R84783
Surr: 4-Bromofluorobenzene	96.4	70-130		%Rec	1	12/24/2021 2:57:44 PM	R84783
Surr: Dibromofluoromethane	101	70-130		%Rec	1	12/24/2021 2:57:44 PM	R84783
Surr: Toluene-d8	101	70-130		%Rec	1	12/24/2021 2:57:44 PM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW11-I
Project: Griggs Walnut **Collection Date:** 12/17/2021 9:08:00 AM
Lab ID: 2112B80-022 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
Toluene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
Ethylbenzene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
Naphthalene	ND	2.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
1-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
2-Methylnaphthalene	ND	4.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
Acetone	ND	10		µg/L	1	12/24/2021 3:26:24 PM	R84783
Bromobenzene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
Bromodichloromethane	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
Bromoform	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
Bromomethane	ND	3.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
2-Butanone	ND	10		µg/L	1	12/24/2021 3:26:24 PM	R84783
Carbon disulfide	ND	10		µg/L	1	12/24/2021 3:26:24 PM	R84783
Carbon Tetrachloride	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
Chlorobenzene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
Chloroethane	ND	2.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
Chloroform	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
Chloromethane	ND	3.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
2-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
4-Chlorotoluene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
cis-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
Dibromochloromethane	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
Dibromomethane	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
1,1-Dichloroethane	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
1,1-Dichloroethene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
1,2-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
1,3-Dichloropropane	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
2,2-Dichloropropane	ND	2.0		µg/L	1	12/24/2021 3:26:24 PM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW11-I
Project: Griggs Walnut
Collection Date: 12/17/2021 9:08:00 AM
Lab ID: 2112B80-022
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
Hexachlorobutadiene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
2-Hexanone	ND	10		µg/L	1	12/24/2021 3:26:24 PM	R84783
Isopropylbenzene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
4-Isopropyltoluene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
4-Methyl-2-pentanone	ND	10		µg/L	1	12/24/2021 3:26:24 PM	R84783
Methylene Chloride	ND	3.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
n-Butylbenzene	ND	3.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
n-Propylbenzene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
sec-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
Styrene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
tert-Butylbenzene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
Tetrachloroethene (PCE)	3.6	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
trans-1,2-DCE	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
Trichlorofluoromethane	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
Vinyl chloride	ND	1.0		µg/L	1	12/24/2021 3:26:24 PM	R84783
Xylenes, Total	ND	1.5		µg/L	1	12/24/2021 3:26:24 PM	R84783
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	12/24/2021 3:26:24 PM	R84783
Surr: 4-Bromofluorobenzene	95.6	70-130		%Rec	1	12/24/2021 3:26:24 PM	R84783
Surr: Dibromofluoromethane	102	70-130		%Rec	1	12/24/2021 3:26:24 PM	R84783
Surr: Toluene-d8	101	70-130		%Rec	1	12/24/2021 3:26:24 PM	R84783

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW11-D
Project: Griggs Walnut **Collection Date:** 12/17/2021 8:18:00 AM
Lab ID: 2112B80-023 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
Toluene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
Ethylbenzene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
Naphthalene	ND	2.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
1-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
2-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
Acetone	ND	10		µg/L	1	12/27/2021 3:00:19 PM	R84798
Bromobenzene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
Bromodichloromethane	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
Bromoform	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
Bromomethane	ND	3.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
2-Butanone	ND	10		µg/L	1	12/27/2021 3:00:19 PM	R84798
Carbon disulfide	ND	10		µg/L	1	12/27/2021 3:00:19 PM	R84798
Carbon Tetrachloride	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
Chlorobenzene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
Chloroethane	ND	2.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
Chloroform	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
Chloromethane	ND	3.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
2-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
4-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
cis-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
Dibromochloromethane	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
Dibromomethane	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
1,1-Dichloroethane	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
1,1-Dichloroethene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
1,2-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
1,3-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
2,2-Dichloropropane	ND	2.0		µg/L	1	12/27/2021 3:00:19 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW11-D
Project: Griggs Walnut
Collection Date: 12/17/2021 8:18:00 AM
Lab ID: 2112B80-023
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
Hexachlorobutadiene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
2-Hexanone	ND	10		µg/L	1	12/27/2021 3:00:19 PM	R84798
Isopropylbenzene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
4-Isopropyltoluene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
4-Methyl-2-pentanone	ND	10		µg/L	1	12/27/2021 3:00:19 PM	R84798
Methylene Chloride	ND	3.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
n-Butylbenzene	ND	3.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
n-Propylbenzene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
sec-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
Styrene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
tert-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
trans-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
Trichlorofluoromethane	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
Vinyl chloride	ND	1.0		µg/L	1	12/27/2021 3:00:19 PM	R84798
Xylenes, Total	ND	1.5		µg/L	1	12/27/2021 3:00:19 PM	R84798
Surr: 1,2-Dichloroethane-d4	99.9	70-130		%Rec	1	12/27/2021 3:00:19 PM	R84798
Surr: 4-Bromofluorobenzene	97.5	70-130		%Rec	1	12/27/2021 3:00:19 PM	R84798
Surr: Dibromofluoromethane	99.2	70-130		%Rec	1	12/27/2021 3:00:19 PM	R84798
Surr: Toluene-d8	105	70-130		%Rec	1	12/27/2021 3:00:19 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW11-D_Dup
Project: Griggs Walnut
Collection Date: 12/17/2021 8:18:00 AM
Lab ID: 2112B80-024
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
Toluene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
Ethylbenzene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
Naphthalene	ND	2.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
1-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
2-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
Acetone	ND	10		µg/L	1	12/27/2021 3:29:02 PM	R84798
Bromobenzene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
Bromodichloromethane	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
Bromoform	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
Bromomethane	ND	3.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
2-Butanone	ND	10		µg/L	1	12/27/2021 3:29:02 PM	R84798
Carbon disulfide	ND	10		µg/L	1	12/27/2021 3:29:02 PM	R84798
Carbon Tetrachloride	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
Chlorobenzene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
Chloroethane	ND	2.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
Chloroform	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
Chloromethane	ND	3.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
2-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
4-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
cis-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
Dibromochloromethane	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
Dibromomethane	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
1,1-Dichloroethane	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
1,1-Dichloroethene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
1,2-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
1,3-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
2,2-Dichloropropane	ND	2.0		µg/L	1	12/27/2021 3:29:02 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW11-D_Dup
Project: Griggs Walnut
Collection Date: 12/17/2021 8:18:00 AM
Lab ID: 2112B80-024
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
Hexachlorobutadiene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
2-Hexanone	ND	10		µg/L	1	12/27/2021 3:29:02 PM	R84798
Isopropylbenzene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
4-Isopropyltoluene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
4-Methyl-2-pentanone	ND	10		µg/L	1	12/27/2021 3:29:02 PM	R84798
Methylene Chloride	ND	3.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
n-Butylbenzene	ND	3.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
n-Propylbenzene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
sec-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
Styrene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
tert-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
trans-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
Trichlorofluoromethane	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
Vinyl chloride	ND	1.0		µg/L	1	12/27/2021 3:29:02 PM	R84798
Xylenes, Total	ND	1.5		µg/L	1	12/27/2021 3:29:02 PM	R84798
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	12/27/2021 3:29:02 PM	R84798
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/27/2021 3:29:02 PM	R84798
Surr: Dibromofluoromethane	101	70-130		%Rec	1	12/27/2021 3:29:02 PM	R84798
Surr: Toluene-d8	102	70-130		%Rec	1	12/27/2021 3:29:02 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW15-S
Project: Griggs Walnut
Collection Date: 12/16/2021 4:40:00 PM
Lab ID: 2112B80-025
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
Toluene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
Ethylbenzene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
Naphthalene	ND	2.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
1-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
2-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
Acetone	ND	10		µg/L	1	12/27/2021 3:57:34 PM	R84798
Bromobenzene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
Bromodichloromethane	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
Bromoform	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
Bromomethane	ND	3.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
2-Butanone	ND	10		µg/L	1	12/27/2021 3:57:34 PM	R84798
Carbon disulfide	ND	10		µg/L	1	12/27/2021 3:57:34 PM	R84798
Carbon Tetrachloride	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
Chlorobenzene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
Chloroethane	ND	2.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
Chloroform	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
Chloromethane	ND	3.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
2-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
4-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
cis-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
Dibromochloromethane	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
Dibromomethane	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
1,1-Dichloroethane	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
1,1-Dichloroethene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
1,2-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
1,3-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
2,2-Dichloropropane	ND	2.0		µg/L	1	12/27/2021 3:57:34 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW15-S
Project: Griggs Walnut
Collection Date: 12/16/2021 4:40:00 PM
Lab ID: 2112B80-025
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
Hexachlorobutadiene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
2-Hexanone	ND	10		µg/L	1	12/27/2021 3:57:34 PM	R84798
Isopropylbenzene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
4-Isopropyltoluene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
4-Methyl-2-pentanone	ND	10		µg/L	1	12/27/2021 3:57:34 PM	R84798
Methylene Chloride	ND	3.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
n-Butylbenzene	ND	3.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
n-Propylbenzene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
sec-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
Styrene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
tert-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
trans-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
Trichlorofluoromethane	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
Vinyl chloride	ND	1.0		µg/L	1	12/27/2021 3:57:34 PM	R84798
Xylenes, Total	ND	1.5		µg/L	1	12/27/2021 3:57:34 PM	R84798
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	12/27/2021 3:57:34 PM	R84798
Surr: 4-Bromofluorobenzene	99.4	70-130		%Rec	1	12/27/2021 3:57:34 PM	R84798
Surr: Dibromofluoromethane	101	70-130		%Rec	1	12/27/2021 3:57:34 PM	R84798
Surr: Toluene-d8	106	70-130		%Rec	1	12/27/2021 3:57:34 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW15-I
Project: Griggs Walnut
Collection Date: 12/15/2021 5:00:00 PM
Lab ID: 2112B80-026
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
Toluene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
Ethylbenzene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
Naphthalene	ND	2.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
1-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
2-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
Acetone	ND	10		µg/L	1	12/27/2021 4:26:18 PM	R84798
Bromobenzene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
Bromodichloromethane	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
Bromoform	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
Bromomethane	ND	3.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
2-Butanone	ND	10		µg/L	1	12/27/2021 4:26:18 PM	R84798
Carbon disulfide	ND	10		µg/L	1	12/27/2021 4:26:18 PM	R84798
Carbon Tetrachloride	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
Chlorobenzene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
Chloroethane	ND	2.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
Chloroform	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
Chloromethane	ND	3.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
2-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
4-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
cis-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
Dibromochloromethane	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
Dibromomethane	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
1,1-Dichloroethane	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
1,1-Dichloroethene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
1,2-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
1,3-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
2,2-Dichloropropane	ND	2.0		µg/L	1	12/27/2021 4:26:18 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW15-I
Project: Griggs Walnut
Collection Date: 12/15/2021 5:00:00 PM
Lab ID: 2112B80-026
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
Hexachlorobutadiene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
2-Hexanone	ND	10		µg/L	1	12/27/2021 4:26:18 PM	R84798
Isopropylbenzene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
4-Isopropyltoluene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
4-Methyl-2-pentanone	ND	10		µg/L	1	12/27/2021 4:26:18 PM	R84798
Methylene Chloride	ND	3.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
n-Butylbenzene	ND	3.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
n-Propylbenzene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
sec-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
Styrene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
tert-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
Tetrachloroethene (PCE)	22	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
trans-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
Trichlorofluoromethane	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
Vinyl chloride	ND	1.0		µg/L	1	12/27/2021 4:26:18 PM	R84798
Xylenes, Total	ND	1.5		µg/L	1	12/27/2021 4:26:18 PM	R84798
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	12/27/2021 4:26:18 PM	R84798
Surr: 4-Bromofluorobenzene	99.0	70-130		%Rec	1	12/27/2021 4:26:18 PM	R84798
Surr: Dibromofluoromethane	105	70-130		%Rec	1	12/27/2021 4:26:18 PM	R84798
Surr: Toluene-d8	103	70-130		%Rec	1	12/27/2021 4:26:18 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW15-D
Project: Griggs Walnut **Collection Date:** 12/15/2021 5:17:00 PM
Lab ID: 2112B80-029 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
Toluene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
Ethylbenzene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
Naphthalene	ND	2.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
1-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
2-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
Acetone	ND	10		µg/L	1	12/27/2021 5:52:19 PM	R84798
Bromobenzene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
Bromodichloromethane	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
Bromoform	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
Bromomethane	ND	3.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
2-Butanone	ND	10		µg/L	1	12/27/2021 5:52:19 PM	R84798
Carbon disulfide	ND	10		µg/L	1	12/27/2021 5:52:19 PM	R84798
Carbon Tetrachloride	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
Chlorobenzene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
Chloroethane	ND	2.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
Chloroform	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
Chloromethane	ND	3.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
2-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
4-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
cis-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
Dibromochloromethane	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
Dibromomethane	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
1,1-Dichloroethane	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
1,1-Dichloroethene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
1,2-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
1,3-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
2,2-Dichloropropane	ND	2.0		µg/L	1	12/27/2021 5:52:19 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW15-D
Project: Griggs Walnut
Collection Date: 12/15/2021 5:17:00 PM
Lab ID: 2112B80-029
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
Hexachlorobutadiene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
2-Hexanone	ND	10		µg/L	1	12/27/2021 5:52:19 PM	R84798
Isopropylbenzene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
4-Isopropyltoluene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
4-Methyl-2-pentanone	ND	10		µg/L	1	12/27/2021 5:52:19 PM	R84798
Methylene Chloride	ND	3.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
n-Butylbenzene	ND	3.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
n-Propylbenzene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
sec-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
Styrene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
tert-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
Tetrachloroethene (PCE)	1.0	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
trans-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
Trichlorofluoromethane	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
Vinyl chloride	ND	1.0		µg/L	1	12/27/2021 5:52:19 PM	R84798
Xylenes, Total	ND	1.5		µg/L	1	12/27/2021 5:52:19 PM	R84798
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	12/27/2021 5:52:19 PM	R84798
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	12/27/2021 5:52:19 PM	R84798
Surr: Dibromofluoromethane	105	70-130		%Rec	1	12/27/2021 5:52:19 PM	R84798
Surr: Toluene-d8	103	70-130		%Rec	1	12/27/2021 5:52:19 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW16-S
Project: Griggs Walnut **Collection Date:** 12/16/2021 10:00:00 AM
Lab ID: 2112B80-030 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
Toluene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
Ethylbenzene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
Naphthalene	ND	2.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
1-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
2-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
Acetone	ND	10		µg/L	1	12/27/2021 6:21:01 PM	R84798
Bromobenzene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
Bromodichloromethane	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
Bromoform	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
Bromomethane	ND	3.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
2-Butanone	ND	10		µg/L	1	12/27/2021 6:21:01 PM	R84798
Carbon disulfide	ND	10		µg/L	1	12/27/2021 6:21:01 PM	R84798
Carbon Tetrachloride	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
Chlorobenzene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
Chloroethane	ND	2.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
Chloroform	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
Chloromethane	ND	3.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
2-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
4-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
cis-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
Dibromochloromethane	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
Dibromomethane	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
1,1-Dichloroethane	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
1,1-Dichloroethene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
1,2-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
1,3-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
2,2-Dichloropropane	ND	2.0		µg/L	1	12/27/2021 6:21:01 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW16-S
Project: Griggs Walnut
Collection Date: 12/16/2021 10:00:00 AM
Lab ID: 2112B80-030
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
Hexachlorobutadiene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
2-Hexanone	ND	10		µg/L	1	12/27/2021 6:21:01 PM	R84798
Isopropylbenzene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
4-Isopropyltoluene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
4-Methyl-2-pentanone	ND	10		µg/L	1	12/27/2021 6:21:01 PM	R84798
Methylene Chloride	ND	3.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
n-Butylbenzene	ND	3.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
n-Propylbenzene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
sec-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
Styrene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
tert-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
Tetrachloroethene (PCE)	4.6	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
trans-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
Trichlorofluoromethane	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
Vinyl chloride	ND	1.0		µg/L	1	12/27/2021 6:21:01 PM	R84798
Xylenes, Total	ND	1.5		µg/L	1	12/27/2021 6:21:01 PM	R84798
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	1	12/27/2021 6:21:01 PM	R84798
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	12/27/2021 6:21:01 PM	R84798
Surr: Dibromofluoromethane	109	70-130		%Rec	1	12/27/2021 6:21:01 PM	R84798
Surr: Toluene-d8	104	70-130		%Rec	1	12/27/2021 6:21:01 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW16-D
Project: Griggs Walnut **Collection Date:** 12/16/2021 9:43:00 AM
Lab ID: 2112B80-031 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
Toluene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
Ethylbenzene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
Naphthalene	ND	2.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
1-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
2-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
Acetone	ND	10		µg/L	1	12/27/2021 6:49:42 PM	R84798
Bromobenzene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
Bromodichloromethane	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
Bromoform	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
Bromomethane	ND	3.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
2-Butanone	ND	10		µg/L	1	12/27/2021 6:49:42 PM	R84798
Carbon disulfide	ND	10		µg/L	1	12/27/2021 6:49:42 PM	R84798
Carbon Tetrachloride	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
Chlorobenzene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
Chloroethane	ND	2.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
Chloroform	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
Chloromethane	ND	3.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
2-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
4-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
cis-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
Dibromochloromethane	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
Dibromomethane	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
1,1-Dichloroethane	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
1,1-Dichloroethene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
1,2-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
1,3-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
2,2-Dichloropropane	ND	2.0		µg/L	1	12/27/2021 6:49:42 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW16-D
Project: Griggs Walnut
Collection Date: 12/16/2021 9:43:00 AM
Lab ID: 2112B80-031
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
Hexachlorobutadiene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
2-Hexanone	ND	10		µg/L	1	12/27/2021 6:49:42 PM	R84798
Isopropylbenzene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
4-Isopropyltoluene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
4-Methyl-2-pentanone	ND	10		µg/L	1	12/27/2021 6:49:42 PM	R84798
Methylene Chloride	ND	3.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
n-Butylbenzene	ND	3.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
n-Propylbenzene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
sec-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
Styrene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
tert-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
Tetrachloroethene (PCE)	23	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
trans-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
Trichloroethene (TCE)	1.3	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
Trichlorofluoromethane	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
Vinyl chloride	ND	1.0		µg/L	1	12/27/2021 6:49:42 PM	R84798
Xylenes, Total	ND	1.5		µg/L	1	12/27/2021 6:49:42 PM	R84798
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	1	12/27/2021 6:49:42 PM	R84798
Surr: 4-Bromofluorobenzene	98.0	70-130		%Rec	1	12/27/2021 6:49:42 PM	R84798
Surr: Dibromofluoromethane	107	70-130		%Rec	1	12/27/2021 6:49:42 PM	R84798
Surr: Toluene-d8	103	70-130		%Rec	1	12/27/2021 6:49:42 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** MWSF2
Project: Griggs Walnut **Collection Date:** 12/15/2021 1:00:00 PM
Lab ID: 2112B80-032 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
Toluene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
Ethylbenzene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
Naphthalene	ND	2.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
1-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
2-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
Acetone	ND	10		µg/L	1	12/27/2021 7:18:23 PM	R84798
Bromobenzene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
Bromodichloromethane	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
Bromoform	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
Bromomethane	ND	3.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
2-Butanone	ND	10		µg/L	1	12/27/2021 7:18:23 PM	R84798
Carbon disulfide	ND	10		µg/L	1	12/27/2021 7:18:23 PM	R84798
Carbon Tetrachloride	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
Chlorobenzene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
Chloroethane	ND	2.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
Chloroform	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
Chloromethane	ND	3.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
2-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
4-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
cis-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
Dibromochloromethane	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
Dibromomethane	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
1,1-Dichloroethane	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
1,1-Dichloroethene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
1,2-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
1,3-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
2,2-Dichloropropane	ND	2.0		µg/L	1	12/27/2021 7:18:23 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: MWSF2
Project: Griggs Walnut
Collection Date: 12/15/2021 1:00:00 PM
Lab ID: 2112B80-032
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
Hexachlorobutadiene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
2-Hexanone	ND	10		µg/L	1	12/27/2021 7:18:23 PM	R84798
Isopropylbenzene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
4-Isopropyltoluene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
4-Methyl-2-pentanone	ND	10		µg/L	1	12/27/2021 7:18:23 PM	R84798
Methylene Chloride	ND	3.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
n-Butylbenzene	ND	3.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
n-Propylbenzene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
sec-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
Styrene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
tert-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
Tetrachloroethene (PCE)	3.1	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
trans-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
Trichlorofluoromethane	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
Vinyl chloride	ND	1.0		µg/L	1	12/27/2021 7:18:23 PM	R84798
Xylenes, Total	ND	1.5		µg/L	1	12/27/2021 7:18:23 PM	R84798
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	12/27/2021 7:18:23 PM	R84798
Surr: 4-Bromofluorobenzene	98.2	70-130		%Rec	1	12/27/2021 7:18:23 PM	R84798
Surr: Dibromofluoromethane	110	70-130		%Rec	1	12/27/2021 7:18:23 PM	R84798
Surr: Toluene-d8	101	70-130		%Rec	1	12/27/2021 7:18:23 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** MWSF5
Project: Griggs Walnut **Collection Date:** 12/15/2021 9:25:00 AM
Lab ID: 2112B80-033 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
Toluene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
Ethylbenzene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
Naphthalene	ND	2.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
1-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
2-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
Acetone	ND	10		µg/L	1	12/27/2021 7:47:07 PM	R84798
Bromobenzene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
Bromodichloromethane	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
Bromoform	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
Bromomethane	ND	3.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
2-Butanone	ND	10		µg/L	1	12/27/2021 7:47:07 PM	R84798
Carbon disulfide	ND	10		µg/L	1	12/27/2021 7:47:07 PM	R84798
Carbon Tetrachloride	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
Chlorobenzene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
Chloroethane	ND	2.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
Chloroform	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
Chloromethane	ND	3.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
2-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
4-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
cis-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
Dibromochloromethane	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
Dibromomethane	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
1,1-Dichloroethane	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
1,1-Dichloroethene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
1,2-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
1,3-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
2,2-Dichloropropane	ND	2.0		µg/L	1	12/27/2021 7:47:07 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: MWSF5
Project: Griggs Walnut
Collection Date: 12/15/2021 9:25:00 AM
Lab ID: 2112B80-033
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
Hexachlorobutadiene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
2-Hexanone	ND	10		µg/L	1	12/27/2021 7:47:07 PM	R84798
Isopropylbenzene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
4-Isopropyltoluene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
4-Methyl-2-pentanone	ND	10		µg/L	1	12/27/2021 7:47:07 PM	R84798
Methylene Chloride	ND	3.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
n-Butylbenzene	ND	3.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
n-Propylbenzene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
sec-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
Styrene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
tert-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
trans-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
Trichlorofluoromethane	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
Vinyl chloride	ND	1.0		µg/L	1	12/27/2021 7:47:07 PM	R84798
Xylenes, Total	ND	1.5		µg/L	1	12/27/2021 7:47:07 PM	R84798
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	12/27/2021 7:47:07 PM	R84798
Surr: 4-Bromofluorobenzene	97.4	70-130		%Rec	1	12/27/2021 7:47:07 PM	R84798
Surr: Dibromofluoromethane	107	70-130		%Rec	1	12/27/2021 7:47:07 PM	R84798
Surr: Toluene-d8	101	70-130		%Rec	1	12/27/2021 7:47:07 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** MWSF9
Project: Griggs Walnut **Collection Date:** 12/15/2021 1:24:00 PM
Lab ID: 2112B80-034 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
Toluene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
Ethylbenzene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
Naphthalene	ND	2.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
1-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
2-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
Acetone	ND	10		µg/L	1	12/27/2021 8:15:39 PM	R84798
Bromobenzene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
Bromodichloromethane	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
Bromoform	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
Bromomethane	ND	3.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
2-Butanone	ND	10		µg/L	1	12/27/2021 8:15:39 PM	R84798
Carbon disulfide	ND	10		µg/L	1	12/27/2021 8:15:39 PM	R84798
Carbon Tetrachloride	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
Chlorobenzene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
Chloroethane	ND	2.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
Chloroform	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
Chloromethane	ND	3.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
2-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
4-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
cis-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
Dibromochloromethane	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
Dibromomethane	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
1,1-Dichloroethane	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
1,1-Dichloroethene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
1,2-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
1,3-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
2,2-Dichloropropane	ND	2.0		µg/L	1	12/27/2021 8:15:39 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: MWSF9
Project: Griggs Walnut
Collection Date: 12/15/2021 1:24:00 PM
Lab ID: 2112B80-034
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
Hexachlorobutadiene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
2-Hexanone	ND	10		µg/L	1	12/27/2021 8:15:39 PM	R84798
Isopropylbenzene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
4-Isopropyltoluene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
4-Methyl-2-pentanone	ND	10		µg/L	1	12/27/2021 8:15:39 PM	R84798
Methylene Chloride	ND	3.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
n-Butylbenzene	ND	3.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
n-Propylbenzene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
sec-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
Styrene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
tert-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
trans-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
Trichlorofluoromethane	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
Vinyl chloride	ND	1.0		µg/L	1	12/27/2021 8:15:39 PM	R84798
Xylenes, Total	ND	1.5		µg/L	1	12/27/2021 8:15:39 PM	R84798
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	12/27/2021 8:15:39 PM	R84798
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	12/27/2021 8:15:39 PM	R84798
Surr: Dibromofluoromethane	108	70-130		%Rec	1	12/27/2021 8:15:39 PM	R84798
Surr: Toluene-d8	104	70-130		%Rec	1	12/27/2021 8:15:39 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** MWSF10
Project: Griggs Walnut **Collection Date:** 12/15/2021 1:50:00 PM
Lab ID: 2112B80-035 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
Toluene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
Ethylbenzene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
Naphthalene	ND	2.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
1-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
2-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
Acetone	ND	10		µg/L	1	12/27/2021 8:44:19 PM	R84798
Bromobenzene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
Bromodichloromethane	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
Bromoform	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
Bromomethane	ND	3.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
2-Butanone	ND	10		µg/L	1	12/27/2021 8:44:19 PM	R84798
Carbon disulfide	ND	10		µg/L	1	12/27/2021 8:44:19 PM	R84798
Carbon Tetrachloride	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
Chlorobenzene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
Chloroethane	ND	2.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
Chloroform	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
Chloromethane	ND	3.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
2-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
4-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
cis-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
Dibromochloromethane	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
Dibromomethane	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
1,1-Dichloroethane	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
1,1-Dichloroethene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
1,2-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
1,3-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
2,2-Dichloropropane	ND	2.0		µg/L	1	12/27/2021 8:44:19 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: MWSF10
Project: Griggs Walnut
Collection Date: 12/15/2021 1:50:00 PM
Lab ID: 2112B80-035
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
Hexachlorobutadiene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
2-Hexanone	ND	10		µg/L	1	12/27/2021 8:44:19 PM	R84798
Isopropylbenzene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
4-Isopropyltoluene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
4-Methyl-2-pentanone	ND	10		µg/L	1	12/27/2021 8:44:19 PM	R84798
Methylene Chloride	ND	3.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
n-Butylbenzene	ND	3.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
n-Propylbenzene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
sec-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
Styrene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
tert-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
Tetrachloroethene (PCE)	9.5	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
trans-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
Trichlorofluoromethane	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
Vinyl chloride	ND	1.0		µg/L	1	12/27/2021 8:44:19 PM	R84798
Xylenes, Total	ND	1.5		µg/L	1	12/27/2021 8:44:19 PM	R84798
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	12/27/2021 8:44:19 PM	R84798
Surr: 4-Bromofluorobenzene	98.2	70-130		%Rec	1	12/27/2021 8:44:19 PM	R84798
Surr: Dibromofluoromethane	109	70-130		%Rec	1	12/27/2021 8:44:19 PM	R84798
Surr: Toluene-d8	103	70-130		%Rec	1	12/27/2021 8:44:19 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** NGMW01
Project: Griggs Walnut **Collection Date:** 12/15/2021 10:20:00 AM
Lab ID: 2112B80-036 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
Toluene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
Ethylbenzene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
Naphthalene	ND	2.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
1-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
2-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
Acetone	ND	10		µg/L	1	12/27/2021 9:13:00 PM	R84798
Bromobenzene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
Bromodichloromethane	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
Bromoform	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
Bromomethane	ND	3.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
2-Butanone	ND	10		µg/L	1	12/27/2021 9:13:00 PM	R84798
Carbon disulfide	ND	10		µg/L	1	12/27/2021 9:13:00 PM	R84798
Carbon Tetrachloride	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
Chlorobenzene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
Chloroethane	ND	2.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
Chloroform	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
Chloromethane	ND	3.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
2-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
4-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
cis-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
Dibromochloromethane	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
Dibromomethane	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
1,1-Dichloroethane	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
1,1-Dichloroethene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
1,2-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
1,3-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
2,2-Dichloropropane	ND	2.0		µg/L	1	12/27/2021 9:13:00 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: NGMW01
Project: Griggs Walnut
Collection Date: 12/15/2021 10:20:00 AM
Lab ID: 2112B80-036
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
Hexachlorobutadiene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
2-Hexanone	ND	10		µg/L	1	12/27/2021 9:13:00 PM	R84798
Isopropylbenzene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
4-Isopropyltoluene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
4-Methyl-2-pentanone	ND	10		µg/L	1	12/27/2021 9:13:00 PM	R84798
Methylene Chloride	ND	3.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
n-Butylbenzene	ND	3.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
n-Propylbenzene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
sec-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
Styrene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
tert-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
trans-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
Trichlorofluoromethane	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
Vinyl chloride	ND	1.0		µg/L	1	12/27/2021 9:13:00 PM	R84798
Xylenes, Total	ND	1.5		µg/L	1	12/27/2021 9:13:00 PM	R84798
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	12/27/2021 9:13:00 PM	R84798
Surr: 4-Bromofluorobenzene	99.1	70-130		%Rec	1	12/27/2021 9:13:00 PM	R84798
Surr: Dibromofluoromethane	108	70-130		%Rec	1	12/27/2021 9:13:00 PM	R84798
Surr: Toluene-d8	103	70-130		%Rec	1	12/27/2021 9:13:00 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** NGMW02
Project: Griggs Walnut **Collection Date:** 12/15/2021 12:35:00 PM
Lab ID: 2112B80-037 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
Toluene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
Ethylbenzene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
Naphthalene	ND	2.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
1-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
2-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
Acetone	ND	10		µg/L	1	12/27/2021 9:41:41 PM	R84798
Bromobenzene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
Bromodichloromethane	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
Bromoform	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
Bromomethane	ND	3.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
2-Butanone	ND	10		µg/L	1	12/27/2021 9:41:41 PM	R84798
Carbon disulfide	ND	10		µg/L	1	12/27/2021 9:41:41 PM	R84798
Carbon Tetrachloride	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
Chlorobenzene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
Chloroethane	ND	2.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
Chloroform	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
Chloromethane	ND	3.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
2-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
4-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
cis-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
Dibromochloromethane	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
Dibromomethane	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
1,1-Dichloroethane	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
1,1-Dichloroethene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
1,2-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
1,3-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
2,2-Dichloropropane	ND	2.0		µg/L	1	12/27/2021 9:41:41 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: NGMW02
Project: Griggs Walnut
Collection Date: 12/15/2021 12:35:00 PM
Lab ID: 2112B80-037
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
Hexachlorobutadiene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
2-Hexanone	ND	10		µg/L	1	12/27/2021 9:41:41 PM	R84798
Isopropylbenzene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
4-Isopropyltoluene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
4-Methyl-2-pentanone	ND	10		µg/L	1	12/27/2021 9:41:41 PM	R84798
Methylene Chloride	ND	3.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
n-Butylbenzene	ND	3.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
n-Propylbenzene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
sec-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
Styrene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
tert-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
trans-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
Trichlorofluoromethane	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
Vinyl chloride	ND	1.0		µg/L	1	12/27/2021 9:41:41 PM	R84798
Xylenes, Total	ND	1.5		µg/L	1	12/27/2021 9:41:41 PM	R84798
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	12/27/2021 9:41:41 PM	R84798
Surr: 4-Bromofluorobenzene	99.4	70-130		%Rec	1	12/27/2021 9:41:41 PM	R84798
Surr: Dibromofluoromethane	110	70-130		%Rec	1	12/27/2021 9:41:41 PM	R84798
Surr: Toluene-d8	103	70-130		%Rec	1	12/27/2021 9:41:41 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** NGMW03
Project: Griggs Walnut **Collection Date:** 12/15/2021 9:42:00 AM
Lab ID: 2112B80-038 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
Toluene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
Ethylbenzene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
Naphthalene	ND	2.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
1-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
2-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
Acetone	ND	10		µg/L	1	12/27/2021 10:10:21 PM	R84798
Bromobenzene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
Bromodichloromethane	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
Bromoform	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
Bromomethane	ND	3.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
2-Butanone	ND	10		µg/L	1	12/27/2021 10:10:21 PM	R84798
Carbon disulfide	ND	10		µg/L	1	12/27/2021 10:10:21 PM	R84798
Carbon Tetrachloride	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
Chlorobenzene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
Chloroethane	ND	2.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
Chloroform	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
Chloromethane	ND	3.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
2-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
4-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
cis-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
Dibromochloromethane	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
Dibromomethane	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
1,1-Dichloroethane	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
1,1-Dichloroethene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
1,2-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
1,3-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
2,2-Dichloropropane	ND	2.0		µg/L	1	12/27/2021 10:10:21 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: NGMW03
Project: Griggs Walnut
Collection Date: 12/15/2021 9:42:00 AM
Lab ID: 2112B80-038
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
Hexachlorobutadiene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
2-Hexanone	ND	10		µg/L	1	12/27/2021 10:10:21 PM	R84798
Isopropylbenzene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
4-Isopropyltoluene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
4-Methyl-2-pentanone	ND	10		µg/L	1	12/27/2021 10:10:21 PM	R84798
Methylene Chloride	ND	3.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
n-Butylbenzene	ND	3.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
n-Propylbenzene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
sec-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
Styrene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
tert-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
trans-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
Trichlorofluoromethane	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
Vinyl chloride	ND	1.0		µg/L	1	12/27/2021 10:10:21 PM	R84798
Xylenes, Total	ND	1.5		µg/L	1	12/27/2021 10:10:21 PM	R84798
Surr: 1,2-Dichloroethane-d4	114	70-130		%Rec	1	12/27/2021 10:10:21 PM	R84798
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	12/27/2021 10:10:21 PM	R84798
Surr: Dibromofluoromethane	111	70-130		%Rec	1	12/27/2021 10:10:21 PM	R84798
Surr: Toluene-d8	103	70-130		%Rec	1	12/27/2021 10:10:21 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** NGMW03_Dup
Project: Griggs Walnut **Collection Date:** 12/15/2021 9:42:00 AM
Lab ID: 2112B80-039 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
Toluene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
Ethylbenzene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
Naphthalene	ND	2.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
1-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
2-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
Acetone	ND	10		µg/L	1	12/27/2021 10:38:59 PM	R84798
Bromobenzene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
Bromodichloromethane	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
Bromoform	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
Bromomethane	ND	3.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
2-Butanone	ND	10		µg/L	1	12/27/2021 10:38:59 PM	R84798
Carbon disulfide	ND	10		µg/L	1	12/27/2021 10:38:59 PM	R84798
Carbon Tetrachloride	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
Chlorobenzene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
Chloroethane	ND	2.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
Chloroform	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
Chloromethane	ND	3.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
2-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
4-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
cis-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
Dibromochloromethane	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
Dibromomethane	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
1,1-Dichloroethane	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
1,1-Dichloroethene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
1,2-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
1,3-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
2,2-Dichloropropane	ND	2.0		µg/L	1	12/27/2021 10:38:59 PM	R84798

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: NGMW03_Dup
Project: Griggs Walnut
Collection Date: 12/15/2021 9:42:00 AM
Lab ID: 2112B80-039
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
Hexachlorobutadiene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
2-Hexanone	ND	10		µg/L	1	12/27/2021 10:38:59 PM	R84798
Isopropylbenzene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
4-Isopropyltoluene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
4-Methyl-2-pentanone	ND	10		µg/L	1	12/27/2021 10:38:59 PM	R84798
Methylene Chloride	ND	3.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
n-Butylbenzene	ND	3.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
n-Propylbenzene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
sec-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
Styrene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
tert-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
trans-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
Trichlorofluoromethane	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
Vinyl chloride	ND	1.0		µg/L	1	12/27/2021 10:38:59 PM	R84798
Xylenes, Total	ND	1.5		µg/L	1	12/27/2021 10:38:59 PM	R84798
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	12/27/2021 10:38:59 PM	R84798
Surr: 4-Bromofluorobenzene	97.1	70-130		%Rec	1	12/27/2021 10:38:59 PM	R84798
Surr: Dibromofluoromethane	107	70-130		%Rec	1	12/27/2021 10:38:59 PM	R84798
Surr: Toluene-d8	107	70-130		%Rec	1	12/27/2021 10:38:59 PM	R84798

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D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** EB1
Project: Griggs Walnut **Collection Date:** 12/14/2021 11:00:00 AM
Lab ID: 2112B80-040 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
Toluene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
Ethylbenzene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
Naphthalene	ND	2.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
1-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
2-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
Acetone	ND	10		µg/L	1	12/27/2021 11:07:37 PM	R84798
Bromobenzene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
Bromodichloromethane	1.2	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
Bromoform	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
Bromomethane	ND	3.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
2-Butanone	ND	10		µg/L	1	12/27/2021 11:07:37 PM	R84798
Carbon disulfide	ND	10		µg/L	1	12/27/2021 11:07:37 PM	R84798
Carbon Tetrachloride	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
Chlorobenzene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
Chloroethane	ND	2.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
Chloroform	1.9	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
Chloromethane	ND	3.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
2-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
4-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
cis-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
Dibromochloromethane	1.3	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
Dibromomethane	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
1,1-Dichloroethane	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
1,1-Dichloroethene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
1,2-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
1,3-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
2,2-Dichloropropane	ND	2.0		µg/L	1	12/27/2021 11:07:37 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: EB1
Project: Griggs Walnut
Collection Date: 12/14/2021 11:00:00 AM
Lab ID: 2112B80-040
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
Hexachlorobutadiene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
2-Hexanone	ND	10		µg/L	1	12/27/2021 11:07:37 PM	R84798
Isopropylbenzene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
4-Isopropyltoluene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
4-Methyl-2-pentanone	ND	10		µg/L	1	12/27/2021 11:07:37 PM	R84798
Methylene Chloride	ND	3.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
n-Butylbenzene	ND	3.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
n-Propylbenzene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
sec-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
Styrene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
tert-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
trans-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
Trichlorofluoromethane	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
Vinyl chloride	ND	1.0		µg/L	1	12/27/2021 11:07:37 PM	R84798
Xylenes, Total	ND	1.5		µg/L	1	12/27/2021 11:07:37 PM	R84798
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	12/27/2021 11:07:37 PM	R84798
Surr: 4-Bromofluorobenzene	96.4	70-130		%Rec	1	12/27/2021 11:07:37 PM	R84798
Surr: Dibromofluoromethane	105	70-130		%Rec	1	12/27/2021 11:07:37 PM	R84798
Surr: Toluene-d8	101	70-130		%Rec	1	12/27/2021 11:07:37 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** EB2
Project: Griggs Walnut **Collection Date:** 12/17/2021 11:10:00 AM
Lab ID: 2112B80-041 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
Toluene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
Ethylbenzene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
Naphthalene	ND	2.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
1-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
2-Methylnaphthalene	ND	4.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
Acetone	ND	10		µg/L	1	12/27/2021 11:36:13 PM	R84798
Bromobenzene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
Bromodichloromethane	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
Bromoform	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
Bromomethane	ND	3.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
2-Butanone	ND	10		µg/L	1	12/27/2021 11:36:13 PM	R84798
Carbon disulfide	ND	10		µg/L	1	12/27/2021 11:36:13 PM	R84798
Carbon Tetrachloride	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
Chlorobenzene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
Chloroethane	ND	2.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
Chloroform	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
Chloromethane	ND	3.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
2-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
4-Chlorotoluene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
cis-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
Dibromochloromethane	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
Dibromomethane	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
1,1-Dichloroethane	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
1,1-Dichloroethene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
1,2-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
1,3-Dichloropropane	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
2,2-Dichloropropane	ND	2.0		µg/L	1	12/27/2021 11:36:13 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: EB2
Project: Griggs Walnut
Collection Date: 12/17/2021 11:10:00 AM
Lab ID: 2112B80-041
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
Hexachlorobutadiene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
2-Hexanone	ND	10		µg/L	1	12/27/2021 11:36:13 PM	R84798
Isopropylbenzene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
4-Isopropyltoluene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
4-Methyl-2-pentanone	ND	10		µg/L	1	12/27/2021 11:36:13 PM	R84798
Methylene Chloride	ND	3.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
n-Butylbenzene	ND	3.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
n-Propylbenzene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
sec-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
Styrene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
tert-Butylbenzene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
trans-1,2-DCE	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
Trichlorofluoromethane	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
Vinyl chloride	ND	1.0		µg/L	1	12/27/2021 11:36:13 PM	R84798
Xylenes, Total	ND	1.5		µg/L	1	12/27/2021 11:36:13 PM	R84798
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	12/27/2021 11:36:13 PM	R84798
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	12/27/2021 11:36:13 PM	R84798
Surr: Dibromofluoromethane	108	70-130		%Rec	1	12/27/2021 11:36:13 PM	R84798
Surr: Toluene-d8	102	70-130		%Rec	1	12/27/2021 11:36:13 PM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** FB1
Project: Griggs Walnut **Collection Date:** 12/15/2021 8:55:00 AM
Lab ID: 2112B80-042 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
Toluene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
Ethylbenzene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
Naphthalene	ND	2.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
1-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
2-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
Acetone	ND	10		µg/L	1	12/28/2021 12:04:49 AM	R84798
Bromobenzene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
Bromodichloromethane	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
Bromoform	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
Bromomethane	ND	3.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
2-Butanone	ND	10		µg/L	1	12/28/2021 12:04:49 AM	R84798
Carbon disulfide	ND	10		µg/L	1	12/28/2021 12:04:49 AM	R84798
Carbon Tetrachloride	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
Chlorobenzene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
Chloroethane	ND	2.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
Chloroform	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
Chloromethane	ND	3.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
2-Chlorotoluene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
4-Chlorotoluene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
cis-1,2-DCE	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
Dibromochloromethane	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
Dibromomethane	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
1,1-Dichloroethane	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
1,1-Dichloroethene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
1,2-Dichloropropane	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
1,3-Dichloropropane	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
2,2-Dichloropropane	ND	2.0		µg/L	1	12/28/2021 12:04:49 AM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** FB1
Project: Griggs Walnut **Collection Date:** 12/15/2021 8:55:00 AM
Lab ID: 2112B80-042 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
Hexachlorobutadiene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
2-Hexanone	ND	10		µg/L	1	12/28/2021 12:04:49 AM	R84798
Isopropylbenzene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
4-Isopropyltoluene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
4-Methyl-2-pentanone	ND	10		µg/L	1	12/28/2021 12:04:49 AM	R84798
Methylene Chloride	ND	3.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
n-Butylbenzene	ND	3.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
n-Propylbenzene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
sec-Butylbenzene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
Styrene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
tert-Butylbenzene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
trans-1,2-DCE	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
Trichlorofluoromethane	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
Vinyl chloride	ND	1.0		µg/L	1	12/28/2021 12:04:49 AM	R84798
Xylenes, Total	ND	1.5		µg/L	1	12/28/2021 12:04:49 AM	R84798
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	1	12/28/2021 12:04:49 AM	R84798
Surr: 4-Bromofluorobenzene	97.2	70-130		%Rec	1	12/28/2021 12:04:49 AM	R84798
Surr: Dibromofluoromethane	110	70-130		%Rec	1	12/28/2021 12:04:49 AM	R84798
Surr: Toluene-d8	101	70-130		%Rec	1	12/28/2021 12:04:49 AM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** FB2
Project: Griggs Walnut **Collection Date:** 12/16/2021 9:12:00 AM
Lab ID: 2112B80-043 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
Toluene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
Ethylbenzene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
Naphthalene	ND	2.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
1-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
2-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
Acetone	ND	10		µg/L	1	12/28/2021 12:33:23 AM	R84798
Bromobenzene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
Bromodichloromethane	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
Bromoform	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
Bromomethane	ND	3.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
2-Butanone	ND	10		µg/L	1	12/28/2021 12:33:23 AM	R84798
Carbon disulfide	ND	10		µg/L	1	12/28/2021 12:33:23 AM	R84798
Carbon Tetrachloride	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
Chlorobenzene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
Chloroethane	ND	2.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
Chloroform	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
Chloromethane	ND	3.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
2-Chlorotoluene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
4-Chlorotoluene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
cis-1,2-DCE	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
Dibromochloromethane	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
Dibromomethane	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
1,1-Dichloroethane	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
1,1-Dichloroethene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
1,2-Dichloropropane	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
1,3-Dichloropropane	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
2,2-Dichloropropane	ND	2.0		µg/L	1	12/28/2021 12:33:23 AM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: FB2
Project: Griggs Walnut
Collection Date: 12/16/2021 9:12:00 AM
Lab ID: 2112B80-043
Matrix: GROUNDWA
Received Date: 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
Hexachlorobutadiene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
2-Hexanone	ND	10		µg/L	1	12/28/2021 12:33:23 AM	R84798
Isopropylbenzene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
4-Isopropyltoluene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
4-Methyl-2-pentanone	ND	10		µg/L	1	12/28/2021 12:33:23 AM	R84798
Methylene Chloride	ND	3.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
n-Butylbenzene	ND	3.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
n-Propylbenzene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
sec-Butylbenzene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
Styrene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
tert-Butylbenzene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
trans-1,2-DCE	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
Trichlorofluoromethane	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
Vinyl chloride	ND	1.0		µg/L	1	12/28/2021 12:33:23 AM	R84798
Xylenes, Total	ND	1.5		µg/L	1	12/28/2021 12:33:23 AM	R84798
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	12/28/2021 12:33:23 AM	R84798
Surr: 4-Bromofluorobenzene	98.8	70-130		%Rec	1	12/28/2021 12:33:23 AM	R84798
Surr: Dibromofluoromethane	108	70-130		%Rec	1	12/28/2021 12:33:23 AM	R84798
Surr: Toluene-d8	101	70-130		%Rec	1	12/28/2021 12:33:23 AM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** FB3
Project: Griggs Walnut **Collection Date:** 12/16/2021 4:45:00 PM
Lab ID: 2112B80-044 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
Toluene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
Ethylbenzene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
Naphthalene	ND	2.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
1-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
2-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
Acetone	ND	10		µg/L	1	12/28/2021 1:01:57 AM	R84798
Bromobenzene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
Bromodichloromethane	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
Bromoform	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
Bromomethane	ND	3.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
2-Butanone	ND	10		µg/L	1	12/28/2021 1:01:57 AM	R84798
Carbon disulfide	ND	10		µg/L	1	12/28/2021 1:01:57 AM	R84798
Carbon Tetrachloride	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
Chlorobenzene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
Chloroethane	ND	2.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
Chloroform	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
Chloromethane	ND	3.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
2-Chlorotoluene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
4-Chlorotoluene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
cis-1,2-DCE	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
Dibromochloromethane	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
Dibromomethane	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
1,1-Dichloroethane	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
1,1-Dichloroethene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
1,2-Dichloropropane	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
1,3-Dichloropropane	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
2,2-Dichloropropane	ND	2.0		µg/L	1	12/28/2021 1:01:57 AM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** FB3
Project: Griggs Walnut **Collection Date:** 12/16/2021 4:45:00 PM
Lab ID: 2112B80-044 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
Hexachlorobutadiene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
2-Hexanone	ND	10		µg/L	1	12/28/2021 1:01:57 AM	R84798
Isopropylbenzene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
4-Isopropyltoluene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
4-Methyl-2-pentanone	ND	10		µg/L	1	12/28/2021 1:01:57 AM	R84798
Methylene Chloride	ND	3.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
n-Butylbenzene	ND	3.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
n-Propylbenzene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
sec-Butylbenzene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
Styrene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
tert-Butylbenzene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
trans-1,2-DCE	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
Trichlorofluoromethane	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
Vinyl chloride	ND	1.0		µg/L	1	12/28/2021 1:01:57 AM	R84798
Xylenes, Total	ND	1.5		µg/L	1	12/28/2021 1:01:57 AM	R84798
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	12/28/2021 1:01:57 AM	R84798
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	12/28/2021 1:01:57 AM	R84798
Surr: Dibromofluoromethane	104	70-130		%Rec	1	12/28/2021 1:01:57 AM	R84798
Surr: Toluene-d8	101	70-130		%Rec	1	12/28/2021 1:01:57 AM	R84798

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** FB4
Project: Griggs Walnut **Collection Date:** 12/17/2021 8:00:00 AM
Lab ID: 2112B80-045 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
Toluene	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
Ethylbenzene	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
Naphthalene	ND	2.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
1-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
2-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
Acetone	ND	10		µg/L	1	12/28/2021 2:38:35 PM	R84831
Bromomethane	ND	3.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
2-Butanone	ND	10		µg/L	1	12/28/2021 2:38:35 PM	R84831
Chlorobenzene	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
Chloroethane	ND	2.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
Chloroform	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
Chloromethane	ND	3.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
cis-1,2-DCE	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
1,1-Dichloroethane	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
1,1-Dichloroethene	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
1,2-Dichloropropane	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
2-Hexanone	ND	10		µg/L	1	12/28/2021 2:38:35 PM	R84831
Isopropylbenzene	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
4-Isopropyltoluene	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
4-Methyl-2-pentanone	ND	10		µg/L	1	12/28/2021 2:38:35 PM	R84831
Methylene Chloride	ND	3.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
n-Butylbenzene	ND	3.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
n-Propylbenzene	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
sec-Butylbenzene	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
Styrene	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
tert-Butylbenzene	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** FB4
Project: Griggs Walnut **Collection Date:** 12/17/2021 8:00:00 AM
Lab ID: 2112B80-045 **Matrix:** GROUNDWA **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Vinyl chloride	ND	1.0		µg/L	1	12/28/2021 2:38:35 PM	R84831
Xylenes, Total	ND	1.5		µg/L	1	12/28/2021 2:38:35 PM	R84831
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	12/28/2021 2:38:35 PM	R84831
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	12/28/2021 2:38:35 PM	R84831
Surr: Dibromofluoromethane	108	70-130		%Rec	1	12/28/2021 2:38:35 PM	R84831
Surr: Toluene-d8	106	70-130		%Rec	1	12/28/2021 2:38:35 PM	R84831

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** Trip Blank 1
Project: Griggs Walnut **Collection Date:**
Lab ID: 2112B80-046 **Matrix:** TRIP BLANK **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
Toluene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
Ethylbenzene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
Naphthalene	ND	2.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
1-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
2-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
Acetone	ND	10		µg/L	1	12/28/2021 4:33:32 PM	R84831
Bromobenzene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
Bromodichloromethane	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
Bromoform	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
Bromomethane	ND	3.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
2-Butanone	ND	10		µg/L	1	12/28/2021 4:33:32 PM	R84831
Carbon disulfide	ND	10		µg/L	1	12/28/2021 4:33:32 PM	R84831
Carbon Tetrachloride	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
Chlorobenzene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
Chloroethane	ND	2.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
Chloroform	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
Chloromethane	ND	3.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
2-Chlorotoluene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
4-Chlorotoluene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
cis-1,2-DCE	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
Dibromochloromethane	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
Dibromomethane	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
1,1-Dichloroethane	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
1,1-Dichloroethene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
1,2-Dichloropropane	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
1,3-Dichloropropane	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
2,2-Dichloropropane	ND	2.0		µg/L	1	12/28/2021 4:33:32 PM	R84831

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** Trip Blank 1
Project: Griggs Walnut **Collection Date:**
Lab ID: 2112B80-046 **Matrix:** TRIP BLANK **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
Hexachlorobutadiene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
2-Hexanone	ND	10		µg/L	1	12/28/2021 4:33:32 PM	R84831
Isopropylbenzene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
4-Isopropyltoluene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
4-Methyl-2-pentanone	ND	10		µg/L	1	12/28/2021 4:33:32 PM	R84831
Methylene Chloride	ND	3.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
n-Butylbenzene	ND	3.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
n-Propylbenzene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
sec-Butylbenzene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
Styrene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
tert-Butylbenzene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
trans-1,2-DCE	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
Trichlorofluoromethane	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
Vinyl chloride	ND	1.0		µg/L	1	12/28/2021 4:33:32 PM	R84831
Xylenes, Total	ND	1.5		µg/L	1	12/28/2021 4:33:32 PM	R84831
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	12/28/2021 4:33:32 PM	R84831
Surr: 4-Bromofluorobenzene	96.2	70-130		%Rec	1	12/28/2021 4:33:32 PM	R84831
Surr: Dibromofluoromethane	102	70-130		%Rec	1	12/28/2021 4:33:32 PM	R84831
Surr: Toluene-d8	103	70-130		%Rec	1	12/28/2021 4:33:32 PM	R84831

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** Trip Blank 2
Project: Griggs Walnut **Collection Date:**
Lab ID: 2112B80-047 **Matrix:** TRIP BLANK **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
Toluene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
Ethylbenzene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
Naphthalene	ND	2.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
1-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
2-Methylnaphthalene	ND	4.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
Acetone	ND	10		µg/L	1	12/28/2021 5:02:12 PM	R84831
Bromobenzene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
Bromodichloromethane	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
Bromoform	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
Bromomethane	ND	3.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
2-Butanone	ND	10		µg/L	1	12/28/2021 5:02:12 PM	R84831
Carbon disulfide	ND	10		µg/L	1	12/28/2021 5:02:12 PM	R84831
Carbon Tetrachloride	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
Chlorobenzene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
Chloroethane	ND	2.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
Chloroform	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
Chloromethane	ND	3.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
2-Chlorotoluene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
4-Chlorotoluene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
cis-1,2-DCE	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
Dibromochloromethane	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
Dibromomethane	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
1,1-Dichloroethane	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
1,1-Dichloroethene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
1,2-Dichloropropane	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
1,3-Dichloropropane	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
2,2-Dichloropropane	ND	2.0		µg/L	1	12/28/2021 5:02:12 PM	R84831

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** Trip Blank 2
Project: Griggs Walnut **Collection Date:**
Lab ID: 2112B80-047 **Matrix:** TRIP BLANK **Received Date:** 12/20/2021 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
Hexachlorobutadiene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
2-Hexanone	ND	10		µg/L	1	12/28/2021 5:02:12 PM	R84831
Isopropylbenzene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
4-Isopropyltoluene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
4-Methyl-2-pentanone	ND	10		µg/L	1	12/28/2021 5:02:12 PM	R84831
Methylene Chloride	ND	3.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
n-Butylbenzene	ND	3.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
n-Propylbenzene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
sec-Butylbenzene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
Styrene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
tert-Butylbenzene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
trans-1,2-DCE	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
Trichlorofluoromethane	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
Vinyl chloride	ND	1.0		µg/L	1	12/28/2021 5:02:12 PM	R84831
Xylenes, Total	ND	1.5		µg/L	1	12/28/2021 5:02:12 PM	R84831
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	12/28/2021 5:02:12 PM	R84831
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/28/2021 5:02:12 PM	R84831
Surr: Dibromofluoromethane	106	70-130		%Rec	1	12/28/2021 5:02:12 PM	R84831
Surr: Toluene-d8	106	70-130		%Rec	1	12/28/2021 5:02:12 PM	R84831

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

ANALYTICAL SUMMARY REPORT

January 07, 2022

Hall Environmental
4901 Hawkins St NE Ste D
Albuquerque, NM 87109-4372

Work Order: H21120528

Project Name: Not Indicated

Energy Laboratories Inc Helena MT received the following 2 samples for Hall Environmental on 12/21/2021 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H21120528-001	2112B80-001B CLC18	12/16/21 8:25	12/21/21	Groundwater	Metals by ICP/ICPMS, Dissolved Arsenic Speciation, Total Metals pH check by the Laboratory FIRST
H21120528-002	2112B80-002B CLC27	12/16/21 8:53	12/21/21	Groundwater	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Hall Environmental
Project: Not Indicated
Lab ID: H21120528-001
Client Sample ID: 2112B80-001B CLC18

Report Date: 01/07/22
Collection Date: 12/16/21 08:25
DateReceived: 12/21/21
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SPECIATED, TOTAL							
Arsenic-III	ND	ug/L		5		E1632AM	01/03/22 17:49 / cfg
Arsenic-V	ND	ug/L		5		E1632AM	01/03/22 17:49 / cfg

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: Hall Environmental
Project: Not Indicated
Lab ID: H21120528-002
Client Sample ID: 2112B80-002B CLC27

Report Date: 01/07/22
Collection Date: 12/16/21 08:53
DateReceived: 12/21/21
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SPECIATED, TOTAL							
Arsenic-III	ND	ug/L		5		E1632AM	01/03/22 18:01 / cfg
Arsenic-V	ND	ug/L		5		E1632AM	01/03/22 18:01 / cfg

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: Hall Environmental **Work Order:** H21120528 **Report Date:** 01/07/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM										Analytical Run: ARSENIC SPECIATION_220103A
Lab ID: ICV_10r	2	Initial Calibration Verification Standard								01/03/22 15:01
Arsenic-III		27.3	ug/L	5.0	109	87.6	114			
Arsenic-V		24.5	ug/L	5.0	98	87	116			
Lab ID: CCV_11r	2	Continuing Calibration Verification Standard								01/03/22 15:13
Arsenic-III		48.1	ug/L	5.0	96	85	115			
Arsenic-V		50.0	ug/L	5.0	100	85	115			
Method: E1632AM										Batch: R171443
Lab ID: MBLK_13r	2	Method Blank				Run: ARSENIC SPECIATION_2201				01/03/22 15:37
Arsenic-III		ND	ug/L	0.7						
Arsenic-V		ND	ug/L	0.5						
Lab ID: LCS_14r	2	Laboratory Control Sample				Run: ARSENIC SPECIATION_2201				01/03/22 15:49
Arsenic-III		48.6	ug/L	5.0	97	85	115			
Arsenic-V		48.8	ug/L	5.0	98	85	115			
Lab ID: H21120475-001E MS	2	Sample Matrix Spike				Run: ARSENIC SPECIATION_2201				01/03/22 16:25
Arsenic-III		530	ug/L	10	106	78	121			
Arsenic-V		500	ug/L	10	100	78	121			
Lab ID: H21120475-001E MSD	2	Sample Matrix Spike Duplicate				Run: ARSENIC SPECIATION_2201				01/03/22 16:37
Arsenic-III		588	ug/L	10	118	78	121	10	20	
Arsenic-V		541	ug/L	10	108	78	121	7.8	20	
Lab ID: H21120612-003A MS	2	Sample Matrix Spike				Run: ARSENIC SPECIATION_2201				01/03/22 19:13
Arsenic-III		281	ug/L	5.0	113	78	121			
Arsenic-V		650	ug/L	5.0	106	78	121			
Lab ID: H21120612-003A MSD	2	Sample Matrix Spike Duplicate				Run: ARSENIC SPECIATION_2201				01/03/22 19:25
Arsenic-III		289	ug/L	5.0	116	78	121	2.7	20	
Arsenic-V		685	ug/L	5.0	121	78	121	5.4	20	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

Work Order Receipt Checklist

Hall Environmental

H21120528

Login completed by:	Wanda Johnson	Date Received:	12/21/2021
Reviewed by:	BL2000\jcsmith	Received by:	RAT
Reviewed Date:	1/7/2022	Carrier name:	FedEx Express

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	0.1°C Blue Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☑	Not Applicable ☐

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

Contact and Corrective Action Comments:

Arsenic Speciation samples were preserved with 2 mL of 1:10 hydrochloric acid in the laboratory. In accordance with the method requirements, these samples must be held for 48 hours prior to analysis. wjj 12/21/2021

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

CHAIN OF CUSTODY RECORD 1 1

SUB CONTRATOR: Energy Labs -Helena	COMPANY: Energy Laboratories	PHONE: (877) 472-0711	FAX:
ADDRESS: 3161 E Lyndale Ave		ACCOUNT #	EMAIL:
CITY, STATE, ZIP: Helena, MT 59604			

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2112B80-001B	CLC18	500PL-HCL	Groundwater	12/16/2021 8:25:00 AM	1	Arsenic Speciation
2	2112B80-002B	CLC27	500PL-HCL	Groundwater	12/16/2021 8:53:00 AM	1	Arsenic Speciation

H21120528

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By: Sac	Date: 12/20/2021	Time: 1:50 PM	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date: 12-21-21	Time: 1106

TAT: Standard ☑ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of samples: 0.1 °C Attempt to Cool? Blue ice
Comments: Ful Es Acp Moseul Nos

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2112B80**

25-Jan-22

Client: Daniel B. Stephens & Assoc.

Project: Griggs Walnut

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**
Client ID: **PBW**	Batch ID: **B84739**	RunNo: **84739**
Prep Date:	Analysis Date: **12/22/2021**	SeqNo: **2980201** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC**	Batch ID: **B84739**	RunNo: **84739**
Prep Date:	Analysis Date: **12/22/2021**	SeqNo: **2980202** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	101	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**
Client ID: **LCSW**	Batch ID: **B84739**	RunNo: **84739**
Prep Date:	Analysis Date: **12/22/2021**	SeqNo: **2980203** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	102	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**
Client ID: **PBW**	Batch ID: **A84799**	RunNo: **84799**
Prep Date:	Analysis Date: **12/27/2021**	SeqNo: **2982702** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050								

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC**	Batch ID: **A84799**	RunNo: **84799**
Prep Date:	Analysis Date: **12/27/2021**	SeqNo: **2982703** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050	0.0005000	0	94.8	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**
Client ID: **LCSW**	Batch ID: **A84799**	RunNo: **84799**
Prep Date:	Analysis Date: **12/27/2021**	SeqNo: **2982704** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.011	0.00050	0.01250	0	91.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2112B80**

25-Jan-22

Client: Daniel B. Stephens & Assoc.

Project: Griggs Walnut

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **LCSW** Batch ID: **R84783** RunNo: **84783**

Prep Date: Analysis Date: **12/23/2021** SeqNo: **2981836** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130			
Toluene	21	1.0	20.00	0	104	70	130			
Chlorobenzene	21	1.0	20.00	0	107	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	92.6	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	92.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.1	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.1	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.4	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: **R84783** RunNo: **84783**

Prep Date: Analysis Date: **12/24/2021** SeqNo: **2981837** 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	102	70	130			
Chlorobenzene	21	1.0	20.00	0	104	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	93.5	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	93.7	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.0	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.9	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.4	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID: **2112b80-013ams** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **GWMW09-D1** Batch ID: **R84783** RunNo: **84783**

Prep Date: Analysis Date: **12/24/2021** SeqNo: **2981876** 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	20	1.0	20.00	0	101	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	92.9	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	94.6	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		93.9	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.8	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.3	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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2112B80**
25-Jan-22

Client: Daniel B. Stephens & Assoc.
Project: Griggs Walnut

Sample ID: **2112b80-013amsd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **GWMW09-D1** Batch ID: **R84783** RunNo: **84783**
Prep Date: Analysis Date: **12/24/2021** SeqNo: **2981877** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130	2.44	20	
Toluene	20	1.0	20.00	0	97.7	70	130	3.56	20	
Chlorobenzene	20	1.0	20.00	0	101	70	130	1.33	20	
1,1-Dichloroethene	18	1.0	20.00	0	88.3	70	130	5.14	20	
Trichloroethene (TCE)	18	1.0	20.00	0	88.3	70	130	6.89	20	
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.6		10.00		95.7	70	130	0	0	
Surr: Dibromofluoromethane	9.9		10.00		98.8	70	130	0	0	
Surr: Toluene-d8	10		10.00		103	70	130	0	0	

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R84783** RunNo: **84783**
Prep Date: Analysis Date: **12/23/2021** SeqNo: **2981886** 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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2112B80**
25-Jan-22

Client: Daniel B. Stephens & Assoc.
Project: Griggs Walnut

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R84783**	RunNo: **84783**
Prep Date:	Analysis Date: **12/23/2021**	SeqNo: **2981886** 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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2112B80**
25-Jan-22

Client: Daniel B. Stephens & Assoc.
Project: Griggs Walnut

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R84783**	RunNo: **84783**
Prep Date:	Analysis Date: **12/23/2021**	SeqNo: **2981886** 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		99.7	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.1	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.2	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R84783**	RunNo: **84783**
Prep Date:	Analysis Date: **12/24/2021**	SeqNo: **2981887** 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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2112B80**
25-Jan-22

Client: Daniel B. Stephens & Assoc.
Project: Griggs Walnut

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R84783**	RunNo: **84783**
Prep Date:	Analysis Date: **12/24/2021**	SeqNo: **2981887** 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	10		10.00		101	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2112B80**

25-Jan-22

Client: Daniel B. Stephens & Assoc.

Project: Griggs Walnut

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R84783**	RunNo: **84783**
Prep Date:	Analysis Date: **12/24/2021**	SeqNo: **2981887** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	9.9		10.00		98.8	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.0	70	130			
Surr: Toluene-d8	11		10.00		106	70	130			

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R84798**	RunNo: **84798**
Prep Date:	Analysis Date: **12/27/2021**	SeqNo: **2982738** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	87.1	70	130			
Toluene	19	1.0	20.00	0	93.8	70	130			
Chlorobenzene	20	1.0	20.00	0	98.5	70	130			
1,1-Dichloroethene	16	1.0	20.00	0	82.0	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	80.7	70	130			
Surr: 1,2-Dichloroethane-d4	9.2		10.00		92.4	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.5	70	130			
Surr: Toluene-d8	9.9		10.00		98.9	70	130			

Sample ID: **2112b80-026a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **GWMW15-I**	Batch ID: **R84798**	RunNo: **84798**
Prep Date:	Analysis Date: **12/27/2021**	SeqNo: **2982745** 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			
Toluene	20	1.0	20.00	0	98.8	70	130			
Chlorobenzene	21	1.0	20.00	0	103	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	104	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0.2958	97.9	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.5	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.9		10.00		99.5	70	130			

Sample ID: **2112b80-026a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **GWMW15-I**	Batch ID: **R84798**	RunNo: **84798**
Prep Date:	Analysis Date: **12/27/2021**	SeqNo: **2982746** 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	1.38	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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2112B80**
25-Jan-22

Client: Daniel B. Stephens & Assoc.
Project: Griggs Walnut

Sample ID: **2112b80-026a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **GWMW15-I** Batch ID: **R84798** RunNo: **84798**
Prep Date: Analysis Date: **12/27/2021** SeqNo: **2982746** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	20	1.0	20.00	0	97.9	70	130	0.851	20	
Chlorobenzene	20	1.0	20.00	0	99.4	70	130	3.63	20	
1,1-Dichloroethene	20	1.0	20.00	0	101	70	130	3.06	20	
Trichloroethene (TCE)	20	1.0	20.00	0.2958	97.9	70	130	0.0403	20	
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		105	70	130	0	0	
Surr: Toluene-d8	10		10.00		102	70	130	0	0	

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R84798** RunNo: **84798**
Prep Date: Analysis Date: **12/27/2021** SeqNo: **2982763** 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								

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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2112B80**
25-Jan-22

Client: Daniel B. Stephens & Assoc.
Project: Griggs Walnut

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R84798**	RunNo: **84798**
Prep Date:	Analysis Date: **12/27/2021**	SeqNo: **2982763** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
Vinyl chloride	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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2112B80**

25-Jan-22

Client: Daniel B. Stephens & Assoc.

Project: Griggs Walnut

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R84798**	RunNo: **84798**
Prep Date:	Analysis Date: **12/27/2021**	SeqNo: **2982763** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.6	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.5	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R84831**	RunNo: **84831**
Prep Date:	Analysis Date: **12/28/2021**	SeqNo: **2983890** 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	99.4	70	130			
Chlorobenzene	21	1.0	20.00	0	105	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	104	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.4	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R84831**	RunNo: **84831**
Prep Date:	Analysis Date: **12/28/2021**	SeqNo: **2983922** 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								

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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2112B80**
25-Jan-22

Client: Daniel B. Stephens & Assoc.
Project: Griggs Walnut

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R84831**	RunNo: **84831**
Prep Date:	Analysis Date: **12/28/2021**	SeqNo: **2983922** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
1,1,2,2-Tetrachloroethane	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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2112B80**
25-Jan-22

Client: Daniel B. Stephens & Assoc.
Project: Griggs Walnut

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R84831**	RunNo: **84831**
Prep Date:	Analysis Date: **12/28/2021**	SeqNo: **2983922** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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	10		10.00		100	70	130			
Surr: Dibromofluoromethane	10		10.00		104	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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Daniel B. Stephens & Assoc.

Work Order Number: 2112B80

RcptNo: 1

Received By: Juan Rojas 12/20/2021 8:45:00 AM

Completed By: Sean Livingston 12/20/2021 9:28:25 AM

Reviewed By: DAD 12/20/21

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

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. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☑ No ☐ NA ☐
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 (<2 or >12 unless noted)

Adjusted? NO

Checked by: TMC 12/20/21

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				
2	-1.6	Good				

Chain-of-Custody Record

Client: Daniel B Stephens Associates

Mailing Address: 6020 Academy Rd NE Ste 100
Abq, NM 87109

Phone #: 505-822-9400

email or Fax#: JRaucci@geo-logic.com

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 #: DB21.1359.00 Ph1 T2

Project Manager: Jason Raucci

Sampler: V. Morgan, I. Torres

On Ice: ☒ Yes ☐ No

# of Coolers: 1 2 JR 12/20/21

Cooler Temp(including CF): See check list (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2112850	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) 8260B	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Arsenic & Uranium 200.8	As Speciation SM3114B				
12.6.21	0825	GW	CLC18	2 Plastic	HCl/HNO3	001											X	X				
"	0853		CLC27	"	"	002											X	X				
12.17.21	1315		CLC19	3 VOAs	HgCl2	003								X								
12.14.21	1355		CLC20			004								X								
"	1355		CLC20_Dup			005								X								
12.14.21	1625		CLC21			006								X								
12.6.21	1249		GWMW01-S			007								X								
"	1238		GWMW01-I			008								X								
12.6.21	1218		GWMW01-D			009								X								
12.15.21	0820		GWMW08-S			010								X								
12.15.21	0900		GWMW08-D			011								X								
12.6.21	1355		GWMW09-S			012								X								

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
12/20/21	843			CDO	12/20/21	8:45
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Page 1 of 4

-1.4-0.2=-1.6

-1.6-0.2=-1.8

Not Frozen JR 12/20/21

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: DBS & A

Mailing Address:

Phone #: 505-822-9400

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 #:

Project Manager: J. Rocco

Sampler:

On Ice: ☐ Yes ☐ No

# of Coolers: 1 2 12/20/21

Cooler Temp (including CF): See checklist (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
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4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	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) 8260B	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12-16-21	1320	GW	GWMW09-D1	3 VOAs	HgCl2	013								X		
	1320		GWMW09-D1_MS			see 12/20/21 014								X		
	1320		GWMW09-D1_MSD			015								X		
12-16-21	1340		GWMW09-D2			016								X		
"	1030		GWMW18-S			017								X		
"	1030		GWMW18-S_Dup			018								X		
"	1058		GWMW18-I			019								X		
"	1115		GWMW18-D			020								X		
12-17-21	0852		GWMW11-S			021								X		
	0908		GWMW11-I			022								X		
	0818		GWMW11-D			023								X		
	0818		GWMW11-D_Dup			024								X		

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
12/20/21	8:43			CDO	12/20/21	8:45
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Page 2 of 4

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: DBS+A

Mailing Address:

Phone #: 505-822-9400

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 #:

Project Manager: J. Rocci

Sampler:

On Ice: ☐ Yes ☐ No

# of Coolers: 2 12/20/21

Cooler Temp(including CF): See check (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	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~~ 8260B (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12.16.21	1640	GW	GWMW15-S	3 VOAs	HgCl2	025								X		
12.15.21	1700		GWMW15-I			026								X		
12.15.21	1700		GWMW15-I_MS			see 12/20/21 027								X		
12.15.21	1700		GWMW15-I_MSD			028								X		
12.15.21	17:17		GWMW15-D			029								X		
12.16.21	10:00		GWMW16-S			030								X		
"	09:43		GWMW16-D			031								X		
12.15.21	1300		MWSF2	2 VOAs		032								X		
12.15.21	0925		MWSF5	3 VOAs		033								X		
12.15.21	1324		MWSF9			034								X		
"	1350		MWSF10			035								X		
12.15.21	1020	✓	NGMW01	✓	✓	036								X		

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
12/20/21	843					
				OD	12/20/21	8:45

Date	Time	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Page 3 of 4

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: DBS&A

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 #:

Project Manager: J. Rocci

Sampler:

On Ice: ☒ Yes ☐ No

# of Coolers: 4 → 2 JR 12/20/21

Cooler Temp (including CF): See checklist (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	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) 8260B	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Temp of cmi Vol
12-15-21	12:35	GW	NGMW02	3 VOAs	HgCl2	037								X			
12-15-21	0942		NGMW03			038								X			
12-15-21	0942		NGMW03_Dup			039								X			
12-14-21	1100	DI	EB1			040								X			
12-17-21	1110		EB2			041								X			
12-15-21	0855		FB1			042								X			
12-16-21	0912		FB2			043								X			
12-16-21	1645		FB3			044								X			
12-17-21	0800		FB4			045								X			
Lab	—	—	Trip Blank	2 VOAs		046								X			
Lab	—	—	Trip Blank	2 VOAs		047								X			
Lab	—	—	Temp Blanks	2 Plastic	—	048										X	

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
12/20/21	843	TMP Blank 2W 12/20/21				
				COO	12/20/21	8:45
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Page 4 of 4

2 Coolers, 1 Trip Blank & 1 Temp Blank in each cooler

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

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

December 28, 2021

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.: 2112A45

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 5 sample(s) on 12/15/2021 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,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-211214
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/14/2021 8:03:00 AM
Lab ID: 2112A45-001
Matrix: DRINKING W
Received Date: 12/15/2021 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Toluene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Ethylbenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Naphthalene	ND	2.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1-Methylnaphthalene	ND	4.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
2-Methylnaphthalene	ND	4.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Acetone	ND	10		µg/L	1	12/20/2021 11:26:32 PM	R84705
Bromobenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Bromodichloromethane	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Bromoform	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Bromomethane	ND	3.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
2-Butanone	ND	10		µg/L	1	12/20/2021 11:26:32 PM	R84705
Carbon disulfide	ND	10		µg/L	1	12/20/2021 11:26:32 PM	R84705
Carbon Tetrachloride	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Chlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Chloroethane	ND	2.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Chloroform	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Chloromethane	ND	3.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
2-Chlorotoluene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
4-Chlorotoluene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
cis-1,2-DCE	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Dibromochloromethane	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Dibromomethane	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,1-Dichloroethane	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,1-Dichloroethene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,2-Dichloropropane	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,3-Dichloropropane	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
2,2-Dichloropropane	ND	2.0		µg/L	1	12/20/2021 11:26:32 PM	R84705

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-211214
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/14/2021 8:03:00 AM
Lab ID: 2112A45-001
Matrix: DRINKING W
Received Date: 12/15/2021 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Hexachlorobutadiene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
2-Hexanone	ND	10		µg/L	1	12/20/2021 11:26:32 PM	R84705
Isopropylbenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
4-Isopropyltoluene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
4-Methyl-2-pentanone	ND	10		µg/L	1	12/20/2021 11:26:32 PM	R84705
Methylene Chloride	ND	3.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
n-Butylbenzene	ND	3.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
n-Propylbenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
sec-Butylbenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Styrene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
tert-Butylbenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Tetrachloroethene (PCE)	4.5	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
trans-1,2-DCE	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Trichlorofluoromethane	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Vinyl chloride	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Xylenes, Total	ND	1.5		µg/L	1	12/20/2021 11:26:32 PM	R84705
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	12/20/2021 11:26:32 PM	R84705
Surr: 4-Bromofluorobenzene	97.7	70-130		%Rec	1	12/20/2021 11:26:32 PM	R84705
Surr: Dibromofluoromethane	105	70-130		%Rec	1	12/20/2021 11:26:32 PM	R84705
Surr: Toluene-d8	101	70-130		%Rec	1	12/20/2021 11:26:32 PM	R84705

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-211214
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/14/2021 8:11:00 AM
Lab ID: 2112A45-002
Matrix: DRINKING W
Received Date: 12/15/2021 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Toluene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Ethylbenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Naphthalene	ND	2.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1-Methylnaphthalene	ND	4.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
2-Methylnaphthalene	ND	4.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Acetone	ND	10		µg/L	1	12/20/2021 11:53:10 PM	R84705
Bromobenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Bromodichloromethane	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Bromoform	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Bromomethane	ND	3.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
2-Butanone	ND	10		µg/L	1	12/20/2021 11:53:10 PM	R84705
Carbon disulfide	ND	10		µg/L	1	12/20/2021 11:53:10 PM	R84705
Carbon Tetrachloride	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Chlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Chloroethane	ND	2.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Chloroform	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Chloromethane	ND	3.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
2-Chlorotoluene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
4-Chlorotoluene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
cis-1,2-DCE	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Dibromochloromethane	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Dibromomethane	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,1-Dichloroethane	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,1-Dichloroethene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,2-Dichloropropane	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,3-Dichloropropane	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
2,2-Dichloropropane	ND	2.0		µg/L	1	12/20/2021 11:53:10 PM	R84705

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-211214
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/14/2021 8:11:00 AM
Lab ID: 2112A45-002
Matrix: DRINKING W
Received Date: 12/15/2021 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Hexachlorobutadiene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
2-Hexanone	ND	10		µg/L	1	12/20/2021 11:53:10 PM	R84705
Isopropylbenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
4-Isopropyltoluene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
4-Methyl-2-pentanone	ND	10		µg/L	1	12/20/2021 11:53:10 PM	R84705
Methylene Chloride	ND	3.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
n-Butylbenzene	ND	3.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
n-Propylbenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
sec-Butylbenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Styrene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
tert-Butylbenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Tetrachloroethene (PCE)	11	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
trans-1,2-DCE	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Trichlorofluoromethane	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Vinyl chloride	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Xylenes, Total	ND	1.5		µg/L	1	12/20/2021 11:53:10 PM	R84705
Surr: 1,2-Dichloroethane-d4	99.0	70-130		%Rec	1	12/20/2021 11:53:10 PM	R84705
Surr: 4-Bromofluorobenzene	95.3	70-130		%Rec	1	12/20/2021 11:53:10 PM	R84705
Surr: Dibromofluoromethane	107	70-130		%Rec	1	12/20/2021 11:53:10 PM	R84705
Surr: Toluene-d8	100	70-130		%Rec	1	12/20/2021 11:53:10 PM	R84705

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-211214
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/14/2021 8:13:00 AM
Lab ID: 2112A45-003
Matrix: DRINKING W
Received Date: 12/15/2021 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Toluene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Ethylbenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Naphthalene	ND	2.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
2-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Acetone	ND	10		µg/L	1	12/21/2021 12:19:44 AM	R84705
Bromobenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Bromodichloromethane	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Bromoform	5.7	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Bromomethane	ND	3.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
2-Butanone	ND	10		µg/L	1	12/21/2021 12:19:44 AM	R84705
Carbon disulfide	ND	10		µg/L	1	12/21/2021 12:19:44 AM	R84705
Carbon Tetrachloride	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Chlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Chloroethane	ND	2.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Chloroform	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Chloromethane	ND	3.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
2-Chlorotoluene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
4-Chlorotoluene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
cis-1,2-DCE	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Dibromochloromethane	2.1	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Dibromomethane	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,1-Dichloroethane	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,1-Dichloroethene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,2-Dichloropropane	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,3-Dichloropropane	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
2,2-Dichloropropane	ND	2.0		µg/L	1	12/21/2021 12:19:44 AM	R84705

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-211214
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/14/2021 8:13:00 AM
Lab ID: 2112A45-003
Matrix: DRINKING W
Received Date: 12/15/2021 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Hexachlorobutadiene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
2-Hexanone	ND	10		µg/L	1	12/21/2021 12:19:44 AM	R84705
Isopropylbenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
4-Isopropyltoluene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
4-Methyl-2-pentanone	ND	10		µg/L	1	12/21/2021 12:19:44 AM	R84705
Methylene Chloride	ND	3.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
n-Butylbenzene	ND	3.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
n-Propylbenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
sec-Butylbenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Styrene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
tert-Butylbenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
trans-1,2-DCE	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Trichlorofluoromethane	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Vinyl chloride	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Xylenes, Total	ND	1.5		µg/L	1	12/21/2021 12:19:44 AM	R84705
Surr: 1,2-Dichloroethane-d4	98.2	70-130		%Rec	1	12/21/2021 12:19:44 AM	R84705
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/21/2021 12:19:44 AM	R84705
Surr: Dibromofluoromethane	102	70-130		%Rec	1	12/21/2021 12:19:44 AM	R84705
Surr: Toluene-d8	101	70-130		%Rec	1	12/21/2021 12:19:44 AM	R84705

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-211214 (Dup)
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/14/2021 8:13:00 AM
Lab ID: 2112A45-004
Matrix: DRINKING W
Received Date: 12/15/2021 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Toluene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Ethylbenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Naphthalene	ND	2.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
2-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Acetone	ND	10		µg/L	1	12/21/2021 12:46:18 AM	R84705
Bromobenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Bromodichloromethane	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Bromoform	5.3	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Bromomethane	ND	3.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
2-Butanone	ND	10		µg/L	1	12/21/2021 12:46:18 AM	R84705
Carbon disulfide	ND	10		µg/L	1	12/21/2021 12:46:18 AM	R84705
Carbon Tetrachloride	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Chlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Chloroethane	ND	2.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Chloroform	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Chloromethane	ND	3.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
2-Chlorotoluene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
4-Chlorotoluene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
cis-1,2-DCE	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Dibromochloromethane	2.3	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Dibromomethane	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,1-Dichloroethane	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,1-Dichloroethene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,2-Dichloropropane	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,3-Dichloropropane	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
2,2-Dichloropropane	ND	2.0		µg/L	1	12/21/2021 12:46:18 AM	R84705

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-211214 (Dup)
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/14/2021 8:13:00 AM
Lab ID: 2112A45-004 **Matrix:** DRINKING W **Received Date:** 12/15/2021 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Hexachlorobutadiene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
2-Hexanone	ND	10		µg/L	1	12/21/2021 12:46:18 AM	R84705
Isopropylbenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
4-Isopropyltoluene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
4-Methyl-2-pentanone	ND	10		µg/L	1	12/21/2021 12:46:18 AM	R84705
Methylene Chloride	ND	3.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
n-Butylbenzene	ND	3.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
n-Propylbenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
sec-Butylbenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Styrene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
tert-Butylbenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
trans-1,2-DCE	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Trichlorofluoromethane	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Vinyl chloride	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Xylenes, Total	ND	1.5		µg/L	1	12/21/2021 12:46:18 AM	R84705
Surr: 1,2-Dichloroethane-d4	99.0	70-130		%Rec	1	12/21/2021 12:46:18 AM	R84705
Surr: 4-Bromofluorobenzene	97.2	70-130		%Rec	1	12/21/2021 12:46:18 AM	R84705
Surr: Dibromofluoromethane	107	70-130		%Rec	1	12/21/2021 12:46:18 AM	R84705
Surr: Toluene-d8	105	70-130		%Rec	1	12/21/2021 12:46:18 AM	R84705

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-211214
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/14/2021 8:30:00 AM
Lab ID: 2112A45-005
Matrix: DRINKING W
Received Date: 12/15/2021 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Toluene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Ethylbenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Naphthalene	ND	2.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
2-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Acetone	ND	10		µg/L	1	12/21/2021 1:12:53 AM	R84705
Bromobenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Bromodichloromethane	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Bromoform	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Bromomethane	ND	3.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
2-Butanone	ND	10		µg/L	1	12/21/2021 1:12:53 AM	R84705
Carbon disulfide	ND	10		µg/L	1	12/21/2021 1:12:53 AM	R84705
Carbon Tetrachloride	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Chlorobenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Chloroethane	ND	2.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Chloroform	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Chloromethane	ND	3.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
2-Chlorotoluene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
4-Chlorotoluene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
cis-1,2-DCE	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Dibromochloromethane	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Dibromomethane	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,1-Dichloroethane	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,1-Dichloroethene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,2-Dichloropropane	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,3-Dichloropropane	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
2,2-Dichloropropane	ND	2.0		µg/L	1	12/21/2021 1:12:53 AM	R84705

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

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
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-211214
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/14/2021 8:30:00 AM
Lab ID: 2112A45-005
Matrix: DRINKING W
Received Date: 12/15/2021 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Hexachlorobutadiene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
2-Hexanone	ND	10		µg/L	1	12/21/2021 1:12:53 AM	R84705
Isopropylbenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
4-Isopropyltoluene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
4-Methyl-2-pentanone	ND	10		µg/L	1	12/21/2021 1:12:53 AM	R84705
Methylene Chloride	ND	3.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
n-Butylbenzene	ND	3.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
n-Propylbenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
sec-Butylbenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Styrene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
tert-Butylbenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Tetrachloroethene (PCE)	16	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
trans-1,2-DCE	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Trichlorofluoromethane	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Vinyl chloride	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Xylenes, Total	ND	1.5		µg/L	1	12/21/2021 1:12:53 AM	R84705
Surr: 1,2-Dichloroethane-d4	99.7	70-130		%Rec	1	12/21/2021 1:12:53 AM	R84705
Surr: 4-Bromofluorobenzene	94.0	70-130		%Rec	1	12/21/2021 1:12:53 AM	R84705
Surr: Dibromofluoromethane	105	70-130		%Rec	1	12/21/2021 1:12:53 AM	R84705
Surr: Toluene-d8	104	70-130		%Rec	1	12/21/2021 1:12:53 AM	R84705

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2112A45**
28-Dec-21

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

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R84705**	RunNo: **84705**
Prep Date:	Analysis Date: **12/20/2021**	SeqNo: **2978557** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	88.8	70	130			
Toluene	18	1.0	20.00	0	92.1	70	130			
Chlorobenzene	17	1.0	20.00	0	84.3	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	85.7	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	86.7	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	9.3		10.00		92.9	70	130			
Surr: Toluene-d8	9.7		10.00		97.0	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R84705**	RunNo: **84705**
Prep Date:	Analysis Date: **12/20/2021**	SeqNo: **2978579** 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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2112A45**
28-Dec-21

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

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R84705**	RunNo: **84705**
Prep Date:	Analysis Date: **12/20/2021**	SeqNo: **2978579** 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2112A45**

28-Dec-21

Client: City of Las Cruces

Project: Joint Superfund Project Monthly Analysis

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R84705**	RunNo: **84705**
Prep Date:	Analysis Date: **12/20/2021**	SeqNo: **2978579** 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		93.6	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.1	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.0	70	130			
Surr: Toluene-d8	9.4		10.00		93.9	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
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HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: City of Las Cruces Work Order Number: 2112A45 RcptNo: 1

Received By: **Joseph Alderette** 12/15/2021 10:10:00 AM

Completed By: **Tracy Casarrubias** 12/16/2021 10:43:15 AM

Reviewed By: JR 12/16/21

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 ☐
   Samples not frozen.
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. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
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: MRG 12/16/21

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	Not Present			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
Mailing Address: P.O. Box 20000
Las Cruces NM 88004
Phone #: 575-528-3607
email or Fax#: lguerra@las-cruces.org
QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush
Project Name: Joint Superfund Project
Monthly Analysis
Project #:
CLC JSP Griggs Walnut
Project Manager:
Luis Guerra (575)-528-3607
Sampler: Evangelina Dominguez
On Ice: ☐ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): -0.4 -0.3 = -0.1 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2112A45	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) (VOC)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12/14/21	0803	Drinking water	CLC 18-2111A 2112A14	3-Home vials	HgCl2	001								X		
	0811		CLC IS1-2112A14			002								X		
	0813		CLC ES1-2112A14			003								X		
	0813		CLC ES1-2112A14 (Dup)			004								X		
12/14/21	0830	Drinking water	CLC 27-2112A14	3-Home vials	HgCl2	005								X		

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
12/14/21	1200			Fedex	12-15-21	10:10
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Send Results:
Luis Guerra: lguerra@lascruces.org
Joshua Rosenblatt@las-cruces.org
(Send invoice 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.

Appendix D

Daily Operational Data

DBS&A
Daniel B. Stephens & Associates, Inc.

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
January 2021

Date	Raw Water	Finished Water
01/01/2021	396,707	386,438
01/02/2021	388,945	391,227
01/03/2021	396,638	391,227
01/04/2021	396,638	387,046
01/05/2021	388,824	392,016
01/06/2021	395,552	392,016
01/07/2021	395,552	387,107
01/08/2021	389,787	390,583
01/09/2021	395,554	390,583
01/10/2021	395,554	387,339
01/11/2021	391,289	383,996
01/12/2021	389,826	383,996
01/13/2021	390,367	396,745
01/14/2021	396,030	396,745
01/15/2021	396,030	380,616
01/16/2021	387,275	393,870
01/17/2021	395,938	393,870
01/18/2021	395,938	383,174
01/19/2021	389,299	393,944
01/20/2021	395,643	393,944
01/21/2021	395,643	382,674
01/22/2021	390,699	392,933
01/23/2021	396,038	392,933
01/24/2021	396,038	384,084
01/25/2021	392,638	389,631
01/26/2021	397,796	389,631
01/27/2021	397,796	385,421
01/28/2021	398,602	394,128
01/29/2021	398,602	394,128
01/30/2021	391,564	392,879
01/31/2021	399,806	392,879
Totals:	**12,222,608**	**12,087,803**

Griggs/Walnut Treatment Facility
Well Runtime Hours
January 2021

	Well 18		Well 27	
Date	**Hours**	**Total Gallons**	**Hours**	**Total Gallons**
01/01/2021	8.0	42,489	24.0	342,454
01/02/2021	8.0	42,489	24.0	342,601
01/03/2021	8.0	42,481	24.0	342,600
01/04/2021	8.0	42,484	24.0	342,663
01/05/2021	8.0	42,573	24.0	342,702
01/06/2021	8.0	42,573	24.0	342,586
01/07/2021	8.0	42,456	24.0	342,215
01/08/2021	8.0	42,456	24.0	342,215
01/09/2021	8.0	42,350	24.0	342,404
01/10/2021	8.0	42,379	24.0	342,234
01/11/2021	8.0	42,442	24.0	342,309
01/12/2021	8.0	42,442	24.0	342,807
01/13/2021	8.0	42,483	24.0	342,807
01/14/2021	8.0	42,483	24.0	342,706
01/15/2021	8.0	42,458	24.0	342,365
01/16/2021	8.0	42,486	24.0	342,420
01/17/2021	8.0	42,486	24.0	342,563
01/18/2021	8.0	42,480	24.0	342,612
01/19/2021	8.0	42,440	24.0	342,516
01/20/2021	8.0	42,401	24.0	342,222
01/21/2021	8.0	42,462	24.0	342,343
01/22/2021	8.0	42,505	24.0	342,490
01/23/2021	8.0	42,509	24.0	342,614
01/24/2021	8.0	42,509	24.0	342,887
01/25/2021	8.0	42,493	24.0	343,022
01/26/2021	8.0	42,544	24.0	342,933
01/27/2021	8.0	42,544	24.0	342,703
01/28/2021	8.0	42,537	24.0	343,574
01/29/2021	8.0	42,530	24.0	343,722
01/30/2021	8.0	42,566	24.0	343,689
01/31/2021	8.0	42,566	24.0	343,933
Totals:	**248.0**	**1,317,093**	**744.0**	**10,623,910**

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
February 2021

Date	Raw Water	Finished Water
02/01/2021	399,806	386,232
02/02/2021	394,325	392,801
02/03/2021	394,325	392,801
02/04/2021	388,726	377,590
02/05/2021	391,162	393,261
02/06/2021	398,354	393,261
02/07/2021	398,354	385,939
02/08/2021	393,220	393,549
02/09/2021	397,141	393,549
02/10/2021	397,141	383,896
02/11/2021	396,166	389,986
02/12/2021	396,166	389,986
02/13/2021	395,886	385,047
02/14/2021	392,721	385,047
02/15/2021	392,721	374,710
02/16/2021	381,310	370,914
02/17/2021	386,954	385,976
02/18/2021	400,308	391,417
02/19/2021	400,308	391,417
02/20/2021	394,009	394,914
02/21/2021	396,107	394,914
02/22/2021	396,107	384,261
02/23/2021	399,800	395,065
02/24/2021	399,800	395,065
02/25/2021	392,576	394,295
02/26/2021	398,589	394,295
02/27/2021	398,589	392,229
02/28/2021	401,681	392,229
Totals:	**11,072,349**	**10,894,645**

Griggs/Walnut Treatment Facility
Well Runtime Hours
February 2021

	Well 18		Well 27	
Date	**Hours**	**Total Gallons**	**Hours**	**Total Gallons**
02/01/2021	8.0	42,555	24.0	343,908
02/02/2021	8.0	42,554	24.0	343,526
02/03/2021	8.0	42,554	24.0	343,714
02/04/2021	8.0	42,531	24.0	343,457
02/05/2021	8.0	42,531	24.0	343,608
02/06/2021	8.0	42,531	24.0	343,314
02/07/2021	8.0	42,534	24.0	343,415
02/08/2021	8.0	42,534	24.0	343,562
02/09/2021	8.0	42,460	24.0	343,385
02/10/2021	8.0	42,405	24.0	343,305
02/11/2021	8.0	42,405	24.0	343,197
02/12/2021	8.0	42,408	24.0	343,197
02/13/2021	8.0	42,429	24.0	343,156
02/14/2021	8.0	42,459	24.0	343,205
02/15/2021	8.0	42,512	23.0	332,864
02/16/2021	8.0	41,332	23.0	332,381
02/17/2021	8.0	42,649	24.0	339,420
02/18/2021	8.0	42,649	24.0	344,484
02/19/2021	8.0	42,640	24.0	344,636
02/20/2021	8.0	42,642	24.0	344,563
02/21/2021	8.0	42,642	24.0	344,563
02/22/2021	8.0	42,584	24.0	344,522
02/23/2021	8.0	42,604	24.0	344,466
02/24/2021	8.0	42,604	24.0	344,762
02/25/2021	8.0	42,525	24.0	344,567
02/26/2021	8.0	42,628	24.0	344,474
02/27/2021	8.0	42,628	24.0	344,474
02/28/2021	8.0	42,625	24.0	344,399
Totals:	**224.0**	**1,190,154**	**670.0**	**9,602,521**

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
March 2021

Date	Raw Water	Finished Water
03/01/2021	401,681	387,339
03/02/2021	393,838	399,251
03/03/2021	398,048	399,251
03/04/2021	398,048	387,352
03/05/2021	400,110	393,546
03/06/2021	400,110	393,546
03/07/2021	393,405	392,620
03/08/2021	399,228	392,620
03/09/2021	399,228	388,791
03/10/2021	392,967	394,014
03/11/2021	399,145	394,014
03/12/2021	399,145	385,599
03/13/2021	397,877	390,602
03/14/2021	397,877	390,602
03/15/2021	401,201	386,377
03/16/2021	388,202	382,599
03/17/2021	389,470	396,164
03/18/2021	397,656	387,414
03/19/2021	387,738	377,889
03/20/2021	391,840	393,644
03/21/2021	399,406	385,915
03/22/2021	381,718	382,500
03/23/2021	396,282	391,712
03/24/2021	396,352	384,706
03/25/2021	381,763	387,524
03/26/2021	398,996	387,973
03/27/2021	393,776	383,021
03/28/2021	382,998	388,598
03/29/2021	398,200	386,847
03/30/2021	393,443	382,966
03/31/2021	381,702	386,825
Totals:	**12,231,451**	**12,061,819**

Griggs/Walnut Treatment Facility
Well Runtime Hours
March 2021

	Well 18		Well 27	
Date	**Hours**	**Total Gallons**	**Hours**	**Total Gallons**
03/01/2021	8.0	42,625	24.0	344,313
03/02/2021	8.0	42,599	24.0	344,238
03/03/2021	8.0	42,599	24.0	344,352
03/04/2021	8.0	42,555	24.0	344,231
03/05/2021	8.0	42,538	24.0	344,118
03/06/2021	8.0	42,483	24.0	344,132
03/07/2021	8.0	42,493	24.0	344,083
03/08/2021	8.0	42,493	24.0	343,836
03/09/2021	8.0	42,447	24.0	343,993
03/10/2021	8.0	42,458	24.0	344,112
03/11/2021	8.0	42,458	24.0	344,017
03/12/2021	8.0	42,458	24.0	344,109
03/13/2021	8.0	42,423	24.0	343,742
03/14/2021	8.0	42,424	24.0	343,644
03/15/2021	8.0	42,394	24.0	343,785
03/16/2021	8.0	42,467	24.0	343,632
03/17/2021	8.0	42,459	24.0	343,441
03/18/2021	8.0	42,340	24.0	343,370
03/19/2021	8.0	42,276	24.0	343,388
03/20/2021	8.0	42,385	24.0	343,479
03/21/2021	8.0	42,407	24.0	343,587
03/22/2021	8.0	42,371	24.0	343,259
03/23/2021	8.0	42,443	24.0	343,543
03/24/2021	8.0	42,459	24.0	343,321
03/25/2021	8.0	42,442	24.0	343,555
03/26/2021	8.0	42,374	24.0	343,252
03/27/2021	8.0	42,387	24.0	343,080
03/28/2021	8.0	42,350	24.0	342,790
03/29/2021	8.0	42,395	24.0	342,785
03/30/2021	8.0	42,397	24.0	342,620
03/31/2021	8.0	42,296	24.0	342,342
Totals:	**248.0**	**1,315,693**	**744.0**	**10,652,144**

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
April 2021

Date	Raw Water	Finished Water
04/01/2021	442,141	423,567
04/02/2021	438,641	435,083
04/03/2021	382,814	377,724
04/04/2021	391,708	393,591
04/05/2021	396,543	386,182
04/06/2021	386,002	377,543
04/07/2021	388,289	391,229
04/08/2021	394,676	387,528
04/09/2021	393,080	378,690
04/10/2021	381,079	381,451
04/11/2021	392,396	394,671
04/12/2021	393,517	380,502
04/13/2021	390,427	381,751
04/14/2021	380,543	384,550
04/15/2021	393,303	388,067
04/16/2021	393,498	385,338
04/17/2021	388,431	376,381
04/18/2021	381,516	386,449
04/19/2021	393,777	389,409
04/20/2021	393,302	379,350
04/21/2021	387,059	380,416
04/22/2021	340,618	324,455
04/23/2021	386,738	380,990
04/24/2021	388,397	396,915
04/25/2021	394,212	382,913
04/26/2021	393,125	384,400
04/27/2021	380,096	387,376
04/28/2021	395,292	385,684
04/29/2021	395,635	385,561
04/30/2021	382,300	378,321
Totals:	**11,739,155**	**11,566,087**

Griggs/Walnut Treatment Facility
Well Runtime Hours
April 2021

	Well 18		Well 27	
Date	**Hours**	**Total Gallons**	**Hours**	**Total Gallons**
04/01/2021	16.0	85,571	24.0	342,132
04/02/2021	16.0	84,576	24.0	342,073
04/03/2021	8.0	42,224	24.0	342,339
04/04/2021	8.0	42,283	24.0	342,297
04/05/2021	8.0	42,287	24.0	342,356
04/06/2021	8.0	42,301	24.0	342,246
04/07/2021	8.0	42,215	24.0	341,815
04/08/2021	8.0	42,189	24.0	341,341
04/09/2021	8.0	42,152	24.0	341,516
04/10/2021	8.0	42,080	24.0	341,160
04/11/2021	8.0	42,076	24.0	341,295
04/12/2021	8.0	42,105	24.0	341,153
04/13/2021	8.0	42,067	24.0	340,878
04/14/2021	8.0	42,060	24.0	340,798
04/15/2021	8.0	42,068	24.0	340,716
04/16/2021	8.0	42,089	24.0	340,857
04/17/2021	8.0	42,058	24.0	340,432
04/18/2021	8.0	42,075	24.0	340,384
04/19/2021	8.0	42,002	24.0	340,159
04/20/2021	8.0	42,044	24.0	340,080
04/21/2021	8.0	42,046	24.0	340,102
04/22/2021	5.0	26,856	20.0	290,372
04/23/2021	8.0	42,033	24.0	341,952
04/24/2021	8.0	42,004	24.0	341,747
04/25/2021	8.0	41,993	24.0	341,656
04/26/2021	8.0	42,017	24.0	341,674
04/27/2021	8.0	42,030	24.0	341,437
04/28/2021	8.0	41,988	24.0	341,042
04/29/2021	8.0	41,991	24.0	340,857
04/30/2021	8.0	41,941	24.0	340,984
Totals:	**253.0**	**1,333,420**	**716.0**	**10,187,850**

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
May 2021

Date	Raw Water	Finished Water
05/01/2021	387,481	391,527
05/02/2021	393,465	388,145
05/03/2021	393,768	379,628
05/04/2021	380,129	381,461
05/05/2021	391,522	395,660
05/06/2021	393,525	381,383
05/07/2021	389,394	382,767
05/08/2021	380,611	387,300
05/09/2021	394,927	386,658
05/10/2021	393,047	386,302
05/11/2021	387,951	378,051
05/12/2021	380,229	385,932
05/13/2021	393,140	392,120
05/14/2021	391,627	380,962
05/15/2021	390,581	382,256
05/16/2021	379,118	384,045
05/17/2021	393,712	386,834
05/18/2021	394,165	384,257
05/19/2021	380,755	376,633
05/20/2021	388,120	391,526
05/21/2021	392,375	385,733
05/22/2021	389,087	376,325
05/23/2021	379,197	383,330
05/24/2021	392,517	391,715
05/25/2021	392,584	379,672
05/26/2021	385,981	380,664
05/27/2021	381,649	390,074
05/28/2021	381,675	375,806
05/29/2021	376,272	372,623
05/30/2021	376,170	370,616
05/31/2021	376,823	373,160
Totals:	**12,001,596**	**11,883,165**

Griggs/Walnut Treatment Facility
Well Runtime Hours
May 2021

	Well 18		Well 27	
Date	**Hours**	**Total Gallons**	**Hours**	**Total Gallons**
05/01/2021	8.0	41,828	24.0	340,866
05/02/2021	8.0	41,901	24.0	341,297
05/03/2021	8.0	41,962	24.0	341,301
05/04/2021	8.0	41,796	24.0	340,695
05/05/2021	8.0	41,788	24.0	340,755
05/06/2021	8.0	41,808	24.0	340,799
05/07/2021	8.0	41,845	24.0	340,875
05/08/2021	8.0	41,832	24.0	340,865
05/09/2021	8.0	41,775	24.0	340,778
05/10/2021	8.0	41,783	24.0	340,765
05/11/2021	8.0	41,713	24.0	340,628
05/12/2021	8.0	41,673	24.0	340,366
05/13/2021	8.0	41,715	24.0	340,358
05/14/2021	8.0	41,708	24.0	340,257
05/15/2021	8.0	41,739	24.0	340,018
05/16/2021	8.0	41,687	24.0	339,951
05/17/2021	8.0	41,692	24.0	340,264
05/18/2021	8.0	41,620	24.0	340,011
05/19/2021	8.0	41,702	24.0	340,133
05/20/2021	8.0	41,615	24.0	339,998
05/21/2021	8.0	41,640	24.0	339,894
05/22/2021	8.0	41,614	24.0	339,719
05/23/2021	8.0	41,646	24.0	340,031
05/24/2021	8.0	41,600	24.0	339,809
05/25/2021	8.0	41,632	24.0	339,710
05/26/2021	8.0	41,608	24.0	339,830
05/27/2021	8.0	41,663	24.0	339,614
05/28/2021	8.0	41,626	24.0	333,181
05/29/2021	8.0	41,679	24.0	328,660
05/30/2021	8.0	41,711	24.0	328,640
05/31/2021	8.0	41,646	24.0	328,800
Totals:	**248.0**	**1,293,248**	**744.0**	**10,508,868**

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
June 2021

Date	Raw Water	Finished Water
06/01/2021	376,388	371,704
06/02/2021	376,464	372,797
06/03/2021	376,530	371,584
06/04/2021	376,310	372,486
06/05/2021	376,118	371,388
06/06/2021	375,736	372,936
06/07/2021	375,823	371,433
06/08/2021	375,688	371,832
06/09/2021	375,889	370,008
06/10/2021	375,720	372,332
06/11/2021	375,991	370,457
06/12/2021	375,694	372,157
06/13/2021	343,361	329,582
06/14/2021	375,535	372,412
06/15/2021	372,884	370,702
06/16/2021	372,682	372,053
06/17/2021	375,269	375,437
06/18/2021	348,101	343,228
06/19/2021	374,860	372,456
06/20/2021	375,272	371,679
06/21/2021	375,626	372,099
06/22/2021	375,547	370,594
06/23/2021	375,189	372,550
06/24/2021	374,914	371,048
06/25/2021	374,377	371,483
06/26/2021	374,927	368,973
06/27/2021	374,233	371,712
06/28/2021	374,259	368,606
06/29/2021	373,751	371,351
06/30/2021	373,126	369,776
Totals:	**11,196,265**	**11,076,856**

Griggs/Walnut Treatment Facility
Well Runtime Hours
June 2021

	Well 18		Well 27	
Date	**Hours**	**Total Gallons**	**Hours**	**Total Gallons**
06/01/2021	8.0	41,637	24.0	328,636
06/02/2021	8.0	41,642	24.0	328,508
06/03/2021	8.0	41,722	24.0	328,634
06/04/2021	8.0	41,675	24.0	327,985
06/05/2021	8.0	41,727	24.0	328,012
06/06/2021	8.0	41,793	24.0	327,883
06/07/2021	8.0	41,730	24.0	328,067
06/08/2021	8.0	41,777	24.0	328,059
06/09/2021	8.0	41,738	24.0	327,791
06/10/2021	8.0	41,755	24.0	327,722
06/11/2021	8.0	41,693	24.0	327,494
06/12/2021	8.0	41,729	24.0	327,540
06/13/2021	8.0	41,781	21.0	284,769
06/14/2021	8.0	41,717	24.0	328,908
06/15/2021	8.0	41,739	24.0	328,868
06/16/2021	8.0	41,695	24.0	328,604
06/17/2021	8.0	41,708	24.0	329,018
06/18/2021	8.0	41,721	22.0	300,287
06/19/2021	8.0	41,663	24.0	326,848
06/20/2021	8.0	41,696	24.0	327,318
06/21/2021	8.0	41,647	24.0	327,287
06/22/2021	8.0	41,672	24.0	327,310
06/23/2021	8.0	41,611	24.0	327,274
06/24/2021	8.0	41,646	24.0	327,256
06/25/2021	8.0	41,617	24.0	326,654
06/26/2021	8.0	41,623	24.0	326,496
06/27/2021	8.0	41,661	24.0	326,459
06/28/2021	8.0	41,502	24.0	326,125
06/29/2021	8.0	41,528	24.0	326,361
06/30/2021	8.0	41,485	24.0	326,250
Totals:	**240.0**	**1,250,331**	**715.0**	**9,758,422**

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
July 2021

Date	Raw Water	Finished Water
07/01/2021	374,006	371,641
07/02/2021	374,511	369,961
07/03/2021	374,067	371,901
07/04/2021	373,332	370,178
07/05/2021	374,950	370,273
07/06/2021	374,278	369,181
07/07/2021	369,591	361,475
07/08/2021	365,528	360,179
07/09/2021	364,842	360,816
07/10/2021	364,979	360,311
07/11/2021	363,222	359,273
07/12/2021	362,737	357,951
07/13/2021	352,825	360,843
07/14/2021	358,753	346,405
07/15/2021	322,944	327,676
07/16/2021	371,539	368,441
07/17/2021	368,593	361,407
07/18/2021	367,889	363,509
07/19/2021	367,418	362,701
07/20/2021	366,132	362,223
07/21/2021	366,199	361,313
07/22/2021	365,939	362,154
07/23/2021	366,145	361,603
07/24/2021	365,474	361,336
07/25/2021	365,758	360,951
07/26/2021	365,629	361,630
07/27/2021	365,963	362,086
07/28/2021	365,809	361,927
07/29/2021	365,910	362,202
07/30/2021	365,518	361,357
07/31/2021	364,807	360,645
Totals:	**11,335,288**	**11,213,548**

Griggs/Walnut Treatment Facility
Well Runtime Hours
July 2021

	Well 18		Well 27			
Date	Hours	Total Gallons	Hours	Total Gallons	Corrected Hours	Corrected Total Gallons [a]
07/01/2021	8.0	41,713	24.0	326,530	24.0	319,370
07/02/2021	8.0	41,747	24.0	326,475	24.0	319,370
07/03/2021	8.0	41,763	24.0	326,271	24.0	319,370
07/04/2021	8.0	41,768	24.0	326,537	24.0	319,370
07/05/2021	8.0	41,796	24.0	326,471	24.0	319,370
07/06/2021	8.0	41,771	24.0	326,131	24.0	319,370
07/07/2021	8.0	41,768	24.0	319,749	24.0	319,370
07/08/2021	8.0	41,770	24.0	316,452	24.0	319,370
07/09/2021	8.0	41,808	24.0	316,714	24.0	319,370
07/10/2021	8.0	41,842	24.0	316,978	24.0	319,370
07/11/2021	8.0	41,790	24.0	315,007	24.0	319,370
07/12/2021	8.0	41,767	24.0	311,181	24.0	319,370
07/13/2021	8.0	41,836	24.0	311,201	24.0	319,370
07/14/2021	8.0	41,873	24.0	311,031	24.0	319,370
07/15/2021	8.0	41,665	23.0	285,014	24.0	319,370
07/16/2021	8.0	41,654	0.0	2,050	24.0	319,370
07/17/2021	8.0	41,745	0.0	2,050	24.0	319,370
07/18/2021	8.0	41,749	0.0	2,050	24.0	319,370
07/19/2021	8.0	41,739	0.0	2,050	24.0	319,370
07/20/2021	8.0	41,587	0.0	2,050	24.0	319,370
07/21/2021	8.0	41,576	0.0	2,050	24.0	319,370
07/22/2021	8.0	41,628	0.0	2,050	24.0	319,370
07/23/2021	8.0	41,531	0.0	2,050	24.0	319,370
07/24/2021	8.0	41,535	0.0	2,050	24.0	319,370
07/25/2021	8.0	41,576	0.0	2,050	24.0	319,370
07/26/2021	8.0	41,574	13.0	172,942	24.0	319,370
07/27/2021	8.0	41,603	13.0	172,942	24.0	319,370
07/28/2021	8.0	41,594	12.0	158,751	24.0	319,370
07/29/2021	8.0	41,614	12.0	158,751	24.0	319,370
07/30/2021	8.0	41,640	12.0	158,751	24.0	319,370
07/31/2021	8.0	41,688	12.0	158,751	24.0	319,370
Totals:	**248.0**	**1,292,710**	**433.0**	**5,763,136**	**744.0**	**9,900,457**

[a] Due to CLC 27 SCADA recording errors during July, August, and September, the daily total volumes for this period were calculated using the manual totalizer reading of 29,382,000 gallons recorded on September 30, 2021, divided by 92 days (the number of days since the totalizer was reset on July 1). The monthly total is based on the number of days in each month during this period.

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
August 2021

Date	Raw Water	Finished Water
08/01/2021	366,439	361,785
08/02/2021	366,023	362,351
08/03/2021	366,597	361,707
08/04/2021	366,239	362,526
08/05/2021	366,727	361,763
08/06/2021	366,398	362,403
08/07/2021	366,333	361,539
08/08/2021	365,946	362,291
08/09/2021	366,043	361,263
08/10/2021	361,926	364,864
08/11/2021	367,546	356,742
08/12/2021	365,145	360,919
08/13/2021	362,837	358,162
08/14/2021	364,092	359,438
08/15/2021	353,547	361,124
08/16/2021	360,746	310,264
08/17/2021	361,639	349,897
08/18/2021	327,500	324,850
08/19/2021	359,695	341,346
08/20/2021	334,926	320,768
08/21/2021	317,477	324,939
08/22/2021	329,225	308,355
08/23/2021	337,283	316,618
08/24/2021	352,433	348,421
08/25/2021	336,044	318,607
08/26/2021	352,115	344,781
08/27/2021	335,475	319,173
08/28/2021	316,084	323,879
08/29/2021	330,675	313,752
08/30/2021	326,936	309,718
08/31/2021	358,009	357,384
Totals:	**10,908,097**	**10,651,628**

Griggs/Walnut Treatment Facility
Well Runtime Hours
August 2021

	Well 18		Well 27			
Date	Hours	Total Gallons	Hours	Total Gallons	Corrected Hours	Corrected total Gallons [a]
08/01/2021	8.0	41,694	5.0	67,804	24.0	319,370
08/02/2021	8.0	41,676	5.0	67,804	24.0	319,370
08/03/2021	8.0	41,701	5.0	67,804	24.0	319,370
08/04/2021	8.0	41,666	23.0	310,006	24.0	319,370
08/05/2021	8.0	41,661	7.0	93,249	24.0	319,370
08/06/2021	8.0	41,612	7.0	93,249	24.0	319,370
08/07/2021	8.0	41,618	7.0	93,249	24.0	319,370
08/08/2021	8.0	41,662	7.0	93,249	24.0	319,370
08/09/2021	8.0	41,613	7.0	93,249	24.0	319,370
08/10/2021	8.0	41,641	7.0	93,249	24.0	319,370
08/11/2021	8.0	41,609	7.0	93,249	24.0	319,370
08/12/2021	8.0	41,636	7.0	93,249	24.0	319,370
08/13/2021	8.0	41,588	10.0	130,769	24.0	319,370
08/14/2021	8.0	41,598	10.0	130,769	24.0	319,370
08/15/2021	8.0	41,620	10.0	130,769	24.0	319,370
08/16/2021	7.0	35,180	10.0	130,769	24.0	319,370
08/17/2021	6.0	31,345	10.0	130,769	24.0	319,370
08/18/2021	0.0	0	10.0	130,769	24.0	319,370
08/19/2021	6.0	31,378	10.0	130,769	24.0	319,370
08/20/2021	0.0	0	10.0	130,769	24.0	319,370
08/21/2021	0.0	0	10.0	130,769	24.0	319,370
08/22/2021	0.0	0	10.0	130,769	24.0	319,370
08/23/2021	0.0	0	10.0	130,769	24.0	319,370
08/24/2021	6.0	31,292	10.0	130,769	24.0	319,370
08/25/2021	0.0	0	10.0	130,769	24.0	319,370
08/26/2021	6.0	31,278	10.0	130,769	24.0	319,370
08/27/2021	0.0	0	10.0	130,769	24.0	319,370
08/28/2021	0.0	0	10.0	130,769	24.0	319,370
08/29/2021	0.0	0	22.0	298,909	24.0	319,370
08/30/2021	0.0	0	23.0	306,233	24.0	319,370
08/31/2021	6.0	31,234	23.0	306,233	24.0	319,370
Totals:	**157.0**	**816,300**	**322.0**	**4,263,095**	**744**	**9,900,457**

[a] Due to CLC 27 SCADA recording errors during July, August, and September, the daily total volumes for this period were calculated using the manual totalizer reading of 29,382,000 gallons recorded on September 30, 2021, divided by 92 days (the number of days since the totalizer was reset on July 1). The monthly total is based on the number of days in each month during this period.

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
September 2021

Date	Raw Water	Finished Water
09/01/2021	329,960	306,259
09/02/2021	355,522	356,396
09/03/2021	326,246	315,332
09/04/2021	335,983	304,605
09/05/2021	331,137	324,974
09/06/2021	315,735	320,221
09/07/2021	370,054	337,628
09/08/2021	310,008	312,858
09/09/2021	353,855	330,623
09/10/2021	327,122	323,551
09/11/2021	317,097	317,856
09/12/2021	336,138	307,875
09/13/2021	325,148	323,546
09/14/2021	356,750	336,769
09/15/2021	314,909	308,269
09/16/2021	352,383	362,328
09/17/2021	338,249	307,029
09/18/2021	331,151	324,945
09/19/2021	317,384	321,822
09/20/2021	272,523	263,868
09/21/2021	373,477	352,736
09/22/2021	324,920	319,989
09/23/2021	311,897	314,979
09/24/2021	335,468	313,272
09/25/2021	336,751	327,892
09/26/2021	324,929	329,586
09/27/2021	322,797	320,737
09/28/2021	371,888	352,343
09/29/2021	318,748	312,934
09/30/2021	358,032	362,528
Totals:	**9,996,261**	**9,713,748**

Griggs/Walnut Treatment Facility
Well Runtime Hours
September 2021

	Well 18		Well 27			
Date	Hours	Total Gallons	Hours	Total Gallons	Corrected Hours	Corrected total Gallons [a]
09/01/2021	0.0	0	23.0	306,233	24.0	319,370
09/02/2021	6.0	31,194	23.0	306,233	24.0	319,370
09/03/2021	0.0	0	23.0	306,233	24.0	319,370
09/04/2021	0.0	0	23.0	306,233	24.0	319,370
09/05/2021	0.0	0	23.0	306,233	24.0	319,370
09/06/2021	0.0	0	23.0	306,233	24.0	319,370
09/07/2021	6.0	31,141	23.0	306,233	24.0	319,370
09/08/2021	0.0	0	23.0	306,233	24.0	319,370
09/09/2021	6.0	31,184	23.0	306,233	24.0	319,370
09/10/2021	0.0	0	13.0	165,487	24.0	319,370
09/11/2021	0.0	0	13.0	165,487	24.0	319,370
09/12/2021	0.0	0	13.0	165,487	24.0	319,370
09/13/2021	0.0	0	13.0	165,487	24.0	319,370
09/14/2021	6.0	31,191	24.0	320,912	24.0	319,370
09/15/2021	0.0	0	23.0	310,902	24.0	319,370
09/16/2021	6.0	31,192	24.0	322,699	24.0	319,370
09/17/2021	0.0	0	24.0	323,107	24.0	319,370
09/18/2021	0.0	0	24.0	323,095	24.0	319,370
09/19/2021	0.0	0	24.0	322,852	24.0	319,370
09/20/2021	0.0	0	20.0	266,718	24.0	319,370
09/21/2021	6.0	31,136	24.0	324,086	24.0	319,370
09/22/2021	0.0	0	24.0	323,954	24.0	319,370
09/23/2021	3.0	18,057	21.0	286,374	24.0	319,370
09/24/2021	0.0	0	24.0	324,011	24.0	319,370
09/25/2021	0.0	0	24.0	324,033	24.0	319,370
09/26/2021	0.0	0	24.0	324,117	24.0	319,370
09/27/2021	0.0	0	24.0	323,279	24.0	319,370
09/28/2021	6.0	31,180	24.0	322,884	24.0	319,370
09/29/2021	0.0	0	23.0	314,206	24.0	319,370
09/30/2021	6.0	31,203	24.0	324,196	24.0	319,370
Totals:	**51.0**	**267,478**	**658.0**	**8,799,469**	**720**	**9,581,087**

[a] Due to CLC 27 SCADA recording errors during July, August, and September, the daily total volumes for this period were calculated using the manual totalizer reading of 29,382,000 gallons recorded on September 30, 2021, divided by 92 days (the number of days since the totalizer was reset on July 1). The monthly total is based on the number of days in each month during this period.

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
October 2021

Date	Raw Water	Finished Water
10/01/2021	321,574	321,600
10/02/2021	337,414	317,104
10/03/2021	335,230	330,047
10/04/2021	318,897	330,049
10/05/2021	369,360	347,168
10/06/2021	331,762	331,894
10/07/2021	350,198	358,172
10/08/2021	336,648	313,986
10/09/2021	336,607	328,855
10/10/2021	322,380	330,162
10/11/2021	326,222	319,301
10/12/2021	371,408	351,678
10/13/2021	325,434	331,505
10/14/2021	356,716	350,407
10/15/2021	337,505	319,780
10/16/2021	332,064	330,090
10/17/2021	318,535	328,549
10/18/2021	335,091	313,492
10/19/2021	369,426	358,461
10/20/2021	322,296	331,388
10/21/2021	364,602	343,181
10/22/2021	335,838	331,618
10/23/2021	317,964	329,576
10/24/2021	332,456	312,975
10/25/2021	337,162	326,749
10/26/2021	355,678	362,395
10/27/2021	325,543	319,473
10/28/2021	371,883	354,752
10/29/2021	320,434	328,008
10/30/2021	321,493	310,344
10/31/2021	332,985	321,298
Totals:	**10,470,803**	**10,284,056**

Griggs/Walnut Treatment Facility
Well Runtime Hours
October 2021

	Well 18		Well 27	
Date	**Hours**	**Total Gallons**	**Hours**	**Total Gallons**
10/01/2021	0.0	0	24.0	324,008
10/02/2021	0.0	0	24.0	323,796
10/03/2021	0.0	0	24.0	323,893
10/04/2021	0.0	0	24.0	324,086
10/05/2021	6.0	31,190	24.0	323,690
10/06/2021	0.0	0	24.0	324,034
10/07/2021	6.0	31,216	24.0	323,912
10/08/2021	0.0	0	24.0	324,016
10/09/2021	0.0	0	24.0	323,895
10/10/2021	0.0	0	24.0	323,599
10/11/2021	0.0	0	24.0	323,639
10/12/2021	6.0	31,239	24.0	323,845
10/13/2021	0.0	0	24.0	323,822
10/14/2021	6.0	31,198	24.0	323,456
10/15/2021	0.0	0	24.0	323,422
10/16/2021	0.0	0	24.0	323,472
10/17/2021	0.0	0	24.0	323,541
10/18/2021	0.0	0	24.0	323,992
10/19/2021	6.0	31,223	24.0	324,020
10/20/2021	0.0	194	24.0	323,952
10/21/2021	6.0	31,197	24.0	323,340
10/22/2021	0.0	0	24.0	323,524
10/23/2021	0.0	0	24.0	323,299
10/24/2021	0.0	0	24.0	323,330
10/25/2021	0.0	0	24.0	323,597
10/26/2021	6.0	31,184	24.0	323,790
10/27/2021	0.0	0	24.0	323,767
10/28/2021	6.0	31,214	24.0	323,537
10/29/2021	0.0	0	24.0	320,198
10/30/2021	0.0	0	24.0	317,352
10/31/2021	0.0	0	24.0	317,454
Totals:	**48.0**	**249,855**	**744.0**	**10,019,276**

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
November 2021

Date	Raw Water	Finished Water
11/01/2021	310,614	325,244
11/02/2021	368,803	343,510
11/03/2021	311,438	324,827
11/04/2021	368,693	339,369
11/05/2021	311,306	324,084
11/06/2021	329,975	302,797
11/07/2021	328,965	340,577
11/08/2021	333,733	307,284
11/09/2021	348,969	359,875
11/10/2021	348,969	359,875
11/11/2021	352,369	361,014
11/12/2021	352,369	361,231
11/13/2021	326,116	304,920
11/14/2021	334,917	325,527
11/15/2021	334,917	329,072
11/16/2021	359,101	352,532
11/17/2021	338,332	318,290
11/18/2021	360,614	362,430
11/19/2021	360,614	362,652
11/20/2021	332,618	314,787
11/21/2021	332,618	321,875
11/22/2021	324,141	321,875
11/23/2021	351,987	356,235
11/24/2021	351,987	356,235
11/25/2021	351,303	360,018
11/26/2021	351,303	360,228
11/27/2021	330,211	322,961
11/28/2021	330,211	322,961
11/29/2021	333,209	317,397
11/30/2021	348,423	358,899
Totals:	**10,218,825**	**10,118,578**

Griggs/Walnut Treatment Facility
Well Runtime Hours
November 2021

	Well 18		Well 27	
Date	**Hours**	**Total Gallons**	**Hours**	**Total Gallons**
11/01/2021	0.0	0	24.0	317,523
11/02/2021	6.0	31,192	24.0	317,817
11/03/2021	0.0	0	24.0	317,863
11/04/2021	6.0	31,233	24.0	317,680
11/05/2021	0.0	0	24.0	317,767
11/06/2021	0.0	0	24.0	317,712
11/07/2021	0.0	0	24.0	330,878
11/08/2021	0.0	0	24.0	317,611
11/09/2021	6.0	31,262	24.0	317,751
11/10/2021	6.0	31,262	24.0	317,626
11/11/2021	6.0	31,227	24.0	317,711
11/12/2021	6.0	31,227	24.0	317,355
11/13/2021	0.0	0	24.0	316,718
11/14/2021	0.0	0	24.0	324,483
11/15/2021	0.0	0	24.0	324,881
11/16/2021	6.0	31,294	24.0	325,168
11/17/2021	6.0	31,294	24.0	325,102
11/18/2021	6.0	31,291	24.0	325,238
11/19/2021	6.0	31,291	24.0	324,881
11/20/2021	0.0	0	24.0	321,381
11/21/2021	0.0	0	24.0	316,934
11/22/2021	0.0	0	24.0	316,934
11/23/2021	6.0	31,307	24.0	316,679
11/24/2021	6.0	31,307	24.0	317,381
11/25/2021	6.0	31,354	24.0	317,518
11/26/2021	6.0	31,354	24.0	317,368
11/27/2021	0.0	0	24.0	317,233
11/28/2021	0.0	0	24.0	317,419
11/29/2021	0.0	0	24.0	317,566
11/30/2021	6.0	31,408	24.0	317,371
Totals:	**90.0**	**469,301**	**720.0**	**9,585,548**

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
December 2021

Date	Raw Water	Finished Water
12/01/2021	348,423	358,899
12/02/2021	351,802	358,763
12/03/2021	351,802	358,971
12/04/2021	329,761	318,293
12/05/2021	329,761	318,293
12/06/2021	332,699	316,111
12/07/2021	345,225	353,802
12/08/2021	345,225	353,802
12/09/2021	347,519	359,115
12/10/2021	347,519	359,115
12/11/2021	329,721	323,232
12/12/2021	324,906	323,232
12/13/2021	332,627	311,147
12/14/2021	344,150	355,000
12/15/2021	344,150	355,000
12/16/2021	349,122	359,558
12/17/2021	349,122	359,558
12/18/2021	328,191	320,937
12/19/2021	328,191	320,937
12/20/2021	333,713	314,736
12/21/2021	345,828	353,745
12/22/2021	345,828	353,745
12/23/2021	349,046	360,957
12/24/2021	349,046	360,957
12/25/2021	329,905	324,398
12/26/2021	327,251	324,631
12/27/2021	333,573	314,199
12/28/2021	346,190	357,145
12/29/2021	346,190	357,145
12/30/2021	350,824	360,906
12/31/2021	350,824	360,906
Totals:	**10,568,135**	**10,627,233**

Griggs/Walnut Treatment Facility
Well Runtime Hours
December 2021

	Well 18		Well 27	
Date	**Hours**	**Total Gallons**	**Hours**	**Total Gallons**
12/01/2021	6.0	31,408	24.0	317,155
12/02/2021	6.0	31,450	24.0	317,291
12/03/2021	6.0	31,450	24.0	316,982
12/04/2021	0.0	0	24.0	316,954
12/05/2021	0.0	0	24.0	316,659
12/06/2021	0.0	0	24.0	316,463
12/07/2021	6.0	31,398	24.0	316,228
12/08/2021	6.0	31,398	24.0	316,429
12/09/2021	6.0	31,377	24.0	316,578
12/10/2021	6.0	31,377	24.0	316,222
12/11/2021	0.0	0	24.0	316,222
12/12/2021	0.0	0	24.0	316,169
12/13/2021	0.0	0	24.0	316,387
12/14/2021	6.0	31,450	24.0	316,519
12/15/2021	6.0	31,450	24.0	316,534
12/16/2021	6.0	31,432	24.0	316,589
12/17/2021	6.0	31,432	24.0	317,045
12/18/2021	0.0	0	24.0	317,185
12/19/2021	0.0	0	24.0	316,965
12/20/2021	0.0	0	24.0	317,136
12/21/2021	6.0	31,542	24.0	317,287
12/22/2021	6.0	31,542	24.0	316,989
12/23/2021	6.0	31,497	24.0	317,269
12/24/2021	6.0	31,497	24.0	317,195
12/25/2021	0.0	0	24.0	317,195
12/26/2021	0.0	0	24.0	317,218
12/27/2021	0.0	0	24.0	317,354
12/28/2021	6.0	31,544	24.0	316,971
12/29/2021	6.0	31,544	24.0	317,078
12/30/2021	6.0	31,520	24.0	317,346
12/31/2021	6.0	31,520	24.0	317,547
Totals:	**114.0**	**597,828**	**744.0**	**9,823,161**

Appendix E

Laboratory Reports for Remediation System Sampling

DBS&A
Daniel B. Stephens & Associates, Inc.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

February 03, 2021

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.: 2101940

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 5 sample(s) on 1/26/2021 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,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-210125
Project: Joint Superfund Project Monthly Analysi
Collection Date: 1/25/2021 8:10:00 AM
Lab ID: 2101940-001
Matrix: DRINKING W
Received Date: 1/26/2021 11:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
Toluene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
Ethylbenzene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
Naphthalene	ND	2.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
1-Methylnaphthalene	ND	4.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
2-Methylnaphthalene	ND	4.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
Acetone	ND	10		µg/L	1	2/2/2021 3:02:38 AM	R75000
Bromobenzene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
Bromodichloromethane	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
Bromoform	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
Bromomethane	ND	3.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
2-Butanone	ND	10		µg/L	1	2/2/2021 3:02:38 AM	R75000
Carbon disulfide	ND	10		µg/L	1	2/2/2021 3:02:38 AM	R75000
Carbon Tetrachloride	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
Chlorobenzene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
Chloroethane	ND	2.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
Chloroform	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
Chloromethane	ND	3.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
2-Chlorotoluene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
4-Chlorotoluene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
cis-1,2-DCE	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
Dibromochloromethane	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
Dibromomethane	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
1,1-Dichloroethane	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
1,1-Dichloroethene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
1,2-Dichloropropane	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
1,3-Dichloropropane	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
2,2-Dichloropropane	ND	2.0		µg/L	1	2/2/2021 3:02:38 AM	R75000

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

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 Quanitative 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 Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-210125
Project: Joint Superfund Project Monthly Analysi
Collection Date: 1/25/2021 8:10:00 AM
Lab ID: 2101940-001
Matrix: DRINKING W
Received Date: 1/26/2021 11:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
Hexachlorobutadiene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
2-Hexanone	ND	10		µg/L	1	2/2/2021 3:02:38 AM	R75000
Isopropylbenzene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
4-Isopropyltoluene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
4-Methyl-2-pentanone	ND	10		µg/L	1	2/2/2021 3:02:38 AM	R75000
Methylene Chloride	ND	3.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
n-Butylbenzene	ND	3.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
n-Propylbenzene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
sec-Butylbenzene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
Styrene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
tert-Butylbenzene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
Tetrachloroethene (PCE)	5.0	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
trans-1,2-DCE	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
Trichlorofluoromethane	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
Vinyl chloride	ND	1.0		µg/L	1	2/2/2021 3:02:38 AM	R75000
Xylenes, Total	ND	1.5		µg/L	1	2/2/2021 3:02:38 AM	R75000
Surr: 1,2-Dichloroethane-d4	99.8	70-130		%Rec	1	2/2/2021 3:02:38 AM	R75000
Surr: 4-Bromofluorobenzene	99.2	70-130		%Rec	1	2/2/2021 3:02:38 AM	R75000
Surr: Dibromofluoromethane	89.0	70-130		%Rec	1	2/2/2021 3:02:38 AM	R75000
Surr: Toluene-d8	97.9	70-130		%Rec	1	2/2/2021 3:02:38 AM	R75000

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces **Client Sample ID:** CLC 27-210125
Project: Joint Superfund Project Monthly Analysi **Collection Date:** 1/25/2021 8:28:00 AM
Lab ID: 2101940-002 **Matrix:** DRINKING W **Received Date:** 1/26/2021 11:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
Toluene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
Ethylbenzene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
Naphthalene	ND	2.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
1-Methylnaphthalene	ND	4.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
2-Methylnaphthalene	ND	4.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
Acetone	ND	10		µg/L	1	2/2/2021 3:29:41 AM	R75000
Bromobenzene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
Bromodichloromethane	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
Bromoform	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
Bromomethane	ND	3.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
2-Butanone	ND	10		µg/L	1	2/2/2021 3:29:41 AM	R75000
Carbon disulfide	ND	10		µg/L	1	2/2/2021 3:29:41 AM	R75000
Carbon Tetrachloride	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
Chlorobenzene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
Chloroethane	ND	2.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
Chloroform	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
Chloromethane	ND	3.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
2-Chlorotoluene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
4-Chlorotoluene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
cis-1,2-DCE	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
Dibromochloromethane	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
Dibromomethane	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
1,1-Dichloroethane	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
1,1-Dichloroethene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
1,2-Dichloropropane	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
1,3-Dichloropropane	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
2,2-Dichloropropane	ND	2.0		µg/L	1	2/2/2021 3:29:41 AM	R75000

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

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 Quanitative 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 Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-210125
Project: Joint Superfund Project Monthly Analysi
Collection Date: 1/25/2021 8:28:00 AM
Lab ID: 2101940-002
Matrix: DRINKING W
Received Date: 1/26/2021 11:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
Hexachlorobutadiene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
2-Hexanone	ND	10		µg/L	1	2/2/2021 3:29:41 AM	R75000
Isopropylbenzene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
4-Isopropyltoluene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
4-Methyl-2-pentanone	ND	10		µg/L	1	2/2/2021 3:29:41 AM	R75000
Methylene Chloride	ND	3.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
n-Butylbenzene	ND	3.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
n-Propylbenzene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
sec-Butylbenzene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
Styrene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
tert-Butylbenzene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
Tetrachloroethene (PCE)	13	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
trans-1,2-DCE	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
Trichlorofluoromethane	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
Vinyl chloride	ND	1.0		µg/L	1	2/2/2021 3:29:41 AM	R75000
Xylenes, Total	ND	1.5		µg/L	1	2/2/2021 3:29:41 AM	R75000
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	2/2/2021 3:29:41 AM	R75000
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	2/2/2021 3:29:41 AM	R75000
Surr: Dibromofluoromethane	88.4	70-130		%Rec	1	2/2/2021 3:29:41 AM	R75000
Surr: Toluene-d8	94.5	70-130		%Rec	1	2/2/2021 3:29:41 AM	R75000

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-210125-Dup
Project: Joint Superfund Project Monthly Analysi
Collection Date: 1/25/2021 8:29:00 AM
Lab ID: 2101940-003
Matrix: DRINKING W
Received Date: 1/26/2021 11:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
Toluene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
Ethylbenzene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
Naphthalene	ND	2.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
1-Methylnaphthalene	ND	4.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
2-Methylnaphthalene	ND	4.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
Acetone	ND	10		µg/L	1	2/2/2021 3:56:44 AM	R75000
Bromobenzene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
Bromodichloromethane	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
Bromoform	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
Bromomethane	ND	3.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
2-Butanone	ND	10		µg/L	1	2/2/2021 3:56:44 AM	R75000
Carbon disulfide	ND	10		µg/L	1	2/2/2021 3:56:44 AM	R75000
Carbon Tetrachloride	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
Chlorobenzene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
Chloroethane	ND	2.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
Chloroform	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
Chloromethane	ND	3.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
2-Chlorotoluene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
4-Chlorotoluene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
cis-1,2-DCE	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
Dibromochloromethane	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
Dibromomethane	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
1,1-Dichloroethane	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
1,1-Dichloroethene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
1,2-Dichloropropane	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
1,3-Dichloropropane	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
2,2-Dichloropropane	ND	2.0		µg/L	1	2/2/2021 3:56:44 AM	R75000

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-210125-Dup
Project: Joint Superfund Project Monthly Analysi
Collection Date: 1/25/2021 8:29:00 AM
Lab ID: 2101940-003
Matrix: DRINKING W
Received Date: 1/26/2021 11:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
Hexachlorobutadiene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
2-Hexanone	ND	10		µg/L	1	2/2/2021 3:56:44 AM	R75000
Isopropylbenzene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
4-Isopropyltoluene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
4-Methyl-2-pentanone	ND	10		µg/L	1	2/2/2021 3:56:44 AM	R75000
Methylene Chloride	ND	3.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
n-Butylbenzene	ND	3.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
n-Propylbenzene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
sec-Butylbenzene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
Styrene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
tert-Butylbenzene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
Tetrachloroethene (PCE)	14	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
trans-1,2-DCE	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
Trichlorofluoromethane	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
Vinyl chloride	ND	1.0		µg/L	1	2/2/2021 3:56:44 AM	R75000
Xylenes, Total	ND	1.5		µg/L	1	2/2/2021 3:56:44 AM	R75000
Surr: 1,2-Dichloroethane-d4	98.6	70-130		%Rec	1	2/2/2021 3:56:44 AM	R75000
Surr: 4-Bromofluorobenzene	98.9	70-130		%Rec	1	2/2/2021 3:56:44 AM	R75000
Surr: Dibromofluoromethane	86.9	70-130		%Rec	1	2/2/2021 3:56:44 AM	R75000
Surr: Toluene-d8	97.2	70-130		%Rec	1	2/2/2021 3:56:44 AM	R75000

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-210125
Project: Joint Superfund Project Monthly Analysi
Collection Date: 1/25/2021 8:15:00 AM
Lab ID: 2101940-004
Matrix: DRINKING W
Received Date: 1/26/2021 11:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
Toluene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
Ethylbenzene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
Naphthalene	ND	2.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
1-Methylnaphthalene	ND	4.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
2-Methylnaphthalene	ND	4.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
Acetone	ND	10		µg/L	1	2/2/2021 4:23:49 AM	R75000
Bromobenzene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
Bromodichloromethane	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
Bromoform	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
Bromomethane	ND	3.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
2-Butanone	ND	10		µg/L	1	2/2/2021 4:23:49 AM	R75000
Carbon disulfide	ND	10		µg/L	1	2/2/2021 4:23:49 AM	R75000
Carbon Tetrachloride	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
Chlorobenzene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
Chloroethane	ND	2.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
Chloroform	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
Chloromethane	ND	3.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
2-Chlorotoluene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
4-Chlorotoluene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
cis-1,2-DCE	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
Dibromochloromethane	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
Dibromomethane	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
1,1-Dichloroethane	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
1,1-Dichloroethene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
1,2-Dichloropropane	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
1,3-Dichloropropane	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
2,2-Dichloropropane	ND	2.0		µg/L	1	2/2/2021 4:23:49 AM	R75000

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

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 Quanitative 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 Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-210125
Project: Joint Superfund Project Monthly Analysi
Collection Date: 1/25/2021 8:15:00 AM
Lab ID: 2101940-004
Matrix: DRINKING W
Received Date: 1/26/2021 11:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
Hexachlorobutadiene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
2-Hexanone	ND	10		µg/L	1	2/2/2021 4:23:49 AM	R75000
Isopropylbenzene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
4-Isopropyltoluene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
4-Methyl-2-pentanone	ND	10		µg/L	1	2/2/2021 4:23:49 AM	R75000
Methylene Chloride	ND	3.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
n-Butylbenzene	ND	3.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
n-Propylbenzene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
sec-Butylbenzene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
Styrene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
tert-Butylbenzene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
Tetrachloroethene (PCE)	10	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
trans-1,2-DCE	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
Trichlorofluoromethane	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
Vinyl chloride	ND	1.0		µg/L	1	2/2/2021 4:23:49 AM	R75000
Xylenes, Total	ND	1.5		µg/L	1	2/2/2021 4:23:49 AM	R75000
Surr: 1,2-Dichloroethane-d4	95.3	70-130		%Rec	1	2/2/2021 4:23:49 AM	R75000
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	2/2/2021 4:23:49 AM	R75000
Surr: Dibromofluoromethane	86.2	70-130		%Rec	1	2/2/2021 4:23:49 AM	R75000
Surr: Toluene-d8	92.7	70-130		%Rec	1	2/2/2021 4:23:49 AM	R75000

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-210125
Project: Joint Superfund Project Monthly Analysi
Collection Date: 1/25/2021 8:18:00 AM
Lab ID: 2101940-005
Matrix: DRINKING W
Received Date: 1/26/2021 11:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
Toluene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
Ethylbenzene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
Naphthalene	ND	2.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
1-Methylnaphthalene	ND	4.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
2-Methylnaphthalene	ND	4.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
Acetone	ND	10		µg/L	1	2/2/2021 4:50:54 AM	R75000
Bromobenzene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
Bromodichloromethane	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
Bromoform	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
Bromomethane	ND	3.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
2-Butanone	ND	10		µg/L	1	2/2/2021 4:50:54 AM	R75000
Carbon disulfide	ND	10		µg/L	1	2/2/2021 4:50:54 AM	R75000
Carbon Tetrachloride	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
Chlorobenzene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
Chloroethane	ND	2.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
Chloroform	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
Chloromethane	ND	3.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
2-Chlorotoluene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
4-Chlorotoluene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
cis-1,2-DCE	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
Dibromochloromethane	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
Dibromomethane	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
1,1-Dichloroethane	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
1,1-Dichloroethene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
1,2-Dichloropropane	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
1,3-Dichloropropane	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
2,2-Dichloropropane	ND	2.0		µg/L	1	2/2/2021 4:50:54 AM	R75000

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

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 Quanitative 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 Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-210125
Project: Joint Superfund Project Monthly Analysi
Collection Date: 1/25/2021 8:18:00 AM
Lab ID: 2101940-005 **Matrix:** DRINKING W **Received Date:** 1/26/2021 11:17:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
Hexachlorobutadiene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
2-Hexanone	ND	10		µg/L	1	2/2/2021 4:50:54 AM	R75000
Isopropylbenzene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
4-Isopropyltoluene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
4-Methyl-2-pentanone	ND	10		µg/L	1	2/2/2021 4:50:54 AM	R75000
Methylene Chloride	ND	3.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
n-Butylbenzene	ND	3.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
n-Propylbenzene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
sec-Butylbenzene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
Styrene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
tert-Butylbenzene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
trans-1,2-DCE	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
Trichlorofluoromethane	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
Vinyl chloride	ND	1.0		µg/L	1	2/2/2021 4:50:54 AM	R75000
Xylenes, Total	ND	1.5		µg/L	1	2/2/2021 4:50:54 AM	R75000
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	2/2/2021 4:50:54 AM	R75000
Surr: 4-Bromofluorobenzene	91.6	70-130		%Rec	1	2/2/2021 4:50:54 AM	R75000
Surr: Dibromofluoromethane	91.2	70-130		%Rec	1	2/2/2021 4:50:54 AM	R75000
Surr: Toluene-d8	93.6	70-130		%Rec	1	2/2/2021 4:50:54 AM	R75000

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2101940**
03-Feb-21

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

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R75000**	RunNo: **75000**
Prep Date:	Analysis Date: **2/1/2021**	SeqNo: **2648005** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	90.3	70	130			
Toluene	18	1.0	20.00	0	91.7	70	130			
Chlorobenzene	19	1.0	20.00	0	93.6	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	92.2	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	95.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.1	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		111	70	130			
Surr: Dibromofluoromethane	7.9		10.00		79.0	70	130			
Surr: Toluene-d8	9.4		10.00		93.6	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R75000**	RunNo: **75000**
Prep Date:	Analysis Date: **2/1/2021**	SeqNo: **2648023** 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 Quanitative 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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2101940**
03-Feb-21

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

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R75000**	RunNo: **75000**
Prep Date:	Analysis Date: **2/1/2021**	SeqNo: **2648023** 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 Quanitative 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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2101940**
03-Feb-21

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

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R75000**	RunNo: **75000**
Prep Date:	Analysis Date: **2/1/2021**	SeqNo: **2648023** 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								
tert-Butyl alcohol	ND	25								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.8	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	8.3		10.00		83.2	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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **City of Las Cruces** Work Order Number: **2101940** RcptNo: **1**

Received By: **Cheyenne Cason** **1/26/2021 11:17:00 AM**

Completed By: **Cheyenne Cason** **1/26/2021 11:45:20 AM**

Reviewed By:

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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☑	No ☐	NA ☐
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 ☐	

10

# of preserved bottles checked for pH: 1/26/21

(<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	2.1	Good				

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
Mailing Address: P.O. Box 20000
Las Cruces, N.M. 88004
Phone #: 575-528-3609
email or Fax#: lguerra@las-cruces.org
QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other
☑ EDD (Type) EXCEL

Turn-Around Time:
☑ Standard ☐ Rush
Project Name: Joint Superfund Project Monthly Analysis
Project #: CLC JSP Griggs Walnut
Project Manager: Luis Guerra (575) 528-3609
Sampler: Yadira Reyna
On Ice: ☒ Yes ☐ No
Sample Temperature: 2.3 - 0.2 = 2.1

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 210140	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~~) VOC	8270 (Semi-VOA)					Air Bubbles (Y or N)
01-25-21	0810	DRINKING WATER	CLC 18-210125	3-40ml VIAls	$HgCl_2$	001										X						
	0828		CLC 27-210125			002										X						
	0829		CLC 27-210125-DUP			003										X						
	0915		CLC IS1-210125			004										X						
01-25-21	0818	DRINKING WATER	CLC ES1-210125	3-40 ml VIAls	$HgCl_2$	005										X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
1/25/21	1500	Yadira Reyna	[illegible]	1/26/21	1117
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Send Results to:
Luis Guerra: lguerra@las-cruces.org
Joshua Rosenblatt: jrosenblatt@lascruces.org
Send invoice 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

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

March 03, 2021

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.: 2102B60

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 5 sample(s) on 2/25/2021 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,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-210223
Project: Joint Superfund Project Monthly Analysi
Collection Date: 2/23/2021 8:10:00 AM
Lab ID: 2102B60-001
Matrix: DRINKING W
Received Date: 2/25/2021 3:02:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
Benzene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
Toluene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
Ethylbenzene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
Naphthalene	ND	2.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
1-Methylnaphthalene	ND	4.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
2-Methylnaphthalene	ND	4.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
Acetone	ND	10		µg/L	1	3/2/2021 5:01:25 AM	B75610
Bromobenzene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
Bromodichloromethane	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
Bromoform	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
Bromomethane	ND	3.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
2-Butanone	ND	10		µg/L	1	3/2/2021 5:01:25 AM	B75610
Carbon disulfide	ND	10		µg/L	1	3/2/2021 5:01:25 AM	B75610
Carbon Tetrachloride	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
Chlorobenzene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
Chloroethane	ND	2.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
Chloroform	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
Chloromethane	ND	3.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
2-Chlorotoluene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
4-Chlorotoluene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
cis-1,2-DCE	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
Dibromochloromethane	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
Dibromomethane	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
1,1-Dichloroethane	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
1,1-Dichloroethene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
1,2-Dichloropropane	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
1,3-Dichloropropane	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
2,2-Dichloropropane	ND	2.0		µg/L	1	3/2/2021 5:01:25 AM	B75610

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-210223
Project: Joint Superfund Project Monthly Analysi
Collection Date: 2/23/2021 8:10:00 AM
Lab ID: 2102B60-001
Matrix: DRINKING W
Received Date: 2/25/2021 3:02:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
Hexachlorobutadiene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
2-Hexanone	ND	10		µg/L	1	3/2/2021 5:01:25 AM	B75610
Isopropylbenzene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
4-Isopropyltoluene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
4-Methyl-2-pentanone	ND	10		µg/L	1	3/2/2021 5:01:25 AM	B75610
Methylene Chloride	ND	3.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
n-Butylbenzene	ND	3.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
n-Propylbenzene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
sec-Butylbenzene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
Styrene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
tert-Butylbenzene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
Tetrachloroethene (PCE)	4.7	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
trans-1,2-DCE	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
Trichlorofluoromethane	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
Vinyl chloride	ND	1.0		µg/L	1	3/2/2021 5:01:25 AM	B75610
Xylenes, Total	ND	1.5		µg/L	1	3/2/2021 5:01:25 AM	B75610
Surr: 1,2-Dichloroethane-d4	84.2	70-130		%Rec	1	3/2/2021 5:01:25 AM	B75610
Surr: 4-Bromofluorobenzene	98.9	70-130		%Rec	1	3/2/2021 5:01:25 AM	B75610
Surr: Dibromofluoromethane	103	70-130		%Rec	1	3/2/2021 5:01:25 AM	B75610
Surr: Toluene-d8	90.6	70-130		%Rec	1	3/2/2021 5:01:25 AM	B75610

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces **Client Sample ID:** CLC 27-210223
Project: Joint Superfund Project Monthly Analysi **Collection Date:** 2/23/2021 8:23:00 AM
Lab ID: 2102B60-002 **Matrix:** DRINKING W **Received Date:** 2/25/2021 3:02:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
Benzene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
Toluene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
Ethylbenzene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
Naphthalene	ND	2.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
1-Methylnaphthalene	ND	4.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
2-Methylnaphthalene	ND	4.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
Acetone	ND	10		µg/L	1	3/2/2021 5:28:18 AM	B75610
Bromobenzene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
Bromodichloromethane	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
Bromoform	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
Bromomethane	ND	3.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
2-Butanone	ND	10		µg/L	1	3/2/2021 5:28:18 AM	B75610
Carbon disulfide	ND	10		µg/L	1	3/2/2021 5:28:18 AM	B75610
Carbon Tetrachloride	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
Chlorobenzene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
Chloroethane	ND	2.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
Chloroform	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
Chloromethane	ND	3.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
2-Chlorotoluene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
4-Chlorotoluene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
cis-1,2-DCE	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
Dibromochloromethane	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
Dibromomethane	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
1,1-Dichloroethane	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
1,1-Dichloroethene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
1,2-Dichloropropane	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
1,3-Dichloropropane	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
2,2-Dichloropropane	ND	2.0		µg/L	1	3/2/2021 5:28:18 AM	B75610

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-210223
Project: Joint Superfund Project Monthly Analysi
Collection Date: 2/23/2021 8:23:00 AM
Lab ID: 2102B60-002
Matrix: DRINKING W
Received Date: 2/25/2021 3:02:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
Hexachlorobutadiene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
2-Hexanone	ND	10		µg/L	1	3/2/2021 5:28:18 AM	B75610
Isopropylbenzene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
4-Isopropyltoluene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
4-Methyl-2-pentanone	ND	10		µg/L	1	3/2/2021 5:28:18 AM	B75610
Methylene Chloride	ND	3.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
n-Butylbenzene	ND	3.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
n-Propylbenzene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
sec-Butylbenzene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
Styrene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
tert-Butylbenzene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
Tetrachloroethene (PCE)	12	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
trans-1,2-DCE	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
Trichlorofluoromethane	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
Vinyl chloride	ND	1.0		µg/L	1	3/2/2021 5:28:18 AM	B75610
Xylenes, Total	ND	1.5		µg/L	1	3/2/2021 5:28:18 AM	B75610
Surr: 1,2-Dichloroethane-d4	85.8	70-130		%Rec	1	3/2/2021 5:28:18 AM	B75610
Surr: 4-Bromofluorobenzene	97.4	70-130		%Rec	1	3/2/2021 5:28:18 AM	B75610
Surr: Dibromofluoromethane	107	70-130		%Rec	1	3/2/2021 5:28:18 AM	B75610
Surr: Toluene-d8	90.1	70-130		%Rec	1	3/2/2021 5:28:18 AM	B75610

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-210223
Project: Joint Superfund Project Monthly Analysi
Collection Date: 2/23/2021 8:40:00 AM
Lab ID: 2102B60-003
Matrix: DRINKING W
Received Date: 2/25/2021 3:02:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
Benzene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
Toluene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
Ethylbenzene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
Naphthalene	ND	2.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
1-Methylnaphthalene	ND	4.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
2-Methylnaphthalene	ND	4.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
Acetone	ND	10		µg/L	1	3/2/2021 5:55:29 AM	B75610
Bromobenzene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
Bromodichloromethane	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
Bromoform	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
Bromomethane	ND	3.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
2-Butanone	ND	10		µg/L	1	3/2/2021 5:55:29 AM	B75610
Carbon disulfide	ND	10		µg/L	1	3/2/2021 5:55:29 AM	B75610
Carbon Tetrachloride	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
Chlorobenzene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
Chloroethane	ND	2.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
Chloroform	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
Chloromethane	ND	3.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
2-Chlorotoluene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
4-Chlorotoluene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
cis-1,2-DCE	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
Dibromochloromethane	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
Dibromomethane	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
1,1-Dichloroethane	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
1,1-Dichloroethene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
1,2-Dichloropropane	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
1,3-Dichloropropane	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
2,2-Dichloropropane	ND	2.0		µg/L	1	3/2/2021 5:55:29 AM	B75610

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-210223
Project: Joint Superfund Project Monthly Analysi
Collection Date: 2/23/2021 8:40:00 AM
Lab ID: 2102B60-003
Matrix: DRINKING W
Received Date: 2/25/2021 3:02:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
Hexachlorobutadiene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
2-Hexanone	ND	10		µg/L	1	3/2/2021 5:55:29 AM	B75610
Isopropylbenzene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
4-Isopropyltoluene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
4-Methyl-2-pentanone	ND	10		µg/L	1	3/2/2021 5:55:29 AM	B75610
Methylene Chloride	ND	3.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
n-Butylbenzene	ND	3.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
n-Propylbenzene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
sec-Butylbenzene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
Styrene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
tert-Butylbenzene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
Tetrachloroethene (PCE)	10	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
trans-1,2-DCE	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
Trichlorofluoromethane	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
Vinyl chloride	ND	1.0		µg/L	1	3/2/2021 5:55:29 AM	B75610
Xylenes, Total	ND	1.5		µg/L	1	3/2/2021 5:55:29 AM	B75610
Surr: 1,2-Dichloroethane-d4	88.7	70-130		%Rec	1	3/2/2021 5:55:29 AM	B75610
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	3/2/2021 5:55:29 AM	B75610
Surr: Dibromofluoromethane	100	70-130		%Rec	1	3/2/2021 5:55:29 AM	B75610
Surr: Toluene-d8	98.4	70-130		%Rec	1	3/2/2021 5:55:29 AM	B75610

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-210223
Project: Joint Superfund Project Monthly Analysi
Collection Date: 2/23/2021 8:43:00 AM
Lab ID: 2102B60-004
Matrix: DRINKING W
Received Date: 2/25/2021 3:02:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
Benzene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
Toluene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
Ethylbenzene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
Naphthalene	ND	2.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
1-Methylnaphthalene	ND	4.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
2-Methylnaphthalene	ND	4.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
Acetone	ND	10		µg/L	1	3/2/2021 6:22:36 AM	B75610
Bromobenzene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
Bromodichloromethane	1.6	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
Bromoform	3.8	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
Bromomethane	ND	3.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
2-Butanone	ND	10		µg/L	1	3/2/2021 6:22:36 AM	B75610
Carbon disulfide	ND	10		µg/L	1	3/2/2021 6:22:36 AM	B75610
Carbon Tetrachloride	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
Chlorobenzene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
Chloroethane	ND	2.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
Chloroform	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
Chloromethane	ND	3.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
2-Chlorotoluene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
4-Chlorotoluene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
cis-1,2-DCE	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
Dibromochloromethane	4.3	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
Dibromomethane	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
1,1-Dichloroethane	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
1,1-Dichloroethene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
1,2-Dichloropropane	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
1,3-Dichloropropane	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
2,2-Dichloropropane	ND	2.0		µg/L	1	3/2/2021 6:22:36 AM	B75610

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-210223
Project: Joint Superfund Project Monthly Analysi
Collection Date: 2/23/2021 8:43:00 AM
Lab ID: 2102B60-004
Matrix: DRINKING W
Received Date: 2/25/2021 3:02:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
Hexachlorobutadiene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
2-Hexanone	ND	10		µg/L	1	3/2/2021 6:22:36 AM	B75610
Isopropylbenzene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
4-Isopropyltoluene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
4-Methyl-2-pentanone	ND	10		µg/L	1	3/2/2021 6:22:36 AM	B75610
Methylene Chloride	ND	3.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
n-Butylbenzene	ND	3.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
n-Propylbenzene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
sec-Butylbenzene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
Styrene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
tert-Butylbenzene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
trans-1,2-DCE	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
Trichlorofluoromethane	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
Vinyl chloride	ND	1.0		µg/L	1	3/2/2021 6:22:36 AM	B75610
Xylenes, Total	ND	1.5		µg/L	1	3/2/2021 6:22:36 AM	B75610
Surr: 1,2-Dichloroethane-d4	94.9	70-130		%Rec	1	3/2/2021 6:22:36 AM	B75610
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	3/2/2021 6:22:36 AM	B75610
Surr: Dibromofluoromethane	101	70-130		%Rec	1	3/2/2021 6:22:36 AM	B75610
Surr: Toluene-d8	96.6	70-130		%Rec	1	3/2/2021 6:22:36 AM	B75610

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-210223 Dup
Project: Joint Superfund Project Monthly Analysi
Collection Date: 2/23/2021 8:45:00 AM
Lab ID: 2102B60-005
Matrix: DRINKING W
Received Date: 2/25/2021 3:02:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
Benzene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
Toluene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
Ethylbenzene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
Naphthalene	ND	2.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
1-Methylnaphthalene	ND	4.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
2-Methylnaphthalene	ND	4.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
Acetone	ND	10		µg/L	1	3/2/2021 6:49:42 AM	B75610
Bromobenzene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
Bromodichloromethane	1.2	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
Bromoform	5.7	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
Bromomethane	ND	3.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
2-Butanone	ND	10		µg/L	1	3/2/2021 6:49:42 AM	B75610
Carbon disulfide	ND	10		µg/L	1	3/2/2021 6:49:42 AM	B75610
Carbon Tetrachloride	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
Chlorobenzene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
Chloroethane	ND	2.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
Chloroform	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
Chloromethane	ND	3.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
2-Chlorotoluene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
4-Chlorotoluene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
cis-1,2-DCE	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
Dibromochloromethane	4.5	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
Dibromomethane	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
1,1-Dichloroethane	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
1,1-Dichloroethene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
1,2-Dichloropropane	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
1,3-Dichloropropane	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
2,2-Dichloropropane	ND	2.0		µg/L	1	3/2/2021 6:49:42 AM	B75610

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

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 Quanitative 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 Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-210223 Dup
Project: Joint Superfund Project Monthly Analysi
Collection Date: 2/23/2021 8:45:00 AM
Lab ID: 2102B60-005
Matrix: DRINKING W
Received Date: 2/25/2021 3:02:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
Hexachlorobutadiene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
2-Hexanone	ND	10		µg/L	1	3/2/2021 6:49:42 AM	B75610
Isopropylbenzene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
4-Isopropyltoluene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
4-Methyl-2-pentanone	ND	10		µg/L	1	3/2/2021 6:49:42 AM	B75610
Methylene Chloride	ND	3.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
n-Butylbenzene	ND	3.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
n-Propylbenzene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
sec-Butylbenzene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
Styrene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
tert-Butylbenzene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
trans-1,2-DCE	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
Trichlorofluoromethane	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
Vinyl chloride	ND	1.0		µg/L	1	3/2/2021 6:49:42 AM	B75610
Xylenes, Total	ND	1.5		µg/L	1	3/2/2021 6:49:42 AM	B75610
Surr: 1,2-Dichloroethane-d4	93.6	70-130		%Rec	1	3/2/2021 6:49:42 AM	B75610
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	3/2/2021 6:49:42 AM	B75610
Surr: Dibromofluoromethane	99.5	70-130		%Rec	1	3/2/2021 6:49:42 AM	B75610
Surr: Toluene-d8	94.9	70-130		%Rec	1	3/2/2021 6:49:42 AM	B75610

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times 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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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2102B60**

03-Mar-21

Client: City of Las Cruces

Project: Joint Superfund Project Monthly Analysis

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**							
Client ID: **LCSW**	Batch ID: **A75610**	RunNo: **75610**							
Prep Date:	Analysis Date: **3/1/2021**	SeqNo: **2673465**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.0		10.00		89.9	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Dibromofluoromethane	9.3		10.00		92.7	70	130			
Surr: Toluene-d8	9.5		10.00		94.8	70	130			

Sample ID: **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**							
Client ID: **LCSW**	Batch ID: **B75610**	RunNo: **75610**							
Prep Date:	Analysis Date: **3/2/2021**	SeqNo: **2673468**	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			
Toluene	19	1.0	20.00	0	94.9	70	130			
Chlorobenzene	18	1.0	20.00	0	88.5	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	105	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	96.1	70	130			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		92.9	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.0	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.0		10.00		90.5	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**							
Client ID: **PBW**	Batch ID: **A75610**	RunNo: **75610**							
Prep Date:	Analysis Date: **3/1/2021**	SeqNo: **2673537**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.2	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.5	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID: **MB2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**							
Client ID: **PBW**	Batch ID: **B75610**	RunNo: **75610**							
Prep Date:	Analysis Date: **3/2/2021**	SeqNo: **2673538**	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.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2102B60**
03-Mar-21

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

Sample ID: **MB2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B75610**	RunNo: **75610**
Prep Date:	Analysis Date: **3/2/2021**	SeqNo: **2673538** 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.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times 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		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2102B60**
03-Mar-21

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

Sample ID: **MB2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B75610**	RunNo: **75610**
Prep Date:	Analysis Date: **3/2/2021**	SeqNo: **2673538** 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	9.4		10.00		93.6	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.8	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.4		10.00		93.6	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
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HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **City of Las Cruces** Work Order Number: **2102B60** RcptNo: 1

Received By: **Cheyenne Cason** **2/25/2021 3:02:00 PM**

Completed By: **Isaiah Ortiz** **2/25/2021 3:50:10 PM** I-OK

Reviewed By: CM 2/25/21

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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☑	No ☐	NA ☐
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 2/25/21

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	4.2	Good	Not Present			

Chain-of-Custody Record

Client: City of Las Cruces Water Quality Laboratory
Mailing Address: P.O. Box 20000 Las Cruces, N.M. 88004
Phone #: 575-528-3609
email or Fax#: lguerra@las-cruces.org
QA/QC Package: ☑ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other ____
☑ EDD (Type) EXCEL

Turn-Around Time: ☑ Standard ☐ Rush ____
Project Name: Joint Superfund Project Monthly Analysis
Project #: CLC JSP Griggs Walnut
Project Manager: Luis Guerra (575) 528-3609
Sampler: Yadira Reyna
On Ice: ☑ Yes ☐ No
Sample Temperature: 4.2 ~~4.2~~ 4.2

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 2102B60	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~~ VOC)	8270 (Semi-VOA)					Air Bubbles (Y or N)
2-23-21	0810	Drinking Water	CLC18-210223	3-40ml Vials	$HgCl_2$	001										X						
	0823		CLC27-210223			002										X						
	0840		CLC IS1-210223			003										X						
	0843		CLC ES1-210223			004										X						
2-23-21	0845	Drinking water	CLC ES1-210223 DUP	3-40ml Vials	$HgCl_2$	005										X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
2-23-21	1500	Yadira Reyna	Fedex HP	2/25/21	1502
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Send Results to:
Luis Guerra lguerra@las-cruces.org
Joshua Rosenblatt jrosenblatt@las-cruces.org
(Send invoice 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

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

March 31, 2021

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.: 2103B67

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 8 sample(s) on 3/24/2021 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,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-210323
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/23/2021 8:12:00 AM
Lab ID: 2103B67-001
Matrix: DRINKING W
Received Date: 3/24/2021 12:44:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
Toluene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
Ethylbenzene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
Naphthalene	ND	2.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
1-Methylnaphthalene	ND	4.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
2-Methylnaphthalene	ND	4.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
Acetone	ND	10		µg/L	1	3/30/2021 2:28:56 AM	A76302
Bromobenzene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
Bromodichloromethane	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
Bromoform	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
Bromomethane	ND	3.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
2-Butanone	ND	10		µg/L	1	3/30/2021 2:28:56 AM	A76302
Carbon disulfide	ND	10		µg/L	1	3/30/2021 2:28:56 AM	A76302
Carbon Tetrachloride	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
Chlorobenzene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
Chloroethane	ND	2.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
Chloroform	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
Chloromethane	ND	3.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
2-Chlorotoluene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
4-Chlorotoluene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
cis-1,2-DCE	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
Dibromochloromethane	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
Dibromomethane	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
1,1-Dichloroethane	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
1,1-Dichloroethene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
1,2-Dichloropropane	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
1,3-Dichloropropane	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
2,2-Dichloropropane	ND	2.0		µg/L	1	3/30/2021 2:28:56 AM	A76302

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times 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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Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-210323
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/23/2021 8:12:00 AM
Lab ID: 2103B67-001
Matrix: DRINKING W
Received Date: 3/24/2021 12:44:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
Hexachlorobutadiene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
2-Hexanone	ND	10		µg/L	1	3/30/2021 2:28:56 AM	A76302
Isopropylbenzene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
4-Isopropyltoluene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
4-Methyl-2-pentanone	ND	10		µg/L	1	3/30/2021 2:28:56 AM	A76302
Methylene Chloride	ND	3.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
n-Butylbenzene	ND	3.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
n-Propylbenzene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
sec-Butylbenzene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
Styrene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
tert-Butylbenzene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
Tetrachloroethene (PCE)	4.9	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
trans-1,2-DCE	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
Trichlorofluoromethane	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
Vinyl chloride	ND	1.0		µg/L	1	3/30/2021 2:28:56 AM	A76302
Xylenes, Total	ND	1.5		µg/L	1	3/30/2021 2:28:56 AM	A76302
Surr: 1,2-Dichloroethane-d4	98.9	70-130		%Rec	1	3/30/2021 2:28:56 AM	A76302
Surr: 4-Bromofluorobenzene	94.1	70-130		%Rec	1	3/30/2021 2:28:56 AM	A76302
Surr: Dibromofluoromethane	107	70-130		%Rec	1	3/30/2021 2:28:56 AM	A76302
Surr: Toluene-d8	106	70-130		%Rec	1	3/30/2021 2:28:56 AM	A76302

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.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-210323
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/23/2021 8:25:00 AM
Lab ID: 2103B67-002
Matrix: DRINKING W
Received Date: 3/24/2021 12:44:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
Toluene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
Ethylbenzene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
Naphthalene	ND	2.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
1-Methylnaphthalene	ND	4.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
2-Methylnaphthalene	ND	4.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
Acetone	ND	10		µg/L	1	3/30/2021 2:57:31 AM	A76302
Bromobenzene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
Bromodichloromethane	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
Bromoform	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
Bromomethane	ND	3.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
2-Butanone	ND	10		µg/L	1	3/30/2021 2:57:31 AM	A76302
Carbon disulfide	ND	10		µg/L	1	3/30/2021 2:57:31 AM	A76302
Carbon Tetrachloride	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
Chlorobenzene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
Chloroethane	ND	2.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
Chloroform	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
Chloromethane	ND	3.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
2-Chlorotoluene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
4-Chlorotoluene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
cis-1,2-DCE	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
Dibromochloromethane	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
Dibromomethane	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
1,1-Dichloroethane	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
1,1-Dichloroethene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
1,2-Dichloropropane	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
1,3-Dichloropropane	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
2,2-Dichloropropane	ND	2.0		µg/L	1	3/30/2021 2:57:31 AM	A76302

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-210323
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/23/2021 8:25:00 AM
Lab ID: 2103B67-002
Matrix: DRINKING W
Received Date: 3/24/2021 12:44:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
Hexachlorobutadiene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
2-Hexanone	ND	10		µg/L	1	3/30/2021 2:57:31 AM	A76302
Isopropylbenzene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
4-Isopropyltoluene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
4-Methyl-2-pentanone	ND	10		µg/L	1	3/30/2021 2:57:31 AM	A76302
Methylene Chloride	ND	3.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
n-Butylbenzene	ND	3.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
n-Propylbenzene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
sec-Butylbenzene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
Styrene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
tert-Butylbenzene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
Tetrachloroethene (PCE)	5.1	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
trans-1,2-DCE	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
Trichlorofluoromethane	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
Vinyl chloride	ND	1.0		µg/L	1	3/30/2021 2:57:31 AM	A76302
Xylenes, Total	ND	1.5		µg/L	1	3/30/2021 2:57:31 AM	A76302
Surr: 1,2-Dichloroethane-d4	99.2	70-130		%Rec	1	3/30/2021 2:57:31 AM	A76302
Surr: 4-Bromofluorobenzene	91.2	70-130		%Rec	1	3/30/2021 2:57:31 AM	A76302
Surr: Dibromofluoromethane	110	70-130		%Rec	1	3/30/2021 2:57:31 AM	A76302
Surr: Toluene-d8	105	70-130		%Rec	1	3/30/2021 2:57:31 AM	A76302

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-210323
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/23/2021 9:11:00 AM
Lab ID: 2103B67-003
Matrix: DRINKING W
Received Date: 3/24/2021 12:44:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
Toluene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
Ethylbenzene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
Naphthalene	ND	2.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
1-Methylnaphthalene	ND	4.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
2-Methylnaphthalene	ND	4.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
Acetone	ND	10		µg/L	1	3/30/2021 3:26:09 AM	A76302
Bromobenzene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
Bromodichloromethane	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
Bromoform	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
Bromomethane	ND	3.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
2-Butanone	ND	10		µg/L	1	3/30/2021 3:26:09 AM	A76302
Carbon disulfide	ND	10		µg/L	1	3/30/2021 3:26:09 AM	A76302
Carbon Tetrachloride	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
Chlorobenzene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
Chloroethane	ND	2.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
Chloroform	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
Chloromethane	ND	3.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
2-Chlorotoluene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
4-Chlorotoluene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
cis-1,2-DCE	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
Dibromochloromethane	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
Dibromomethane	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
1,1-Dichloroethane	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
1,1-Dichloroethene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
1,2-Dichloropropane	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
1,3-Dichloropropane	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
2,2-Dichloropropane	ND	2.0		µg/L	1	3/30/2021 3:26:09 AM	A76302

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-210323
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/23/2021 9:11:00 AM
Lab ID: 2103B67-003
Matrix: DRINKING W
Received Date: 3/24/2021 12:44:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
Hexachlorobutadiene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
2-Hexanone	ND	10		µg/L	1	3/30/2021 3:26:09 AM	A76302
Isopropylbenzene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
4-Isopropyltoluene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
4-Methyl-2-pentanone	ND	10		µg/L	1	3/30/2021 3:26:09 AM	A76302
Methylene Chloride	ND	3.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
n-Butylbenzene	ND	3.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
n-Propylbenzene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
sec-Butylbenzene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
Styrene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
tert-Butylbenzene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
Tetrachloroethene (PCE)	13	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
trans-1,2-DCE	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
Trichlorofluoromethane	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
Vinyl chloride	ND	1.0		µg/L	1	3/30/2021 3:26:09 AM	A76302
Xylenes, Total	ND	1.5		µg/L	1	3/30/2021 3:26:09 AM	A76302
Surr: 1,2-Dichloroethane-d4	96.7	70-130		%Rec	1	3/30/2021 3:26:09 AM	A76302
Surr: 4-Bromofluorobenzene	90.1	70-130		%Rec	1	3/30/2021 3:26:09 AM	A76302
Surr: Dibromofluoromethane	106	70-130		%Rec	1	3/30/2021 3:26:09 AM	A76302
Surr: Toluene-d8	107	70-130		%Rec	1	3/30/2021 3:26:09 AM	A76302

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-210323
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/23/2021 8:30:00 AM
Lab ID: 2103B67-004
Matrix: DRINKING W
Received Date: 3/24/2021 12:44:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
Toluene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
Ethylbenzene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
Naphthalene	ND	2.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
1-Methylnaphthalene	ND	4.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
2-Methylnaphthalene	ND	4.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
Acetone	ND	10		µg/L	1	3/30/2021 3:54:53 AM	A76302
Bromobenzene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
Bromodichloromethane	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
Bromoform	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
Bromomethane	ND	3.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
2-Butanone	ND	10		µg/L	1	3/30/2021 3:54:53 AM	A76302
Carbon disulfide	ND	10		µg/L	1	3/30/2021 3:54:53 AM	A76302
Carbon Tetrachloride	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
Chlorobenzene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
Chloroethane	ND	2.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
Chloroform	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
Chloromethane	ND	3.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
2-Chlorotoluene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
4-Chlorotoluene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
cis-1,2-DCE	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
Dibromochloromethane	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
Dibromomethane	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
1,1-Dichloroethane	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
1,1-Dichloroethene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
1,2-Dichloropropane	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
1,3-Dichloropropane	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
2,2-Dichloropropane	ND	2.0		µg/L	1	3/30/2021 3:54:53 AM	A76302

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-210323
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/23/2021 8:30:00 AM
Lab ID: 2103B67-004
Matrix: DRINKING W
Received Date: 3/24/2021 12:44:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
Hexachlorobutadiene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
2-Hexanone	ND	10		µg/L	1	3/30/2021 3:54:53 AM	A76302
Isopropylbenzene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
4-Isopropyltoluene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
4-Methyl-2-pentanone	ND	10		µg/L	1	3/30/2021 3:54:53 AM	A76302
Methylene Chloride	ND	3.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
n-Butylbenzene	ND	3.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
n-Propylbenzene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
sec-Butylbenzene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
Styrene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
tert-Butylbenzene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
Tetrachloroethene (PCE)	11	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
trans-1,2-DCE	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
Trichlorofluoromethane	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
Vinyl chloride	ND	1.0		µg/L	1	3/30/2021 3:54:53 AM	A76302
Xylenes, Total	ND	1.5		µg/L	1	3/30/2021 3:54:53 AM	A76302
Surr: 1,2-Dichloroethane-d4	90.8	70-130		%Rec	1	3/30/2021 3:54:53 AM	A76302
Surr: 4-Bromofluorobenzene	91.8	70-130		%Rec	1	3/30/2021 3:54:53 AM	A76302
Surr: Dibromofluoromethane	109	70-130		%Rec	1	3/30/2021 3:54:53 AM	A76302
Surr: Toluene-d8	107	70-130		%Rec	1	3/30/2021 3:54:53 AM	A76302

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-210323-D
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/23/2021 8:32:00 AM
Lab ID: 2103B67-005
Matrix: DRINKING W
Received Date: 3/24/2021 12:44:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
Toluene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
Ethylbenzene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
Naphthalene	ND	2.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
1-Methylnaphthalene	ND	4.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
2-Methylnaphthalene	ND	4.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
Acetone	ND	10		µg/L	1	3/30/2021 4:23:33 AM	A76302
Bromobenzene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
Bromodichloromethane	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
Bromoform	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
Bromomethane	ND	3.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
2-Butanone	ND	10		µg/L	1	3/30/2021 4:23:33 AM	A76302
Carbon disulfide	ND	10		µg/L	1	3/30/2021 4:23:33 AM	A76302
Carbon Tetrachloride	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
Chlorobenzene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
Chloroethane	ND	2.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
Chloroform	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
Chloromethane	ND	3.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
2-Chlorotoluene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
4-Chlorotoluene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
cis-1,2-DCE	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
Dibromochloromethane	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
Dibromomethane	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
1,1-Dichloroethane	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
1,1-Dichloroethene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
1,2-Dichloropropane	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
1,3-Dichloropropane	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
2,2-Dichloropropane	ND	2.0		µg/L	1	3/30/2021 4:23:33 AM	A76302

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-210323-D
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/23/2021 8:32:00 AM
Lab ID: 2103B67-005 **Matrix:** DRINKING W **Received Date:** 3/24/2021 12:44:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
Hexachlorobutadiene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
2-Hexanone	ND	10		µg/L	1	3/30/2021 4:23:33 AM	A76302
Isopropylbenzene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
4-Isopropyltoluene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
4-Methyl-2-pentanone	ND	10		µg/L	1	3/30/2021 4:23:33 AM	A76302
Methylene Chloride	ND	3.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
n-Butylbenzene	ND	3.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
n-Propylbenzene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
sec-Butylbenzene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
Styrene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
tert-Butylbenzene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
Tetrachloroethene (PCE)	10	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
trans-1,2-DCE	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
Trichlorofluoromethane	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
Vinyl chloride	ND	1.0		µg/L	1	3/30/2021 4:23:33 AM	A76302
Xylenes, Total	ND	1.5		µg/L	1	3/30/2021 4:23:33 AM	A76302
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	3/30/2021 4:23:33 AM	A76302
Surr: 4-Bromofluorobenzene	96.2	70-130		%Rec	1	3/30/2021 4:23:33 AM	A76302
Surr: Dibromofluoromethane	109	70-130		%Rec	1	3/30/2021 4:23:33 AM	A76302
Surr: Toluene-d8	106	70-130		%Rec	1	3/30/2021 4:23:33 AM	A76302

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C1-210323
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/23/2021 8:36:00 AM
Lab ID: 2103B67-006
Matrix: DRINKING W
Received Date: 3/24/2021 12:44:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
Toluene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
Ethylbenzene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
Naphthalene	ND	2.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
1-Methylnaphthalene	ND	4.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
2-Methylnaphthalene	ND	4.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
Acetone	ND	10		µg/L	1	3/30/2021 4:52:12 AM	A76302
Bromobenzene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
Bromodichloromethane	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
Bromoform	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
Bromomethane	ND	3.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
2-Butanone	ND	10		µg/L	1	3/30/2021 4:52:12 AM	A76302
Carbon disulfide	ND	10		µg/L	1	3/30/2021 4:52:12 AM	A76302
Carbon Tetrachloride	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
Chlorobenzene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
Chloroethane	ND	2.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
Chloroform	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
Chloromethane	ND	3.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
2-Chlorotoluene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
4-Chlorotoluene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
cis-1,2-DCE	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
Dibromochloromethane	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
Dibromomethane	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
1,1-Dichloroethane	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
1,1-Dichloroethene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
1,2-Dichloropropane	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
1,3-Dichloropropane	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
2,2-Dichloropropane	ND	2.0		µg/L	1	3/30/2021 4:52:12 AM	A76302

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C1-210323
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/23/2021 8:36:00 AM
Lab ID: 2103B67-006
Matrix: DRINKING W
Received Date: 3/24/2021 12:44:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
Hexachlorobutadiene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
2-Hexanone	ND	10		µg/L	1	3/30/2021 4:52:12 AM	A76302
Isopropylbenzene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
4-Isopropyltoluene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
4-Methyl-2-pentanone	ND	10		µg/L	1	3/30/2021 4:52:12 AM	A76302
Methylene Chloride	ND	3.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
n-Butylbenzene	ND	3.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
n-Propylbenzene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
sec-Butylbenzene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
Styrene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
tert-Butylbenzene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
trans-1,2-DCE	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
Trichlorofluoromethane	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
Vinyl chloride	ND	1.0		µg/L	1	3/30/2021 4:52:12 AM	A76302
Xylenes, Total	ND	1.5		µg/L	1	3/30/2021 4:52:12 AM	A76302
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	3/30/2021 4:52:12 AM	A76302
Surr: 4-Bromofluorobenzene	91.3	70-130		%Rec	1	3/30/2021 4:52:12 AM	A76302
Surr: Dibromofluoromethane	108	70-130		%Rec	1	3/30/2021 4:52:12 AM	A76302
Surr: Toluene-d8	108	70-130		%Rec	1	3/30/2021 4:52:12 AM	A76302

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C2-210323
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/23/2021 8:38:00 AM
Lab ID: 2103B67-007
Matrix: DRINKING W
Received Date: 3/24/2021 12:44:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
Toluene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
Ethylbenzene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
Naphthalene	ND	2.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
1-Methylnaphthalene	ND	4.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
2-Methylnaphthalene	ND	4.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
Acetone	ND	10		µg/L	1	3/30/2021 5:20:52 AM	A76302
Bromobenzene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
Bromodichloromethane	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
Bromoform	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
Bromomethane	ND	3.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
2-Butanone	ND	10		µg/L	1	3/30/2021 5:20:52 AM	A76302
Carbon disulfide	ND	10		µg/L	1	3/30/2021 5:20:52 AM	A76302
Carbon Tetrachloride	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
Chlorobenzene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
Chloroethane	ND	2.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
Chloroform	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
Chloromethane	ND	3.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
2-Chlorotoluene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
4-Chlorotoluene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
cis-1,2-DCE	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
Dibromochloromethane	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
Dibromomethane	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
1,1-Dichloroethane	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
1,1-Dichloroethene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
1,2-Dichloropropane	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
1,3-Dichloropropane	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
2,2-Dichloropropane	ND	2.0		µg/L	1	3/30/2021 5:20:52 AM	A76302

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C2-210323
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/23/2021 8:38:00 AM
Lab ID: 2103B67-007
Matrix: DRINKING W
Received Date: 3/24/2021 12:44:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
Hexachlorobutadiene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
2-Hexanone	ND	10		µg/L	1	3/30/2021 5:20:52 AM	A76302
Isopropylbenzene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
4-Isopropyltoluene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
4-Methyl-2-pentanone	ND	10		µg/L	1	3/30/2021 5:20:52 AM	A76302
Methylene Chloride	ND	3.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
n-Butylbenzene	ND	3.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
n-Propylbenzene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
sec-Butylbenzene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
Styrene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
tert-Butylbenzene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
trans-1,2-DCE	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
Trichlorofluoromethane	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
Vinyl chloride	ND	1.0		µg/L	1	3/30/2021 5:20:52 AM	A76302
Xylenes, Total	ND	1.5		µg/L	1	3/30/2021 5:20:52 AM	A76302
Surr: 1,2-Dichloroethane-d4	93.5	70-130		%Rec	1	3/30/2021 5:20:52 AM	A76302
Surr: 4-Bromofluorobenzene	92.9	70-130		%Rec	1	3/30/2021 5:20:52 AM	A76302
Surr: Dibromofluoromethane	104	70-130		%Rec	1	3/30/2021 5:20:52 AM	A76302
Surr: Toluene-d8	103	70-130		%Rec	1	3/30/2021 5:20:52 AM	A76302

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-210323
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/23/2021 8:40:00 AM
Lab ID: 2103B67-008
Matrix: DRINKING W
Received Date: 3/24/2021 12:44:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
Toluene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
Ethylbenzene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
Naphthalene	ND	2.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
1-Methylnaphthalene	ND	4.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
2-Methylnaphthalene	ND	4.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
Acetone	ND	10		µg/L	1	3/30/2021 5:49:32 AM	A76302
Bromobenzene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
Bromodichloromethane	2.2	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
Bromoform	3.3	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
Bromomethane	ND	3.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
2-Butanone	ND	10		µg/L	1	3/30/2021 5:49:32 AM	A76302
Carbon disulfide	ND	10		µg/L	1	3/30/2021 5:49:32 AM	A76302
Carbon Tetrachloride	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
Chlorobenzene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
Chloroethane	ND	2.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
Chloroform	1.1	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
Chloromethane	ND	3.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
2-Chlorotoluene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
4-Chlorotoluene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
cis-1,2-DCE	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
Dibromochloromethane	4.6	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
Dibromomethane	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
1,1-Dichloroethane	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
1,1-Dichloroethene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
1,2-Dichloropropane	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
1,3-Dichloropropane	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
2,2-Dichloropropane	ND	2.0		µg/L	1	3/30/2021 5:49:32 AM	A76302

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

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 Quanitative 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 Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-210323
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/23/2021 8:40:00 AM
Lab ID: 2103B67-008
Matrix: DRINKING W
Received Date: 3/24/2021 12:44:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
Hexachlorobutadiene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
2-Hexanone	ND	10		µg/L	1	3/30/2021 5:49:32 AM	A76302
Isopropylbenzene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
4-Isopropyltoluene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
4-Methyl-2-pentanone	ND	10		µg/L	1	3/30/2021 5:49:32 AM	A76302
Methylene Chloride	ND	3.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
n-Butylbenzene	ND	3.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
n-Propylbenzene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
sec-Butylbenzene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
Styrene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
tert-Butylbenzene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
trans-1,2-DCE	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
Trichlorofluoromethane	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
Vinyl chloride	ND	1.0		µg/L	1	3/30/2021 5:49:32 AM	A76302
Xylenes, Total	ND	1.5		µg/L	1	3/30/2021 5:49:32 AM	A76302
Surr: 1,2-Dichloroethane-d4	96.9	70-130		%Rec	1	3/30/2021 5:49:32 AM	A76302
Surr: 4-Bromofluorobenzene	90.9	70-130		%Rec	1	3/30/2021 5:49:32 AM	A76302
Surr: Dibromofluoromethane	106	70-130		%Rec	1	3/30/2021 5:49:32 AM	A76302
Surr: Toluene-d8	103	70-130		%Rec	1	3/30/2021 5:49:32 AM	A76302

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2103B67**

31-Mar-21

Client: City of Las Cruces

Project: Joint Superfund Project Monthly Analysis

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **A76302**	RunNo: **76302**
Prep Date:	Analysis Date: **3/29/2021**	SeqNo: **2701814** 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	93.6	70	130			
Chlorobenzene	19	1.0	20.00	0	92.6	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	99.3	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	92.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.0	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		94.5	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.7	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A76302**	RunNo: **76302**
Prep Date:	Analysis Date: **3/29/2021**	SeqNo: **2701815** 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 Quanitative 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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2103B67**
31-Mar-21

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

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A76302**	RunNo: **76302**
Prep Date:	Analysis Date: **3/29/2021**	SeqNo: **2701815** 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2103B67**

31-Mar-21

Client: City of Las Cruces

Project: Joint Superfund Project Monthly Analysis

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A76302**	RunNo: **76302**
Prep Date:	Analysis Date: **3/29/2021**	SeqNo: **2701815** 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	9.6		10.00		95.7	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 Quanitative 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 Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **City of Las Cruces** Work Order Number: **2103B67** RcptNo: 1

Received By: **Scott Anderson** **3/24/2021 12:44:00 PM**

Completed By: **Desiree Dominguez** **3/24/2021 3:25:34 PM** DD

Reviewed By: JR 3/25/21

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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☑	No ☐	NA ☐
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: CW 3/25/4

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	0.4	Good				

Chain-of-Custody Record

Client: City of Las Cruces Water Quality Laboratory

Mailing Address: P.O. Box 20000 Las Cruces N.M. 88004

Phone #: 575-528-3409

email or Fax#: lguerra@las-cruces.org

QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☑ EDD (Type) EXCELL

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: Joint Superfund Project Monthly Analysis

Project #: CLC JSP Griggs Walnut

Project Manager: Luis Guerra (575) 528-3409

Sampler: Yadira Ryan

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 0.4 - 0 = 0.4 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2103B67
3-23-21	0812	DRINKING WATER	CLC 18-210323	3-40ml VOAs	HgCl2	-001
	0825		CLC 18-210323			-002
	0911		CLC 27-210323			-003
	0830		CLC ISI-210323			-004
	0832		CLC ISI-210323-D			-005
	0836		CLC C1-210323			-006
	0838		CLC C2-210323			-007
3-23-21	0840	DRINKING WATER	CLC ESI-210323	3-40ml VOAs	HgCl2	-008

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~~) VOC	8270 (Semi-VOA)	Total Coliform (Present/Absent)
							X		
							X		
							X		
							X		
							X		
							X		
							X		
							X		

Date	Time	Relinquished by	Received by	Via	Date	Time
3-23-21	1506	Yadira Ryan	SPA	FedEx	3.24.21	12:44
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Send Results to:
Luis Guerra: lguerra@las-cruces.org
Joshua Rosenblatt: jrosenblatt@las-cruces.org
Send invoice 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

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

May 06, 2021

Luis Guerra

City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3604
FAX:

RE: CLC Joint Superfund Project OrderNo.: 2105081

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 5/4/2021 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,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-210430
Project: CLC Joint Superfund Project
Collection Date: 4/30/2021 8:13:00 AM
Lab ID: 2105081-001
Matrix: DRINKING W
Received Date: 5/4/2021 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
Toluene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
Ethylbenzene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
Naphthalene	ND	2.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
1-Methylnaphthalene	ND	4.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
2-Methylnaphthalene	ND	4.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
Acetone	ND	10		µg/L	1	5/5/2021 10:31:19 PM	A77184
Bromobenzene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
Bromodichloromethane	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
Bromoform	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
Bromomethane	ND	3.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
2-Butanone	ND	10		µg/L	1	5/5/2021 10:31:19 PM	A77184
Carbon disulfide	ND	10		µg/L	1	5/5/2021 10:31:19 PM	A77184
Carbon Tetrachloride	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
Chlorobenzene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
Chloroethane	ND	2.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
Chloroform	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
Chloromethane	ND	3.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
2-Chlorotoluene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
4-Chlorotoluene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
cis-1,2-DCE	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
Dibromochloromethane	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
Dibromomethane	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
1,1-Dichloroethane	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
1,1-Dichloroethene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
1,2-Dichloropropane	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
1,3-Dichloropropane	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
2,2-Dichloropropane	ND	2.0		µg/L	1	5/5/2021 10:31:19 PM	A77184

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-210430
Project: CLC Joint Superfund Project
Collection Date: 4/30/2021 8:13:00 AM
Lab ID: 2105081-001
Matrix: DRINKING W
Received Date: 5/4/2021 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
Hexachlorobutadiene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
2-Hexanone	ND	10		µg/L	1	5/5/2021 10:31:19 PM	A77184
Isopropylbenzene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
4-Isopropyltoluene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
4-Methyl-2-pentanone	ND	10		µg/L	1	5/5/2021 10:31:19 PM	A77184
Methylene Chloride	ND	3.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
n-Butylbenzene	ND	3.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
n-Propylbenzene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
sec-Butylbenzene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
Styrene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
tert-Butylbenzene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
Tetrachloroethene (PCE)	5.0	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
trans-1,2-DCE	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
Trichlorofluoromethane	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
Vinyl chloride	ND	1.0		µg/L	1	5/5/2021 10:31:19 PM	A77184
Xylenes, Total	ND	1.5		µg/L	1	5/5/2021 10:31:19 PM	A77184
Surr: 1,2-Dichloroethane-d4	92.5	70-130		%Rec	1	5/5/2021 10:31:19 PM	A77184
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	5/5/2021 10:31:19 PM	A77184
Surr: Dibromofluoromethane	103	70-130		%Rec	1	5/5/2021 10:31:19 PM	A77184
Surr: Toluene-d8	100	70-130		%Rec	1	5/5/2021 10:31:19 PM	A77184

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-210430 Dup
Project: CLC Joint Superfund Project
Collection Date: 4/30/2021 8:15:00 AM
Lab ID: 2105081-002
Matrix: DRINKING W
Received Date: 5/4/2021 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
Toluene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
Ethylbenzene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
Naphthalene	ND	2.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
1-Methylnaphthalene	ND	4.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
2-Methylnaphthalene	ND	4.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
Acetone	ND	10		µg/L	1	5/6/2021 1:51:14 AM	A77184
Bromobenzene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
Bromodichloromethane	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
Bromoform	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
Bromomethane	ND	3.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
2-Butanone	ND	10		µg/L	1	5/6/2021 1:51:14 AM	A77184
Carbon disulfide	ND	10		µg/L	1	5/6/2021 1:51:14 AM	A77184
Carbon Tetrachloride	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
Chlorobenzene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
Chloroethane	ND	2.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
Chloroform	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
Chloromethane	ND	3.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
2-Chlorotoluene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
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cis-1,2-DCE	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
Dibromochloromethane	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
Dibromomethane	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
1,1-Dichloroethane	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
1,1-Dichloroethene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
1,2-Dichloropropane	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
1,3-Dichloropropane	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
2,2-Dichloropropane	ND	2.0		µg/L	1	5/6/2021 1:51:14 AM	A77184

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-210430 Dup
Project: CLC Joint Superfund Project
Collection Date: 4/30/2021 8:15:00 AM
Lab ID: 2105081-002
Matrix: DRINKING W
Received Date: 5/4/2021 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
Hexachlorobutadiene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
2-Hexanone	ND	10		µg/L	1	5/6/2021 1:51:14 AM	A77184
Isopropylbenzene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
4-Isopropyltoluene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
4-Methyl-2-pentanone	ND	10		µg/L	1	5/6/2021 1:51:14 AM	A77184
Methylene Chloride	ND	3.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
n-Butylbenzene	ND	3.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
n-Propylbenzene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
sec-Butylbenzene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
Styrene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
tert-Butylbenzene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
Tetrachloroethene (PCE)	5.0	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
trans-1,2-DCE	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
Trichlorofluoromethane	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
Vinyl chloride	ND	1.0		µg/L	1	5/6/2021 1:51:14 AM	A77184
Xylenes, Total	ND	1.5		µg/L	1	5/6/2021 1:51:14 AM	A77184
Surr: 1,2-Dichloroethane-d4	90.4	70-130		%Rec	1	5/6/2021 1:51:14 AM	A77184
Surr: 4-Bromofluorobenzene	96.6	70-130		%Rec	1	5/6/2021 1:51:14 AM	A77184
Surr: Dibromofluoromethane	104	70-130		%Rec	1	5/6/2021 1:51:14 AM	A77184
Surr: Toluene-d8	99.6	70-130		%Rec	1	5/6/2021 1:51:14 AM	A77184

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-210430
Project: CLC Joint Superfund Project
Collection Date: 4/30/2021 8:18:00 AM
Lab ID: 2105081-003
Matrix: DRINKING W
Received Date: 5/4/2021 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
Toluene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
Ethylbenzene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
Naphthalene	ND	2.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
1-Methylnaphthalene	ND	4.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
2-Methylnaphthalene	ND	4.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
Acetone	ND	10		µg/L	1	5/6/2021 2:19:44 AM	A77184
Bromobenzene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
Bromodichloromethane	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
Bromoform	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
Bromomethane	ND	3.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
2-Butanone	ND	10		µg/L	1	5/6/2021 2:19:44 AM	A77184
Carbon disulfide	ND	10		µg/L	1	5/6/2021 2:19:44 AM	A77184
Carbon Tetrachloride	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
Chlorobenzene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
Chloroethane	ND	2.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
Chloroform	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
Chloromethane	ND	3.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
2-Chlorotoluene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
4-Chlorotoluene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
cis-1,2-DCE	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
Dibromochloromethane	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
Dibromomethane	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
1,1-Dichloroethane	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
1,1-Dichloroethene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
1,2-Dichloropropane	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
1,3-Dichloropropane	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
2,2-Dichloropropane	ND	2.0		µg/L	1	5/6/2021 2:19:44 AM	A77184

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-210430
Project: CLC Joint Superfund Project
Collection Date: 4/30/2021 8:18:00 AM
Lab ID: 2105081-003
Matrix: DRINKING W
Received Date: 5/4/2021 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
Hexachlorobutadiene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
2-Hexanone	ND	10		µg/L	1	5/6/2021 2:19:44 AM	A77184
Isopropylbenzene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
4-Isopropyltoluene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
4-Methyl-2-pentanone	ND	10		µg/L	1	5/6/2021 2:19:44 AM	A77184
Methylene Chloride	ND	3.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
n-Butylbenzene	ND	3.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
n-Propylbenzene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
sec-Butylbenzene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
Styrene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
tert-Butylbenzene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
trans-1,2-DCE	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
Trichlorofluoromethane	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
Vinyl chloride	ND	1.0		µg/L	1	5/6/2021 2:19:44 AM	A77184
Xylenes, Total	ND	1.5		µg/L	1	5/6/2021 2:19:44 AM	A77184
Surr: 1,2-Dichloroethane-d4	90.7	70-130		%Rec	1	5/6/2021 2:19:44 AM	A77184
Surr: 4-Bromofluorobenzene	94.6	70-130		%Rec	1	5/6/2021 2:19:44 AM	A77184
Surr: Dibromofluoromethane	95.4	70-130		%Rec	1	5/6/2021 2:19:44 AM	A77184
Surr: Toluene-d8	99.3	70-130		%Rec	1	5/6/2021 2:19:44 AM	A77184

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C1-210430
Project: CLC Joint Superfund Project
Collection Date: 4/30/2021 8:22:00 AM
Lab ID: 2105081-004
Matrix: DRINKING W
Received Date: 5/4/2021 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
Toluene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
Ethylbenzene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
Naphthalene	ND	2.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
1-Methylnaphthalene	ND	4.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
2-Methylnaphthalene	ND	4.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
Acetone	ND	10		µg/L	1	5/6/2021 2:48:15 AM	A77184
Bromobenzene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
Bromodichloromethane	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
Bromoform	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
Bromomethane	ND	3.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
2-Butanone	ND	10		µg/L	1	5/6/2021 2:48:15 AM	A77184
Carbon disulfide	ND	10		µg/L	1	5/6/2021 2:48:15 AM	A77184
Carbon Tetrachloride	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
Chlorobenzene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
Chloroethane	ND	2.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
Chloroform	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
Chloromethane	ND	3.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
2-Chlorotoluene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
4-Chlorotoluene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
cis-1,2-DCE	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
Dibromochloromethane	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
Dibromomethane	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
1,1-Dichloroethane	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
1,1-Dichloroethene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
1,2-Dichloropropane	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
1,3-Dichloropropane	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
2,2-Dichloropropane	ND	2.0		µg/L	1	5/6/2021 2:48:15 AM	A77184

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C1-210430
Project: CLC Joint Superfund Project
Collection Date: 4/30/2021 8:22:00 AM
Lab ID: 2105081-004
Matrix: DRINKING W
Received Date: 5/4/2021 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
Hexachlorobutadiene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
2-Hexanone	ND	10		µg/L	1	5/6/2021 2:48:15 AM	A77184
Isopropylbenzene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
4-Isopropyltoluene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
4-Methyl-2-pentanone	ND	10		µg/L	1	5/6/2021 2:48:15 AM	A77184
Methylene Chloride	ND	3.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
n-Butylbenzene	ND	3.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
n-Propylbenzene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
sec-Butylbenzene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
Styrene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
tert-Butylbenzene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
trans-1,2-DCE	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
Trichlorofluoromethane	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
Vinyl chloride	ND	1.0		µg/L	1	5/6/2021 2:48:15 AM	A77184
Xylenes, Total	ND	1.5		µg/L	1	5/6/2021 2:48:15 AM	A77184
Surr: 1,2-Dichloroethane-d4	86.8	70-130		%Rec	1	5/6/2021 2:48:15 AM	A77184
Surr: 4-Bromofluorobenzene	97.8	70-130		%Rec	1	5/6/2021 2:48:15 AM	A77184
Surr: Dibromofluoromethane	95.6	70-130		%Rec	1	5/6/2021 2:48:15 AM	A77184
Surr: Toluene-d8	101	70-130		%Rec	1	5/6/2021 2:48:15 AM	A77184

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C2-210430
Project: CLC Joint Superfund Project
Collection Date: 4/30/2021 8:24:00 AM
Lab ID: 2105081-005
Matrix: DRINKING W
Received Date: 5/4/2021 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
Toluene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
Ethylbenzene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
Naphthalene	ND	2.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
1-Methylnaphthalene	ND	4.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
2-Methylnaphthalene	ND	4.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
Acetone	ND	10		µg/L	1	5/6/2021 3:16:52 AM	A77184
Bromobenzene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
Bromodichloromethane	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
Bromoform	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
Bromomethane	ND	3.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
2-Butanone	ND	10		µg/L	1	5/6/2021 3:16:52 AM	A77184
Carbon disulfide	ND	10		µg/L	1	5/6/2021 3:16:52 AM	A77184
Carbon Tetrachloride	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
Chlorobenzene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
Chloroethane	ND	2.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
Chloroform	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
Chloromethane	ND	3.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
2-Chlorotoluene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
4-Chlorotoluene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
cis-1,2-DCE	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
Dibromochloromethane	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
Dibromomethane	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
1,1-Dichloroethane	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
1,1-Dichloroethene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
1,2-Dichloropropane	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
1,3-Dichloropropane	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
2,2-Dichloropropane	ND	2.0		µg/L	1	5/6/2021 3:16:52 AM	A77184

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C2-210430
Project: CLC Joint Superfund Project
Collection Date: 4/30/2021 8:24:00 AM
Lab ID: 2105081-005
Matrix: DRINKING W
Received Date: 5/4/2021 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
Hexachlorobutadiene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
2-Hexanone	ND	10		µg/L	1	5/6/2021 3:16:52 AM	A77184
Isopropylbenzene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
4-Isopropyltoluene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
4-Methyl-2-pentanone	ND	10		µg/L	1	5/6/2021 3:16:52 AM	A77184
Methylene Chloride	ND	3.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
n-Butylbenzene	ND	3.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
n-Propylbenzene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
sec-Butylbenzene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
Styrene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
tert-Butylbenzene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
Tetrachloroethene (PCE)	11	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
trans-1,2-DCE	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
Trichlorofluoromethane	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
Vinyl chloride	ND	1.0		µg/L	1	5/6/2021 3:16:52 AM	A77184
Xylenes, Total	ND	1.5		µg/L	1	5/6/2021 3:16:52 AM	A77184
Surr: 1,2-Dichloroethane-d4	89.2	70-130		%Rec	1	5/6/2021 3:16:52 AM	A77184
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	5/6/2021 3:16:52 AM	A77184
Surr: Dibromofluoromethane	97.6	70-130		%Rec	1	5/6/2021 3:16:52 AM	A77184
Surr: Toluene-d8	104	70-130		%Rec	1	5/6/2021 3:16:52 AM	A77184

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-210430
Project: CLC Joint Superfund Project
Collection Date: 4/30/2021 8:27:00 AM
Lab ID: 2105081-006
Matrix: DRINKING W
Received Date: 5/4/2021 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
Toluene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
Ethylbenzene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
Naphthalene	ND	2.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
1-Methylnaphthalene	ND	4.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
2-Methylnaphthalene	ND	4.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
Acetone	ND	10		µg/L	1	5/6/2021 3:45:30 AM	A77184
Bromobenzene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
Bromodichloromethane	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
Bromoform	5.6	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
Bromomethane	ND	3.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
2-Butanone	ND	10		µg/L	1	5/6/2021 3:45:30 AM	A77184
Carbon disulfide	ND	10		µg/L	1	5/6/2021 3:45:30 AM	A77184
Carbon Tetrachloride	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
Chlorobenzene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
Chloroethane	ND	2.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
Chloroform	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
Chloromethane	ND	3.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
2-Chlorotoluene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
4-Chlorotoluene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
cis-1,2-DCE	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
Dibromochloromethane	2.2	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
Dibromomethane	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
1,1-Dichloroethane	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
1,1-Dichloroethene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
1,2-Dichloropropane	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
1,3-Dichloropropane	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
2,2-Dichloropropane	ND	2.0		µg/L	1	5/6/2021 3:45:30 AM	A77184

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-210430
Project: CLC Joint Superfund Project
Collection Date: 4/30/2021 8:27:00 AM
Lab ID: 2105081-006
Matrix: DRINKING W
Received Date: 5/4/2021 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
Hexachlorobutadiene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
2-Hexanone	ND	10		µg/L	1	5/6/2021 3:45:30 AM	A77184
Isopropylbenzene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
4-Isopropyltoluene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
4-Methyl-2-pentanone	ND	10		µg/L	1	5/6/2021 3:45:30 AM	A77184
Methylene Chloride	ND	3.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
n-Butylbenzene	ND	3.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
n-Propylbenzene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
sec-Butylbenzene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
Styrene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
tert-Butylbenzene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
trans-1,2-DCE	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
Trichlorofluoromethane	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
Vinyl chloride	ND	1.0		µg/L	1	5/6/2021 3:45:30 AM	A77184
Xylenes, Total	ND	1.5		µg/L	1	5/6/2021 3:45:30 AM	A77184
Surr: 1,2-Dichloroethane-d4	86.3	70-130		%Rec	1	5/6/2021 3:45:30 AM	A77184
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	5/6/2021 3:45:30 AM	A77184
Surr: Dibromofluoromethane	98.3	70-130		%Rec	1	5/6/2021 3:45:30 AM	A77184
Surr: Toluene-d8	104	70-130		%Rec	1	5/6/2021 3:45:30 AM	A77184

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-210430
Project: CLC Joint Superfund Project
Collection Date: 4/30/2021 8:46:00 AM
Lab ID: 2105081-007
Matrix: DRINKING W
Received Date: 5/4/2021 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
Toluene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
Ethylbenzene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
Naphthalene	ND	2.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
1-Methylnaphthalene	ND	4.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
2-Methylnaphthalene	ND	4.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
Acetone	ND	10		µg/L	1	5/6/2021 4:14:09 AM	A77184
Bromobenzene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
Bromodichloromethane	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
Bromoform	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
Bromomethane	ND	3.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
2-Butanone	ND	10		µg/L	1	5/6/2021 4:14:09 AM	A77184
Carbon disulfide	ND	10		µg/L	1	5/6/2021 4:14:09 AM	A77184
Carbon Tetrachloride	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
Chlorobenzene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
Chloroethane	ND	2.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
Chloroform	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
Chloromethane	ND	3.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
2-Chlorotoluene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
4-Chlorotoluene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
cis-1,2-DCE	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
Dibromochloromethane	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
Dibromomethane	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
1,1-Dichloroethane	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
1,1-Dichloroethene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
1,2-Dichloropropane	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
1,3-Dichloropropane	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
2,2-Dichloropropane	ND	2.0		µg/L	1	5/6/2021 4:14:09 AM	A77184

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-210430
Project: CLC Joint Superfund Project
Collection Date: 4/30/2021 8:46:00 AM
Lab ID: 2105081-007
Matrix: DRINKING W
Received Date: 5/4/2021 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
Hexachlorobutadiene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
2-Hexanone	ND	10		µg/L	1	5/6/2021 4:14:09 AM	A77184
Isopropylbenzene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
4-Isopropyltoluene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
4-Methyl-2-pentanone	ND	10		µg/L	1	5/6/2021 4:14:09 AM	A77184
Methylene Chloride	ND	3.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
n-Butylbenzene	ND	3.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
n-Propylbenzene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
sec-Butylbenzene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
Styrene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
tert-Butylbenzene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
Tetrachloroethene (PCE)	13	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
trans-1,2-DCE	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
Trichlorofluoromethane	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
Vinyl chloride	ND	1.0		µg/L	1	5/6/2021 4:14:09 AM	A77184
Xylenes, Total	ND	1.5		µg/L	1	5/6/2021 4:14:09 AM	A77184
Surr: 1,2-Dichloroethane-d4	95.1	70-130		%Rec	1	5/6/2021 4:14:09 AM	A77184
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	5/6/2021 4:14:09 AM	A77184
Surr: Dibromofluoromethane	106	70-130		%Rec	1	5/6/2021 4:14:09 AM	A77184
Surr: Toluene-d8	104	70-130		%Rec	1	5/6/2021 4:14:09 AM	A77184

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2105081**
06-May-21

Client: City of Las Cruces
Project: CLC Joint Superfund Project

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **A77184** RunNo: **77184**
Prep Date: Analysis Date: **5/5/2021** SeqNo: **2736861** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	94.9	70	130			
Toluene	19	1.0	20.00	0	96.1	70	130			
Chlorobenzene	20	1.0	20.00	0	98.5	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	96.2	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	87.3	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		94.8	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	10		10.00		99.8	70	130			
Surr: Toluene-d8	9.5		10.00		95.3	70	130			

Sample ID: **100ng lcs2** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **B77184** RunNo: **77184**
Prep Date: Analysis Date: **5/5/2021** SeqNo: **2736862** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.9		10.00		88.6	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.5	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.0	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **A77184** RunNo: **77184**
Prep Date: Analysis Date: **5/5/2021** SeqNo: **2736863** 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								

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 Quanitative 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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2105081**
06-May-21

Client: City of Las Cruces
Project: CLC Joint Superfund Project

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A77184**	RunNo: **77184**
Prep Date:	Analysis Date: **5/5/2021**	SeqNo: **2736863** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2105081**

06-May-21

Client: City of Las Cruces

Project: CLC Joint Superfund Project

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A77184**	RunNo: **77184**
Prep Date:	Analysis Date: **5/5/2021**	SeqNo: **2736863** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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	8.8		10.00		88.2	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.8	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID: **mb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **B77184**	RunNo: **77184**
Prep Date:	Analysis Date: **5/6/2021**	SeqNo: **2736864** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.0		10.00		89.9	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.5	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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **City of Las Cruces** Work Order Number: **2105081** RcptNo: 1

Received By: **Sean Livingston** **5/4/2021 10:50:00 AM** S Livingston

Completed By: **Isaiah Ortiz** **5/4/2021 12:56:15 PM** I Ortiz

Reviewed By: SPA 5.4.21

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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☑	No ☐	NA ☐
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: CM 5/4/21

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	2.0	Good	Not Present			

Chain-of-Custody Record

Client: City of Las Cruces Water Quality Laboratory

Mailing Address: P.O. Box 20000 Las Cruces, N.M. 88004

Phone #: 575-528-3609

email or Fax#: lguerra@las-cruces.org

QA/QC Package: ☑ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ NELAP ☐ Other ____

☑ EDD (Type) EXCEL

Turn-Around Time: ☑ Standard ☐ Rush ____

Project Name: Joint Superfund Project Monthly Analysis

Project #: CLC JSP Griggs Walnut

Project Manager: Luis Guerra (575) 528-3609

Sampler: Yadira Reyna

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.9 + 0.1 = 2.0 °C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 2105081	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) VOC	8270 (Semi-VOA)	Air Bubbles (Y or N)
4-30-21	0813	Drinking Water	CLC 18-20210430	3-40ml Vials	$HgCl_2$	001										X		
	0815		CLC 18-210430 DUP			002										X		
	0818		CLC IS1-210430			003										X		
	0822		CLC C1-210430			004										X		
	0824		CLC C2-210430			005										X		
	0827		CLC ES1-210430			006										X		
4-30-21	0846	Drinking Water	CLC 27-210430	3-40ml Vials	$HgCl_2$	007										X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/3/21	1500	Yadira Reyna	Sue Redex	5/4/21	10:50
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Send results to:
Luis Guerra: lguerra@las-cruces.org
Joshua Rosenblatt: jrosenblatt@las-cruces.org
(Send invoice 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

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

May 11, 2021

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.: 2105158

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 3 sample(s) on 5/4/2021 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,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC AS1-210430
Project: Joint Superfund Project Monthly Analysi
Collection Date: 4/30/2021 8:31:00 AM
Lab ID: 2105158-001 **Matrix:** AIR
Received Date: 5/4/2021 5:04:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
Toluene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
Ethylbenzene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
Naphthalene	ND	0.20		µg/L	1	5/10/2021 3:21:55 PM	A77288
1-Methylnaphthalene	ND	0.40		µg/L	1	5/10/2021 3:21:55 PM	A77288
2-Methylnaphthalene	ND	0.40		µg/L	1	5/10/2021 3:21:55 PM	A77288
Acetone	ND	1.0		µg/L	1	5/10/2021 3:21:55 PM	A77288
Bromobenzene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
Bromodichloromethane	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
Bromoform	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
Bromomethane	ND	0.20		µg/L	1	5/10/2021 3:21:55 PM	A77288
2-Butanone	ND	1.0		µg/L	1	5/10/2021 3:21:55 PM	A77288
Carbon disulfide	ND	1.0		µg/L	1	5/10/2021 3:21:55 PM	A77288
Carbon tetrachloride	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
Chlorobenzene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
Chloroethane	ND	0.20		µg/L	1	5/10/2021 3:21:55 PM	A77288
Chloroform	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
Chloromethane	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
2-Chlorotoluene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
4-Chlorotoluene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
cis-1,2-DCE	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	5/10/2021 3:21:55 PM	A77288
Dibromochloromethane	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
Dibromomethane	ND	0.20		µg/L	1	5/10/2021 3:21:55 PM	A77288
1,2-Dichlorobenzene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
1,3-Dichlorobenzene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
1,4-Dichlorobenzene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
Dichlorodifluoromethane	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
1,1-Dichloroethane	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
1,1-Dichloroethene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
1,2-Dichloropropane	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
1,3-Dichloropropane	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
2,2-Dichloropropane	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288

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

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 Quanitative 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 Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC AS1-210430
Project: Joint Superfund Project Monthly Analysi
Collection Date: 4/30/2021 8:31:00 AM
Lab ID: 2105158-001 **Matrix:** AIR
Received Date: 5/4/2021 5:04:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
Hexachlorobutadiene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
2-Hexanone	ND	1.0		µg/L	1	5/10/2021 3:21:55 PM	A77288
Isopropylbenzene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
4-Isopropyltoluene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
4-Methyl-2-pentanone	ND	1.0		µg/L	1	5/10/2021 3:21:55 PM	A77288
Methylene chloride	ND	0.30		µg/L	1	5/10/2021 3:21:55 PM	A77288
n-Butylbenzene	ND	0.30		µg/L	1	5/10/2021 3:21:55 PM	A77288
n-Propylbenzene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
sec-Butylbenzene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
Styrene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
tert-Butylbenzene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
trans-1,2-DCE	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
1,1,1-Trichloroethane	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
1,1,2-Trichloroethane	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
Trichloroethene (TCE)	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
Trichlorofluoromethane	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
1,2,3-Trichloropropane	ND	0.20		µg/L	1	5/10/2021 3:21:55 PM	A77288
Vinyl chloride	ND	0.10		µg/L	1	5/10/2021 3:21:55 PM	A77288
Xylenes, Total	ND	0.15		µg/L	1	5/10/2021 3:21:55 PM	A77288
Surr: Dibromofluoromethane	105	70-130		%Rec	1	5/10/2021 3:21:55 PM	A77288
Surr: 1,2-Dichloroethane-d4	89.8	70-130		%Rec	1	5/10/2021 3:21:55 PM	A77288
Surr: Toluene-d8	102	70-130		%Rec	1	5/10/2021 3:21:55 PM	A77288
Surr: 4-Bromofluorobenzene	95.7	70-130		%Rec	1	5/10/2021 3:21:55 PM	A77288

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC AS1-210430 DUP
Project: Joint Superfund Project Monthly Analysi
Collection Date: 4/30/2021 8:32:00 AM
Lab ID: 2105158-002 **Matrix:** AIR
Received Date: 5/4/2021 5:04:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
Toluene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
Ethylbenzene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
Naphthalene	ND	0.20		µg/L	1	5/10/2021 4:19:08 PM	A77288
1-Methylnaphthalene	ND	0.40		µg/L	1	5/10/2021 4:19:08 PM	A77288
2-Methylnaphthalene	ND	0.40		µg/L	1	5/10/2021 4:19:08 PM	A77288
Acetone	ND	1.0		µg/L	1	5/10/2021 4:19:08 PM	A77288
Bromobenzene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
Bromodichloromethane	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
Bromoform	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
Bromomethane	ND	0.20		µg/L	1	5/10/2021 4:19:08 PM	A77288
2-Butanone	ND	1.0		µg/L	1	5/10/2021 4:19:08 PM	A77288
Carbon disulfide	ND	1.0		µg/L	1	5/10/2021 4:19:08 PM	A77288
Carbon tetrachloride	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
Chlorobenzene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
Chloroethane	ND	0.20		µg/L	1	5/10/2021 4:19:08 PM	A77288
Chloroform	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
Chloromethane	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
2-Chlorotoluene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
4-Chlorotoluene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
cis-1,2-DCE	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	5/10/2021 4:19:08 PM	A77288
Dibromochloromethane	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
Dibromomethane	ND	0.20		µg/L	1	5/10/2021 4:19:08 PM	A77288
1,2-Dichlorobenzene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
1,3-Dichlorobenzene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
1,4-Dichlorobenzene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
Dichlorodifluoromethane	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
1,1-Dichloroethane	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
1,1-Dichloroethene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
1,2-Dichloropropane	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
1,3-Dichloropropane	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
2,2-Dichloropropane	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC AS1-210430 DUP
Project: Joint Superfund Project Monthly Analysi
Collection Date: 4/30/2021 8:32:00 AM
Lab ID: 2105158-002 **Matrix:** AIR
Received Date: 5/4/2021 5:04:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
Hexachlorobutadiene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
2-Hexanone	ND	1.0		µg/L	1	5/10/2021 4:19:08 PM	A77288
Isopropylbenzene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
4-Isopropyltoluene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
4-Methyl-2-pentanone	ND	1.0		µg/L	1	5/10/2021 4:19:08 PM	A77288
Methylene chloride	ND	0.30		µg/L	1	5/10/2021 4:19:08 PM	A77288
n-Butylbenzene	ND	0.30		µg/L	1	5/10/2021 4:19:08 PM	A77288
n-Propylbenzene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
sec-Butylbenzene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
Styrene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
tert-Butylbenzene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
Tetrachloroethene (PCE)	0.11	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
trans-1,2-DCE	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
1,1,1-Trichloroethane	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
1,1,2-Trichloroethane	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
Trichloroethene (TCE)	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
Trichlorofluoromethane	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
1,2,3-Trichloropropane	ND	0.20		µg/L	1	5/10/2021 4:19:08 PM	A77288
Vinyl chloride	ND	0.10		µg/L	1	5/10/2021 4:19:08 PM	A77288
Xylenes, Total	ND	0.15		µg/L	1	5/10/2021 4:19:08 PM	A77288
Surr: Dibromofluoromethane	110	70-130		%Rec	1	5/10/2021 4:19:08 PM	A77288
Surr: 1,2-Dichloroethane-d4	90.4	70-130		%Rec	1	5/10/2021 4:19:08 PM	A77288
Surr: Toluene-d8	100	70-130		%Rec	1	5/10/2021 4:19:08 PM	A77288
Surr: 4-Bromofluorobenzene	98.9	70-130		%Rec	1	5/10/2021 4:19:08 PM	A77288

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC AS2-210430
Project: Joint Superfund Project Monthly Analysi
Collection Date: 4/30/2021 8:33:00 AM
Lab ID: 2105158-003 **Matrix:** AIR
Received Date: 5/4/2021 5:04:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
Toluene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
Ethylbenzene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
Naphthalene	ND	0.20		µg/L	1	5/10/2021 4:47:43 PM	A77288
1-Methylnaphthalene	ND	0.40		µg/L	1	5/10/2021 4:47:43 PM	A77288
2-Methylnaphthalene	ND	0.40		µg/L	1	5/10/2021 4:47:43 PM	A77288
Acetone	ND	1.0		µg/L	1	5/10/2021 4:47:43 PM	A77288
Bromobenzene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
Bromodichloromethane	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
Bromoform	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
Bromomethane	ND	0.20		µg/L	1	5/10/2021 4:47:43 PM	A77288
2-Butanone	ND	1.0		µg/L	1	5/10/2021 4:47:43 PM	A77288
Carbon disulfide	ND	1.0		µg/L	1	5/10/2021 4:47:43 PM	A77288
Carbon tetrachloride	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
Chlorobenzene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
Chloroethane	ND	0.20		µg/L	1	5/10/2021 4:47:43 PM	A77288
Chloroform	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
Chloromethane	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
2-Chlorotoluene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
4-Chlorotoluene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
cis-1,2-DCE	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	5/10/2021 4:47:43 PM	A77288
Dibromochloromethane	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
Dibromomethane	ND	0.20		µg/L	1	5/10/2021 4:47:43 PM	A77288
1,2-Dichlorobenzene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
1,3-Dichlorobenzene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
1,4-Dichlorobenzene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
Dichlorodifluoromethane	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
1,1-Dichloroethane	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
1,1-Dichloroethene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
1,2-Dichloropropane	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
1,3-Dichloropropane	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
2,2-Dichloropropane	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC AS2-210430
Project: Joint Superfund Project Monthly Analysi
Collection Date: 4/30/2021 8:33:00 AM
Lab ID: 2105158-003 **Matrix:** AIR
Received Date: 5/4/2021 5:04:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
Hexachlorobutadiene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
2-Hexanone	ND	1.0		µg/L	1	5/10/2021 4:47:43 PM	A77288
Isopropylbenzene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
4-Isopropyltoluene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
4-Methyl-2-pentanone	ND	1.0		µg/L	1	5/10/2021 4:47:43 PM	A77288
Methylene chloride	ND	0.30		µg/L	1	5/10/2021 4:47:43 PM	A77288
n-Butylbenzene	ND	0.30		µg/L	1	5/10/2021 4:47:43 PM	A77288
n-Propylbenzene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
sec-Butylbenzene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
Styrene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
tert-Butylbenzene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
Tetrachloroethene (PCE)	0.12	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
trans-1,2-DCE	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
1,1,1-Trichloroethane	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
1,1,2-Trichloroethane	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
Trichloroethene (TCE)	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
Trichlorofluoromethane	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
1,2,3-Trichloropropane	ND	0.20		µg/L	1	5/10/2021 4:47:43 PM	A77288
Vinyl chloride	ND	0.10		µg/L	1	5/10/2021 4:47:43 PM	A77288
Xylenes, Total	ND	0.15		µg/L	1	5/10/2021 4:47:43 PM	A77288
Surr: Dibromofluoromethane	105	70-130		%Rec	1	5/10/2021 4:47:43 PM	A77288
Surr: 1,2-Dichloroethane-d4	84.4	70-130		%Rec	1	5/10/2021 4:47:43 PM	A77288
Surr: Toluene-d8	105	70-130		%Rec	1	5/10/2021 4:47:43 PM	A77288
Surr: 4-Bromofluorobenzene	93.5	70-130		%Rec	1	5/10/2021 4:47:43 PM	A77288

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **City of Las Cruces** Work Order Number: **2105158** RcptNo: 1

Received By: **Scott Anderson** **5/4/2021 5:04:00 PM** SPL

Completed By: **Sean Livingston** **5/5/2021 9:52:03 AM** Sean Livingston

Reviewed By: JR 5/5/21

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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	JO
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 5/4/5/21 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? JO 5/5/21
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:

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				

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
Mailing Address: P.O. Box 20000
Las Cruces, N.M. 88004
Phone #: 575-528-3609
email or Fax#: lguerra@las-cruces.org
QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other _____
☑ EDD (Type) EXCEL

Turn-Around Time:
☑ Standard ☐ Rush _____
Project Name: Joint Superfund Project Monthly Analysis
Project #: CLC JSP Griggs Walnut
Project Manager: Luis Guerra (575) 528-3609
Sampler: Yadira Reyna
On Ice: ☐ Yes ☐ No
Sample Temperature: NA

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 2105158	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) VOC	8270 (Semi-VOA)					Air Bubbles (Y or N)
4/30/21	0831	AIR	CLC AS1-210430	Tedlar Bag	N/A	001										X						
"	0832	AIR	CLC AS1-210430 DUP	Tedlar Bag	N/A	002										X						
4/30/21	0833	AIR	CLC AS2-210430	Tedlar Bag	N/A	003										X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/3/21	1500	Yadira Reyna	SPA FEDEX	5.4.21	17:01
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Send results to:
Luis Guerra: lguerra@las-cruces.org
Joshua Rosenblatt: jrosenblatt@las-cruces.org
(Send invoice 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

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

June 23, 2021

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.: 2106840

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 5 sample(s) on 6/16/2021 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,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18.210615
Project: Joint Superfund Project Monthly Analysi
Collection Date: 6/15/2021 8:13:00 AM
Lab ID: 2106840-001
Matrix: DRINKING W
Received Date: 6/16/2021 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
Toluene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
Ethylbenzene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
Naphthalene	ND	2.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
1-Methylnaphthalene	ND	4.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
2-Methylnaphthalene	ND	4.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
Acetone	ND	10		µg/L	1	6/21/2021 4:12:51 PM	A79248
Bromobenzene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
Bromodichloromethane	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
Bromoform	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
Bromomethane	ND	3.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
2-Butanone	ND	10		µg/L	1	6/21/2021 4:12:51 PM	A79248
Carbon disulfide	ND	10		µg/L	1	6/21/2021 4:12:51 PM	A79248
Carbon Tetrachloride	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
Chlorobenzene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
Chloroethane	ND	2.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
Chloroform	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
Chloromethane	ND	3.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
2-Chlorotoluene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
4-Chlorotoluene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
cis-1,2-DCE	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
Dibromochloromethane	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
Dibromomethane	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
1,1-Dichloroethane	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
1,1-Dichloroethene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
1,2-Dichloropropane	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
1,3-Dichloropropane	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
2,2-Dichloropropane	ND	2.0		µg/L	1	6/21/2021 4:12:51 PM	A79248

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times 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		

Hall Environmental Analysis Laboratory, Inc.

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Project: Joint Superfund Project Monthly Analysi
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EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
Hexachlorobutadiene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
2-Hexanone	ND	10		µg/L	1	6/21/2021 4:12:51 PM	A79248
Isopropylbenzene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
4-Isopropyltoluene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
4-Methyl-2-pentanone	ND	10		µg/L	1	6/21/2021 4:12:51 PM	A79248
Methylene Chloride	ND	3.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
n-Butylbenzene	ND	3.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
n-Propylbenzene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
sec-Butylbenzene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
Styrene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
tert-Butylbenzene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
Tetrachloroethene (PCE)	4.6	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
trans-1,2-DCE	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
Trichlorofluoromethane	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
Vinyl chloride	ND	1.0		µg/L	1	6/21/2021 4:12:51 PM	A79248
Xylenes, Total	ND	1.5		µg/L	1	6/21/2021 4:12:51 PM	A79248
Surr: 1,2-Dichloroethane-d4	97.2	70-130		%Rec	1	6/21/2021 4:12:51 PM	A79248
Surr: 4-Bromofluorobenzene	97.7	70-130		%Rec	1	6/21/2021 4:12:51 PM	A79248
Surr: Dibromofluoromethane	97.7	70-130		%Rec	1	6/21/2021 4:12:51 PM	A79248
Surr: Toluene-d8	106	70-130		%Rec	1	6/21/2021 4:12:51 PM	A79248

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

Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27.210615
Project: Joint Superfund Project Monthly Analysi
Collection Date: 6/15/2021 8:33:00 AM
Lab ID: 2106840-002
Matrix: DRINKING W
Received Date: 6/16/2021 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
Toluene	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
Ethylbenzene	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
Naphthalene	ND	2.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
1-Methylnaphthalene	ND	4.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
2-Methylnaphthalene	ND	4.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
Acetone	ND	10		µg/L	1	6/21/2021 4:41:36 PM	A79248
Bromobenzene	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
Bromodichloromethane	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
Bromoform	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
Bromomethane	ND	3.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
2-Butanone	ND	10		µg/L	1	6/21/2021 4:41:36 PM	A79248
Carbon disulfide	ND	10		µg/L	1	6/21/2021 4:41:36 PM	A79248
Carbon Tetrachloride	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
Chlorobenzene	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
Chloroethane	ND	2.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
Chloroform	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
Chloromethane	ND	3.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
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4-Chlorotoluene	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
cis-1,2-DCE	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
Dibromochloromethane	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
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Dichlorodifluoromethane	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
1,1-Dichloroethane	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
1,1-Dichloroethene	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
1,2-Dichloropropane	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
1,3-Dichloropropane	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
2,2-Dichloropropane	ND	2.0		µg/L	1	6/21/2021 4:41:36 PM	A79248

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

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2-Hexanone	ND	10		µg/L	1	6/21/2021 4:41:36 PM	A79248
Isopropylbenzene	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
4-Isopropyltoluene	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
4-Methyl-2-pentanone	ND	10		µg/L	1	6/21/2021 4:41:36 PM	A79248
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n-Butylbenzene	ND	3.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
n-Propylbenzene	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
sec-Butylbenzene	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
Styrene	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
tert-Butylbenzene	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
Tetrachloroethene (PCE)	13	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
trans-1,2-DCE	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
Trichlorofluoromethane	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
Vinyl chloride	ND	1.0		µg/L	1	6/21/2021 4:41:36 PM	A79248
Xylenes, Total	ND	1.5		µg/L	1	6/21/2021 4:41:36 PM	A79248
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	6/21/2021 4:41:36 PM	A79248
Surr: 4-Bromofluorobenzene	95.6	70-130		%Rec	1	6/21/2021 4:41:36 PM	A79248
Surr: Dibromofluoromethane	99.3	70-130		%Rec	1	6/21/2021 4:41:36 PM	A79248
Surr: Toluene-d8	107	70-130		%Rec	1	6/21/2021 4:41:36 PM	A79248

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Lab ID: 2106840-003
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Received Date: 6/16/2021 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
Toluene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
Ethylbenzene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
Naphthalene	ND	2.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
1-Methylnaphthalene	ND	4.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
2-Methylnaphthalene	ND	4.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
Acetone	ND	10		µg/L	1	6/21/2021 5:10:23 PM	A79248
Bromobenzene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
Bromodichloromethane	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
Bromoform	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
Bromomethane	ND	3.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
2-Butanone	ND	10		µg/L	1	6/21/2021 5:10:23 PM	A79248
Carbon disulfide	ND	10		µg/L	1	6/21/2021 5:10:23 PM	A79248
Carbon Tetrachloride	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
Chlorobenzene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
Chloroethane	ND	2.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
Chloroform	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
Chloromethane	ND	3.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
2-Chlorotoluene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
4-Chlorotoluene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
cis-1,2-DCE	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
Dibromochloromethane	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
Dibromomethane	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
1,1-Dichloroethane	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
1,1-Dichloroethene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
1,2-Dichloropropane	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
1,3-Dichloropropane	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
2,2-Dichloropropane	ND	2.0		µg/L	1	6/21/2021 5:10:23 PM	A79248

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1.210615
Project: Joint Superfund Project Monthly Analysi
Collection Date: 6/15/2021 8:19:00 AM
Lab ID: 2106840-003
Matrix: DRINKING W
Received Date: 6/16/2021 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
Hexachlorobutadiene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
2-Hexanone	ND	10		µg/L	1	6/21/2021 5:10:23 PM	A79248
Isopropylbenzene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
4-Isopropyltoluene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
4-Methyl-2-pentanone	ND	10		µg/L	1	6/21/2021 5:10:23 PM	A79248
Methylene Chloride	ND	3.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
n-Butylbenzene	ND	3.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
n-Propylbenzene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
sec-Butylbenzene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
Styrene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
tert-Butylbenzene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
Tetrachloroethene (PCE)	11	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
trans-1,2-DCE	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
Trichlorofluoromethane	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
Vinyl chloride	ND	1.0		µg/L	1	6/21/2021 5:10:23 PM	A79248
Xylenes, Total	ND	1.5		µg/L	1	6/21/2021 5:10:23 PM	A79248
Surr: 1,2-Dichloroethane-d4	121	70-130		%Rec	1	6/21/2021 5:10:23 PM	A79248
Surr: 4-Bromofluorobenzene	99.1	70-130		%Rec	1	6/21/2021 5:10:23 PM	A79248
Surr: Dibromofluoromethane	104	70-130		%Rec	1	6/21/2021 5:10:23 PM	A79248
Surr: Toluene-d8	110	70-130		%Rec	1	6/21/2021 5:10:23 PM	A79248

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1.210615
Project: Joint Superfund Project Monthly Analysi
Collection Date: 6/15/2021 8:23:00 AM
Lab ID: 2106840-004
Matrix: DRINKING W
Received Date: 6/16/2021 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
Toluene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
Ethylbenzene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
Naphthalene	ND	2.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
1-Methylnaphthalene	ND	4.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
2-Methylnaphthalene	ND	4.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
Acetone	ND	10		µg/L	1	6/21/2021 5:39:11 PM	A79248
Bromobenzene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
Bromodichloromethane	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
Bromoform	6.0	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
Bromomethane	ND	3.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
2-Butanone	ND	10		µg/L	1	6/21/2021 5:39:11 PM	A79248
Carbon disulfide	ND	10		µg/L	1	6/21/2021 5:39:11 PM	A79248
Carbon Tetrachloride	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
Chlorobenzene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
Chloroethane	ND	2.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
Chloroform	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
Chloromethane	ND	3.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
2-Chlorotoluene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
4-Chlorotoluene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
cis-1,2-DCE	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
Dibromochloromethane	2.0	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
Dibromomethane	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
1,1-Dichloroethane	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
1,1-Dichloroethene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
1,2-Dichloropropane	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
1,3-Dichloropropane	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
2,2-Dichloropropane	ND	2.0		µg/L	1	6/21/2021 5:39:11 PM	A79248

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1.210615
Project: Joint Superfund Project Monthly Analysi
Collection Date: 6/15/2021 8:23:00 AM
Lab ID: 2106840-004
Matrix: DRINKING W
Received Date: 6/16/2021 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
Hexachlorobutadiene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
2-Hexanone	ND	10		µg/L	1	6/21/2021 5:39:11 PM	A79248
Isopropylbenzene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
4-Isopropyltoluene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
4-Methyl-2-pentanone	ND	10		µg/L	1	6/21/2021 5:39:11 PM	A79248
Methylene Chloride	ND	3.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
n-Butylbenzene	ND	3.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
n-Propylbenzene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
sec-Butylbenzene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
Styrene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
tert-Butylbenzene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
trans-1,2-DCE	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
Trichlorofluoromethane	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
Vinyl chloride	ND	1.0		µg/L	1	6/21/2021 5:39:11 PM	A79248
Xylenes, Total	ND	1.5		µg/L	1	6/21/2021 5:39:11 PM	A79248
Surr: 1,2-Dichloroethane-d4	114	70-130		%Rec	1	6/21/2021 5:39:11 PM	A79248
Surr: 4-Bromofluorobenzene	98.4	70-130		%Rec	1	6/21/2021 5:39:11 PM	A79248
Surr: Dibromofluoromethane	104	70-130		%Rec	1	6/21/2021 5:39:11 PM	A79248
Surr: Toluene-d8	106	70-130		%Rec	1	6/21/2021 5:39:11 PM	A79248

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1.210615 DUP
Project: Joint Superfund Project Monthly Analysi
Collection Date: 6/15/2021 8:24:00 AM
Lab ID: 2106840-005
Matrix: DRINKING W
Received Date: 6/16/2021 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
Toluene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
Ethylbenzene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
Naphthalene	ND	2.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
1-Methylnaphthalene	ND	4.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
2-Methylnaphthalene	ND	4.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
Acetone	ND	10		µg/L	1	6/21/2021 6:08:03 PM	A79248
Bromobenzene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
Bromodichloromethane	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
Bromoform	7.2	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
Bromomethane	ND	3.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
2-Butanone	ND	10		µg/L	1	6/21/2021 6:08:03 PM	A79248
Carbon disulfide	ND	10		µg/L	1	6/21/2021 6:08:03 PM	A79248
Carbon Tetrachloride	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
Chlorobenzene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
Chloroethane	ND	2.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
Chloroform	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
Chloromethane	ND	3.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
2-Chlorotoluene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
4-Chlorotoluene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
cis-1,2-DCE	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
Dibromochloromethane	1.8	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
Dibromomethane	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
1,1-Dichloroethane	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
1,1-Dichloroethene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
1,2-Dichloropropane	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
1,3-Dichloropropane	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
2,2-Dichloropropane	ND	2.0		µg/L	1	6/21/2021 6:08:03 PM	A79248

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1.210615 DUP
Project: Joint Superfund Project Monthly Analysi
Collection Date: 6/15/2021 8:24:00 AM
Lab ID: 2106840-005 **Matrix:** DRINKING W **Received Date:** 6/16/2021 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,1-Dichloropropene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
Hexachlorobutadiene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
2-Hexanone	ND	10		µg/L	1	6/21/2021 6:08:03 PM	A79248
Isopropylbenzene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
4-Isopropyltoluene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
4-Methyl-2-pentanone	ND	10		µg/L	1	6/21/2021 6:08:03 PM	A79248
Methylene Chloride	ND	3.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
n-Butylbenzene	ND	3.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
n-Propylbenzene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
sec-Butylbenzene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
Styrene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
tert-Butylbenzene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
trans-1,2-DCE	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
Trichlorofluoromethane	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
Vinyl chloride	ND	1.0		µg/L	1	6/21/2021 6:08:03 PM	A79248
Xylenes, Total	ND	1.5		µg/L	1	6/21/2021 6:08:03 PM	A79248
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	6/21/2021 6:08:03 PM	A79248
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	6/21/2021 6:08:03 PM	A79248
Surr: Dibromofluoromethane	99.6	70-130		%Rec	1	6/21/2021 6:08:03 PM	A79248
Surr: Toluene-d8	99.1	70-130		%Rec	1	6/21/2021 6:08:03 PM	A79248

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2106840**
23-Jun-21

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

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **A79248** RunNo: **79248**
Prep Date: Analysis Date: **6/21/2021** SeqNo: **2783036** 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	22	1.0	20.00	0	111	70	130			
Chlorobenzene	21	1.0	20.00	0	105	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	103	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	99.2	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.7	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **A79248** RunNo: **79248**
Prep Date: Analysis Date: **6/21/2021** SeqNo: **2783037** 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 Quanitative 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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2106840**
23-Jun-21

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

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A79248**	RunNo: **79248**
Prep Date:	Analysis Date: **6/21/2021**	SeqNo: **2783037** 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 Quanitative 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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2106840**
23-Jun-21

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

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A79248**	RunNo: **79248**
Prep Date:	Analysis Date: **6/21/2021**	SeqNo: **2783037** 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	12		10.00		120	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.2	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 Quanitative Limit
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P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **City of Las Cruces** Work Order Number: **2106840** RcptNo: **1**

Received By: **Cheyenne Cason** **6/16/2021 9:35:00 AM** Chal

Completed By: **Cheyenne Cason** **6/16/2021 10:37:28 AM** Chal

Reviewed By: IO 6.16.21

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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☑	No ☐	NA ☐
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: KPG 6/16/21

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	4.0	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
Mailing Address: P.O. Box 20000
Las Cruces, NM 88004
Phone #: 575-528-3609
email or Fax#: lguerra@las-cruces.org
QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☑ EDD (Type) EXCEL

Turn-Around Time:
☑ Standard ☐ Rush
Project Name: Joint Superfund Project Monthly Analysis
Project #: CLC JSP Griggs Walnut
Project Manager: Luis Guerra (575) 528-3609
Sampler: Yadira Reyna
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp (including CF): 4.1 -0.1 = 4.0 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2106840	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) VOC	8270 (Semi-VOA)	Total Coliform (Present/Absent)
6-15-21	0813	Drinking water	CLC 18-210615	3-40ml Vials	$HgCl_2$	001								X		
	0833		CLC 27-210615			002								X		
	0819		CLC ESI-210615			003								X		
	0823		CLC ESI-210415			004								X		
6-15-21	0824	Drinking Water	CLC ESI-210615 Dup	3-40ml Vials	$HgCl_2$	005								X		

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
6-15-21	1500	Yadira Reyna	[illegible]	Fedex 6th	6/16/21	0935
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Send Results to:
Luis Guerra: lguerra@las-cruces.org
Joshua Rosenblatt: jrosenblatt@las-cruces.org
Send invoice 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

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

September 07, 2021

Luis Guerra

City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3604
FAX:

RE: CLC Joint Superfund Project OrderNo.: 2108F93

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 3 sample(s) on 8/27/2021 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,



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 - 210826
Project: CLC Joint Superfund Project
Collection Date: 8/26/2021 8:36:00 AM
Lab ID: 2108F93-001 **Matrix:** AIR
Received Date: 8/27/2021 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
Toluene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
Ethylbenzene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
Naphthalene	ND	0.20		µg/L	1	9/2/2021 12:26:00 PM	R81007
1-Methylnaphthalene	ND	0.40		µg/L	1	9/2/2021 12:26:00 PM	R81007
2-Methylnaphthalene	ND	0.40		µg/L	1	9/2/2021 12:26:00 PM	R81007
Acetone	ND	1.0		µg/L	1	9/2/2021 12:26:00 PM	R81007
Bromobenzene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
Bromodichloromethane	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
Bromoform	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
Bromomethane	ND	0.20		µg/L	1	9/2/2021 12:26:00 PM	R81007
2-Butanone	ND	1.0		µg/L	1	9/2/2021 12:26:00 PM	R81007
Carbon disulfide	ND	1.0		µg/L	1	9/2/2021 12:26:00 PM	R81007
Carbon tetrachloride	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
Chlorobenzene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
Chloroethane	ND	0.20		µg/L	1	9/2/2021 12:26:00 PM	R81007
Chloroform	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
Chloromethane	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
2-Chlorotoluene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
4-Chlorotoluene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
cis-1,2-DCE	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	9/2/2021 12:26:00 PM	R81007
Dibromochloromethane	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
Dibromomethane	ND	0.20		µg/L	1	9/2/2021 12:26:00 PM	R81007
1,2-Dichlorobenzene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
1,3-Dichlorobenzene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
1,4-Dichlorobenzene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
Dichlorodifluoromethane	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
1,1-Dichloroethane	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
1,1-Dichloroethene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
1,2-Dichloropropane	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
1,3-Dichloropropane	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
2,2-Dichloropropane	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC AS1 - 210826
Project: CLC Joint Superfund Project
Collection Date: 8/26/2021 8:36:00 AM
Lab ID: 2108F93-001 **Matrix:** AIR
Received Date: 8/27/2021 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
Hexachlorobutadiene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
2-Hexanone	ND	1.0		µg/L	1	9/2/2021 12:26:00 PM	R81007
Isopropylbenzene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
4-Isopropyltoluene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
4-Methyl-2-pentanone	ND	1.0		µg/L	1	9/2/2021 12:26:00 PM	R81007
Methylene chloride	ND	0.30		µg/L	1	9/2/2021 12:26:00 PM	R81007
n-Butylbenzene	ND	0.30		µg/L	1	9/2/2021 12:26:00 PM	R81007
n-Propylbenzene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
sec-Butylbenzene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
Styrene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
tert-Butylbenzene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
trans-1,2-DCE	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
1,1,1-Trichloroethane	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
1,1,2-Trichloroethane	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
Trichloroethene (TCE)	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
Trichlorofluoromethane	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
1,2,3-Trichloropropane	ND	0.20		µg/L	1	9/2/2021 12:26:00 PM	R81007
Vinyl chloride	ND	0.10		µg/L	1	9/2/2021 12:26:00 PM	R81007
Xylenes, Total	ND	0.15		µg/L	1	9/2/2021 12:26:00 PM	R81007
Surr: Dibromofluoromethane	85.3	70-130		%Rec	1	9/2/2021 12:26:00 PM	R81007
Surr: 1,2-Dichloroethane-d4	84.1	70-130		%Rec	1	9/2/2021 12:26:00 PM	R81007
Surr: Toluene-d8	96.5	70-130		%Rec	1	9/2/2021 12:26:00 PM	R81007
Surr: 4-Bromofluorobenzene	99.8	70-130		%Rec	1	9/2/2021 12:26:00 PM	R81007

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC AS2 - 210826
Project: CLC Joint Superfund Project
Collection Date: 8/26/2021 8:38:00 AM
Lab ID: 2108F93-002 **Matrix:** AIR
Received Date: 8/27/2021 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
Toluene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
Ethylbenzene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
Naphthalene	ND	0.20		µg/L	1	9/2/2021 1:12:00 PM	R81007
1-Methylnaphthalene	ND	0.40		µg/L	1	9/2/2021 1:12:00 PM	R81007
2-Methylnaphthalene	ND	0.40		µg/L	1	9/2/2021 1:12:00 PM	R81007
Acetone	ND	1.0		µg/L	1	9/2/2021 1:12:00 PM	R81007
Bromobenzene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
Bromodichloromethane	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
Bromoform	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
Bromomethane	ND	0.20		µg/L	1	9/2/2021 1:12:00 PM	R81007
2-Butanone	ND	1.0		µg/L	1	9/2/2021 1:12:00 PM	R81007
Carbon disulfide	ND	1.0		µg/L	1	9/2/2021 1:12:00 PM	R81007
Carbon tetrachloride	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
Chlorobenzene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
Chloroethane	ND	0.20		µg/L	1	9/2/2021 1:12:00 PM	R81007
Chloroform	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
Chloromethane	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
2-Chlorotoluene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
4-Chlorotoluene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
cis-1,2-DCE	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	9/2/2021 1:12:00 PM	R81007
Dibromochloromethane	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
Dibromomethane	ND	0.20		µg/L	1	9/2/2021 1:12:00 PM	R81007
1,2-Dichlorobenzene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
1,3-Dichlorobenzene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
1,4-Dichlorobenzene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
Dichlorodifluoromethane	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
1,1-Dichloroethane	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
1,1-Dichloroethene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
1,2-Dichloropropane	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
1,3-Dichloropropane	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
2,2-Dichloropropane	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC AS2 - 210826
Project: CLC Joint Superfund Project
Collection Date: 8/26/2021 8:38:00 AM
Lab ID: 2108F93-002 **Matrix:** AIR
Received Date: 8/27/2021 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
Hexachlorobutadiene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
2-Hexanone	ND	1.0		µg/L	1	9/2/2021 1:12:00 PM	R81007
Isopropylbenzene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
4-Isopropyltoluene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
4-Methyl-2-pentanone	ND	1.0		µg/L	1	9/2/2021 1:12:00 PM	R81007
Methylene chloride	ND	0.30		µg/L	1	9/2/2021 1:12:00 PM	R81007
n-Butylbenzene	ND	0.30		µg/L	1	9/2/2021 1:12:00 PM	R81007
n-Propylbenzene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
sec-Butylbenzene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
Styrene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
tert-Butylbenzene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
Tetrachloroethene (PCE)	0.20	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
trans-1,2-DCE	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
1,1,1-Trichloroethane	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
1,1,2-Trichloroethane	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
Trichloroethene (TCE)	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
Trichlorofluoromethane	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
1,2,3-Trichloropropane	ND	0.20		µg/L	1	9/2/2021 1:12:00 PM	R81007
Vinyl chloride	ND	0.10		µg/L	1	9/2/2021 1:12:00 PM	R81007
Xylenes, Total	ND	0.15		µg/L	1	9/2/2021 1:12:00 PM	R81007
Surr: Dibromofluoromethane	84.9	70-130		%Rec	1	9/2/2021 1:12:00 PM	R81007
Surr: 1,2-Dichloroethane-d4	86.1	70-130		%Rec	1	9/2/2021 1:12:00 PM	R81007
Surr: Toluene-d8	95.9	70-130		%Rec	1	9/2/2021 1:12:00 PM	R81007
Surr: 4-Bromofluorobenzene	98.1	70-130		%Rec	1	9/2/2021 1:12:00 PM	R81007

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC AS2 - DUP- 210826
Project: CLC Joint Superfund Project
Collection Date: 8/26/2021 8:39:00 AM
Lab ID: 2108F93-003 **Matrix:** AIR
Received Date: 8/27/2021 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
Toluene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
Ethylbenzene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
Naphthalene	ND	0.20		µg/L	1	9/2/2021 1:36:00 PM	R81007
1-Methylnaphthalene	ND	0.40		µg/L	1	9/2/2021 1:36:00 PM	R81007
2-Methylnaphthalene	ND	0.40		µg/L	1	9/2/2021 1:36:00 PM	R81007
Acetone	ND	1.0		µg/L	1	9/2/2021 1:36:00 PM	R81007
Bromobenzene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
Bromodichloromethane	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
Bromoform	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
Bromomethane	ND	0.20		µg/L	1	9/2/2021 1:36:00 PM	R81007
2-Butanone	ND	1.0		µg/L	1	9/2/2021 1:36:00 PM	R81007
Carbon disulfide	ND	1.0		µg/L	1	9/2/2021 1:36:00 PM	R81007
Carbon tetrachloride	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
Chlorobenzene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
Chloroethane	ND	0.20		µg/L	1	9/2/2021 1:36:00 PM	R81007
Chloroform	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
Chloromethane	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
2-Chlorotoluene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
4-Chlorotoluene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
cis-1,2-DCE	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	9/2/2021 1:36:00 PM	R81007
Dibromochloromethane	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
Dibromomethane	ND	0.20		µg/L	1	9/2/2021 1:36:00 PM	R81007
1,2-Dichlorobenzene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
1,3-Dichlorobenzene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
1,4-Dichlorobenzene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
Dichlorodifluoromethane	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
1,1-Dichloroethane	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
1,1-Dichloroethene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
1,2-Dichloropropane	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
1,3-Dichloropropane	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
2,2-Dichloropropane	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007

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

Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

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Project: CLC Joint Superfund Project
Collection Date: 8/26/2021 8:39:00 AM
Lab ID: 2108F93-003 **Matrix:** AIR
Received Date: 8/27/2021 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
Hexachlorobutadiene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
2-Hexanone	ND	1.0		µg/L	1	9/2/2021 1:36:00 PM	R81007
Isopropylbenzene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
4-Isopropyltoluene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
4-Methyl-2-pentanone	ND	1.0		µg/L	1	9/2/2021 1:36:00 PM	R81007
Methylene chloride	ND	0.30		µg/L	1	9/2/2021 1:36:00 PM	R81007
n-Butylbenzene	ND	0.30		µg/L	1	9/2/2021 1:36:00 PM	R81007
n-Propylbenzene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
sec-Butylbenzene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
Styrene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
tert-Butylbenzene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
Tetrachloroethene (PCE)	0.22	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
trans-1,2-DCE	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
1,1,1-Trichloroethane	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
1,1,2-Trichloroethane	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
Trichloroethene (TCE)	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
Trichlorofluoromethane	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
1,2,3-Trichloropropane	ND	0.20		µg/L	1	9/2/2021 1:36:00 PM	R81007
Vinyl chloride	ND	0.10		µg/L	1	9/2/2021 1:36:00 PM	R81007
Xylenes, Total	ND	0.15		µg/L	1	9/2/2021 1:36:00 PM	R81007
Surr: Dibromofluoromethane	83.7	70-130		%Rec	1	9/2/2021 1:36:00 PM	R81007
Surr: 1,2-Dichloroethane-d4	83.7	70-130		%Rec	1	9/2/2021 1:36:00 PM	R81007
Surr: Toluene-d8	94.4	70-130		%Rec	1	9/2/2021 1:36:00 PM	R81007
Surr: 4-Bromofluorobenzene	98.6	70-130		%Rec	1	9/2/2021 1:36:00 PM	R81007

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **City of Las Cruces** Work Order Number: **2108F93** RcptNo: 1

Received By: **Juan Rojas** **8/27/2021 9:45:00 AM** Juan Rojas

Completed By: **Isaiah Ortiz** **8/27/2021 1:04:57 PM** I-OA

Reviewed By: KPA 8/30/21

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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
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: SPA 8.30.21

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						

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
Mailing Address: P.O. Box 20000
Las Cruces NM 88004
Phone #: 575-528-3609
email or Fax#: lguerra@las-cruces.org
QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type) Excell

Turn-Around Time:
☑ Standard ☐ Rush
Project Name: Joint Superfund Project Monthly Analysis
Project #: CLC JSP Griggs Walnut
Project Manager: Luis Guerra 575-528-3609
Sampler: Evangelina Dominguez
On Ice: ☐ Yes ☑ No
# of Coolers: 1
Cooler Temp(including CF): N/A (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2108F93	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) VOC	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8/26/21	0836	~~Drinking water~~ Air	CLC AS1 - 210826	Tedlar Bag	N/A	001								X		
1	0838	Air	CLC AS2 - 210826	1	1	002								X		
8/26/21	0839	Air	CLC AS2 - Dup - 210826	Tedlar Bag	N/A	003								X		

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
8/26/21	1500	Evangelina Dominguez		FedEx	8/27/21	9:45
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Send Results to:
Luis Guerra: lguerra@lascruces.org
Joshua Rosenblatt: jrosenblatt@las-cruces.org
(Send invoice 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

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

September 02, 2021

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.: 2108F97

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 8/27/2021 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,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-210826
Project: CLC Joint Superfund Project Monthly An
Collection Date: 8/26/2021 8:12:00 AM
Lab ID: 2108F97-001
Matrix: DRINKING W
Received Date: 8/27/2021 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
Toluene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
Ethylbenzene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
Naphthalene	ND	2.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
1-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
2-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
Acetone	ND	10		µg/L	1	9/1/2021 7:57:00 PM	R80963
Bromobenzene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
Bromodichloromethane	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
Bromoform	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
Bromomethane	ND	3.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
2-Butanone	ND	10		µg/L	1	9/1/2021 7:57:00 PM	R80963
Carbon disulfide	ND	10		µg/L	1	9/1/2021 7:57:00 PM	R80963
Carbon Tetrachloride	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
Chlorobenzene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
Chloroethane	ND	2.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
Chloroform	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
Chloromethane	ND	3.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
2-Chlorotoluene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
4-Chlorotoluene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
cis-1,2-DCE	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
Dibromochloromethane	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
Dibromomethane	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
1,1-Dichloroethane	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
1,1-Dichloroethene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
1,2-Dichloropropane	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
1,3-Dichloropropane	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
2,2-Dichloropropane	ND	2.0		µg/L	1	9/1/2021 7:57:00 PM	R80963

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
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Hall Environmental Analysis Laboratory, Inc.

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Project: CLC Joint Superfund Project Monthly An
Collection Date: 8/26/2021 8:12:00 AM
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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
Hexachlorobutadiene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
2-Hexanone	ND	10		µg/L	1	9/1/2021 7:57:00 PM	R80963
Isopropylbenzene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
4-Isopropyltoluene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
4-Methyl-2-pentanone	ND	10		µg/L	1	9/1/2021 7:57:00 PM	R80963
Methylene Chloride	ND	3.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
n-Butylbenzene	ND	3.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
n-Propylbenzene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
sec-Butylbenzene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
Styrene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
tert-Butylbenzene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
Tetrachloroethene (PCE)	4.3	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
trans-1,2-DCE	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
Trichlorofluoromethane	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
Vinyl chloride	ND	1.0		µg/L	1	9/1/2021 7:57:00 PM	R80963
Xylenes, Total	ND	1.5		µg/L	1	9/1/2021 7:57:00 PM	R80963
Surr: 1,2-Dichloroethane-d4	85.3	70-130		%Rec	1	9/1/2021 7:57:00 PM	R80963
Surr: 4-Bromofluorobenzene	98.2	70-130		%Rec	1	9/1/2021 7:57:00 PM	R80963
Surr: Dibromofluoromethane	82.4	70-130		%Rec	1	9/1/2021 7:57:00 PM	R80963
Surr: Toluene-d8	97.9	70-130		%Rec	1	9/1/2021 7:57:00 PM	R80963

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
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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-210826
Project: CLC Joint Superfund Project Monthly An
Collection Date: 8/26/2021 8:25:00 AM
Lab ID: 2108F97-002
Matrix: DRINKING W
Received Date: 8/27/2021 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
Toluene	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
Ethylbenzene	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
Naphthalene	ND	2.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
1-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
2-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
Acetone	ND	10		µg/L	1	9/1/2021 9:06:00 PM	R80963
Bromobenzene	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
Bromodichloromethane	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
Bromoform	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
Bromomethane	ND	3.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
2-Butanone	ND	10		µg/L	1	9/1/2021 9:06:00 PM	R80963
Carbon disulfide	ND	10		µg/L	1	9/1/2021 9:06:00 PM	R80963
Carbon Tetrachloride	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
Chlorobenzene	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
Chloroethane	ND	2.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
Chloroform	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
Chloromethane	ND	3.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
2-Chlorotoluene	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
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cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
Dibromochloromethane	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
Dibromomethane	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
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1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
1,1-Dichloroethane	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
1,1-Dichloroethene	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
1,2-Dichloropropane	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
1,3-Dichloropropane	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
2,2-Dichloropropane	ND	2.0		µg/L	1	9/1/2021 9:06:00 PM	R80963

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

Qualifiers:

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EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
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Hexachlorobutadiene	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
2-Hexanone	ND	10		µg/L	1	9/1/2021 9:06:00 PM	R80963
Isopropylbenzene	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
4-Isopropyltoluene	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
4-Methyl-2-pentanone	ND	10		µg/L	1	9/1/2021 9:06:00 PM	R80963
Methylene Chloride	ND	3.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
n-Butylbenzene	ND	3.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
n-Propylbenzene	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
sec-Butylbenzene	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
Styrene	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
tert-Butylbenzene	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
Tetrachloroethene (PCE)	14	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
trans-1,2-DCE	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
Trichlorofluoromethane	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
Vinyl chloride	ND	1.0		µg/L	1	9/1/2021 9:06:00 PM	R80963
Xylenes, Total	ND	1.5		µg/L	1	9/1/2021 9:06:00 PM	R80963
Surr: 1,2-Dichloroethane-d4	84.1	70-130		%Rec	1	9/1/2021 9:06:00 PM	R80963
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	9/1/2021 9:06:00 PM	R80963
Surr: Dibromofluoromethane	85.3	70-130		%Rec	1	9/1/2021 9:06:00 PM	R80963
Surr: Toluene-d8	96.5	70-130		%Rec	1	9/1/2021 9:06:00 PM	R80963

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

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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
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CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-210826
Project: CLC Joint Superfund Project Monthly An
Collection Date: 8/26/2021 8:42:00 AM
Lab ID: 2108F97-003
Matrix: DRINKING W
Received Date: 8/27/2021 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
Toluene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
Ethylbenzene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
Naphthalene	ND	2.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
1-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
2-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
Acetone	ND	10		µg/L	1	9/1/2021 9:30:00 PM	R80963
Bromobenzene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
Bromodichloromethane	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
Bromoform	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
Bromomethane	ND	3.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
2-Butanone	ND	10		µg/L	1	9/1/2021 9:30:00 PM	R80963
Carbon disulfide	ND	10		µg/L	1	9/1/2021 9:30:00 PM	R80963
Carbon Tetrachloride	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
Chlorobenzene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
Chloroethane	ND	2.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
Chloroform	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
Chloromethane	ND	3.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
2-Chlorotoluene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
4-Chlorotoluene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
cis-1,2-DCE	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
Dibromochloromethane	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
Dibromomethane	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
1,1-Dichloroethane	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
1,1-Dichloroethene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
1,2-Dichloropropane	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
1,3-Dichloropropane	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
2,2-Dichloropropane	ND	2.0		µg/L	1	9/1/2021 9:30:00 PM	R80963

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-210826
Project: CLC Joint Superfund Project Monthly An
Collection Date: 8/26/2021 8:42:00 AM
Lab ID: 2108F97-003
Matrix: DRINKING W
Received Date: 8/27/2021 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
Hexachlorobutadiene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
2-Hexanone	ND	10		µg/L	1	9/1/2021 9:30:00 PM	R80963
Isopropylbenzene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
4-Isopropyltoluene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
4-Methyl-2-pentanone	ND	10		µg/L	1	9/1/2021 9:30:00 PM	R80963
Methylene Chloride	ND	3.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
n-Butylbenzene	ND	3.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
n-Propylbenzene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
sec-Butylbenzene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
Styrene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
tert-Butylbenzene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
Tetrachloroethene (PCE)	9.0	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
trans-1,2-DCE	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
Trichlorofluoromethane	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
Vinyl chloride	ND	1.0		µg/L	1	9/1/2021 9:30:00 PM	R80963
Xylenes, Total	ND	1.5		µg/L	1	9/1/2021 9:30:00 PM	R80963
Surr: 1,2-Dichloroethane-d4	83.8	70-130		%Rec	1	9/1/2021 9:30:00 PM	R80963
Surr: 4-Bromofluorobenzene	98.9	70-130		%Rec	1	9/1/2021 9:30:00 PM	R80963
Surr: Dibromofluoromethane	83.7	70-130		%Rec	1	9/1/2021 9:30:00 PM	R80963
Surr: Toluene-d8	96.6	70-130		%Rec	1	9/1/2021 9:30:00 PM	R80963

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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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C1-210826
Project: CLC Joint Superfund Project Monthly An
Collection Date: 8/26/2021 8:44:00 AM
Lab ID: 2108F97-004
Matrix: DRINKING W
Received Date: 8/27/2021 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
Toluene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
Ethylbenzene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
Naphthalene	ND	2.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
1-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
2-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
Acetone	ND	10		µg/L	1	9/1/2021 9:53:00 PM	R80963
Bromobenzene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
Bromodichloromethane	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
Bromoform	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
Bromomethane	ND	3.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
2-Butanone	ND	10		µg/L	1	9/1/2021 9:53:00 PM	R80963
Carbon disulfide	ND	10		µg/L	1	9/1/2021 9:53:00 PM	R80963
Carbon Tetrachloride	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
Chlorobenzene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
Chloroethane	ND	2.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
Chloroform	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
Chloromethane	ND	3.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
2-Chlorotoluene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
4-Chlorotoluene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
cis-1,2-DCE	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
Dibromochloromethane	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
Dibromomethane	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
1,1-Dichloroethane	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
1,1-Dichloroethene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
1,2-Dichloropropane	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
1,3-Dichloropropane	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
2,2-Dichloropropane	ND	2.0		µg/L	1	9/1/2021 9:53:00 PM	R80963

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

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CLIENT: City of Las Cruces
Client Sample ID: CLC C1-210826
Project: CLC Joint Superfund Project Monthly An
Collection Date: 8/26/2021 8:44:00 AM
Lab ID: 2108F97-004
Matrix: DRINKING W
Received Date: 8/27/2021 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
Hexachlorobutadiene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
2-Hexanone	ND	10		µg/L	1	9/1/2021 9:53:00 PM	R80963
Isopropylbenzene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
4-Isopropyltoluene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
4-Methyl-2-pentanone	ND	10		µg/L	1	9/1/2021 9:53:00 PM	R80963
Methylene Chloride	ND	3.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
n-Butylbenzene	ND	3.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
n-Propylbenzene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
sec-Butylbenzene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
Styrene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
tert-Butylbenzene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
trans-1,2-DCE	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
Trichlorofluoromethane	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
Vinyl chloride	ND	1.0		µg/L	1	9/1/2021 9:53:00 PM	R80963
Xylenes, Total	ND	1.5		µg/L	1	9/1/2021 9:53:00 PM	R80963
Surr: 1,2-Dichloroethane-d4	84.1	70-130		%Rec	1	9/1/2021 9:53:00 PM	R80963
Surr: 4-Bromofluorobenzene	97.3	70-130		%Rec	1	9/1/2021 9:53:00 PM	R80963
Surr: Dibromofluoromethane	83.8	70-130		%Rec	1	9/1/2021 9:53:00 PM	R80963
Surr: Toluene-d8	95.5	70-130		%Rec	1	9/1/2021 9:53:00 PM	R80963

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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
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S	% Recovery outside of range due to dilution or matrix		

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CLIENT: City of Las Cruces
Client Sample ID: CLC C1 DUP -210826
Project: CLC Joint Superfund Project Monthly An
Collection Date: 8/26/2021 8:45:00 AM
Lab ID: 2108F97-005
Matrix: DRINKING W
Received Date: 8/27/2021 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
Toluene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
Ethylbenzene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
Naphthalene	ND	2.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
1-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
2-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
Acetone	ND	10		µg/L	1	9/1/2021 10:16:00 PM	R80963
Bromobenzene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
Bromodichloromethane	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
Bromoform	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
Bromomethane	ND	3.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
2-Butanone	ND	10		µg/L	1	9/1/2021 10:16:00 PM	R80963
Carbon disulfide	ND	10		µg/L	1	9/1/2021 10:16:00 PM	R80963
Carbon Tetrachloride	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
Chlorobenzene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
Chloroethane	ND	2.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
Chloroform	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
Chloromethane	ND	3.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
2-Chlorotoluene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
4-Chlorotoluene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
cis-1,2-DCE	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
Dibromochloromethane	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
Dibromomethane	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
1,1-Dichloroethane	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
1,1-Dichloroethene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
1,2-Dichloropropane	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
1,3-Dichloropropane	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
2,2-Dichloropropane	ND	2.0		µg/L	1	9/1/2021 10:16:00 PM	R80963

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C1 DUP -210826
Project: CLC Joint Superfund Project Monthly An
Collection Date: 8/26/2021 8:45:00 AM
Lab ID: 2108F97-005
Matrix: DRINKING W
Received Date: 8/27/2021 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
Hexachlorobutadiene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
2-Hexanone	ND	10		µg/L	1	9/1/2021 10:16:00 PM	R80963
Isopropylbenzene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
4-Isopropyltoluene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
4-Methyl-2-pentanone	ND	10		µg/L	1	9/1/2021 10:16:00 PM	R80963
Methylene Chloride	ND	3.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
n-Butylbenzene	ND	3.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
n-Propylbenzene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
sec-Butylbenzene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
Styrene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
tert-Butylbenzene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
trans-1,2-DCE	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
Trichlorofluoromethane	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
Vinyl chloride	ND	1.0		µg/L	1	9/1/2021 10:16:00 PM	R80963
Xylenes, Total	ND	1.5		µg/L	1	9/1/2021 10:16:00 PM	R80963
Surr: 1,2-Dichloroethane-d4	86.2	70-130		%Rec	1	9/1/2021 10:16:00 PM	R80963
Surr: 4-Bromofluorobenzene	97.5	70-130		%Rec	1	9/1/2021 10:16:00 PM	R80963
Surr: Dibromofluoromethane	85.9	70-130		%Rec	1	9/1/2021 10:16:00 PM	R80963
Surr: Toluene-d8	95.4	70-130		%Rec	1	9/1/2021 10:16:00 PM	R80963

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C2-210826
Project: CLC Joint Superfund Project Monthly An
Collection Date: 8/26/2021 8:47:00 AM
Lab ID: 2108F97-006
Matrix: DRINKING W
Received Date: 8/27/2021 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
Toluene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
Ethylbenzene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
Naphthalene	ND	2.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
1-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
2-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
Acetone	ND	10		µg/L	1	9/1/2021 10:39:00 PM	R80963
Bromobenzene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
Bromodichloromethane	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
Bromoform	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
Bromomethane	ND	3.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
2-Butanone	ND	10		µg/L	1	9/1/2021 10:39:00 PM	R80963
Carbon disulfide	ND	10		µg/L	1	9/1/2021 10:39:00 PM	R80963
Carbon Tetrachloride	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
Chlorobenzene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
Chloroethane	ND	2.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
Chloroform	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
Chloromethane	ND	3.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
2-Chlorotoluene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
4-Chlorotoluene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
cis-1,2-DCE	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
Dibromochloromethane	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
Dibromomethane	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
1,1-Dichloroethane	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
1,1-Dichloroethene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
1,2-Dichloropropane	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
1,3-Dichloropropane	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
2,2-Dichloropropane	ND	2.0		µg/L	1	9/1/2021 10:39:00 PM	R80963

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C2-210826
Project: CLC Joint Superfund Project Monthly An
Collection Date: 8/26/2021 8:47:00 AM
Lab ID: 2108F97-006
Matrix: DRINKING W
Received Date: 8/27/2021 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
Hexachlorobutadiene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
2-Hexanone	ND	10		µg/L	1	9/1/2021 10:39:00 PM	R80963
Isopropylbenzene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
4-Isopropyltoluene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
4-Methyl-2-pentanone	ND	10		µg/L	1	9/1/2021 10:39:00 PM	R80963
Methylene Chloride	ND	3.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
n-Butylbenzene	ND	3.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
n-Propylbenzene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
sec-Butylbenzene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
Styrene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
tert-Butylbenzene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
trans-1,2-DCE	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
Trichlorofluoromethane	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
Vinyl chloride	ND	1.0		µg/L	1	9/1/2021 10:39:00 PM	R80963
Xylenes, Total	ND	1.5		µg/L	1	9/1/2021 10:39:00 PM	R80963
Surr: 1,2-Dichloroethane-d4	86.7	70-130		%Rec	1	9/1/2021 10:39:00 PM	R80963
Surr: 4-Bromofluorobenzene	99.0	70-130		%Rec	1	9/1/2021 10:39:00 PM	R80963
Surr: Dibromofluoromethane	85.9	70-130		%Rec	1	9/1/2021 10:39:00 PM	R80963
Surr: Toluene-d8	95.5	70-130		%Rec	1	9/1/2021 10:39:00 PM	R80963

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-210826
Project: CLC Joint Superfund Project Monthly An
Collection Date: 8/26/2021 8:50:00 AM
Lab ID: 2108F97-007
Matrix: DRINKING W
Received Date: 8/27/2021 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
Toluene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
Ethylbenzene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
Naphthalene	ND	2.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
1-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
2-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
Acetone	ND	10		µg/L	1	9/1/2021 11:03:00 PM	R80963
Bromobenzene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
Bromodichloromethane	4.6	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
Bromoform	2.1	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
Bromomethane	ND	3.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
2-Butanone	ND	10		µg/L	1	9/1/2021 11:03:00 PM	R80963
Carbon disulfide	ND	10		µg/L	1	9/1/2021 11:03:00 PM	R80963
Carbon Tetrachloride	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
Chlorobenzene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
Chloroethane	ND	2.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
Chloroform	3.9	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
Chloromethane	ND	3.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
2-Chlorotoluene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
4-Chlorotoluene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
cis-1,2-DCE	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
Dibromochloromethane	4.6	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
Dibromomethane	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
1,1-Dichloroethane	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
1,1-Dichloroethene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
1,2-Dichloropropane	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
1,3-Dichloropropane	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
2,2-Dichloropropane	ND	2.0		µg/L	1	9/1/2021 11:03:00 PM	R80963

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-210826
Project: CLC Joint Superfund Project Monthly An
Collection Date: 8/26/2021 8:50:00 AM
Lab ID: 2108F97-007
Matrix: DRINKING W
Received Date: 8/27/2021 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
Hexachlorobutadiene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
2-Hexanone	ND	10		µg/L	1	9/1/2021 11:03:00 PM	R80963
Isopropylbenzene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
4-Isopropyltoluene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
4-Methyl-2-pentanone	ND	10		µg/L	1	9/1/2021 11:03:00 PM	R80963
Methylene Chloride	ND	3.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
n-Butylbenzene	ND	3.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
n-Propylbenzene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
sec-Butylbenzene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
Styrene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
tert-Butylbenzene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
trans-1,2-DCE	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
Trichlorofluoromethane	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
Vinyl chloride	ND	1.0		µg/L	1	9/1/2021 11:03:00 PM	R80963
Xylenes, Total	ND	1.5		µg/L	1	9/1/2021 11:03:00 PM	R80963
Surr: 1,2-Dichloroethane-d4	83.4	70-130		%Rec	1	9/1/2021 11:03:00 PM	R80963
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	9/1/2021 11:03:00 PM	R80963
Surr: Dibromofluoromethane	83.8	70-130		%Rec	1	9/1/2021 11:03:00 PM	R80963
Surr: Toluene-d8	95.4	70-130		%Rec	1	9/1/2021 11:03:00 PM	R80963

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2108F97**

02-Sep-21

Client: City of Las Cruces

Project: CLC Joint Superfund Project Monthly Analysis

Sample ID: **100ng 8260 lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R80963**	RunNo: **80963**
Prep Date:	Analysis Date: **9/1/2021**	SeqNo: **2857554** 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	20	1.0	20.00	0	101	70	130			
Chlorobenzene	19	1.0	20.00	0	96.9	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	92.2	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.6	70	130			
Surr: 1,2-Dichloroethane-d4	8.3		10.00		83.0	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	8.3		10.00		82.9	70	130			
Surr: Toluene-d8	9.9		10.00		98.7	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R80963**	RunNo: **80963**
Prep Date:	Analysis Date: **9/1/2021**	SeqNo: **2858553** 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 Quanitative 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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2108F97**

02-Sep-21

Client: City of Las Cruces

Project: CLC Joint Superfund Project Monthly Analysis

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R80963**	RunNo: **80963**
Prep Date:	Analysis Date: **9/1/2021**	SeqNo: **2858553** 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 Quanitative 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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2108F97**

02-Sep-21

Client: City of Las Cruces

Project: CLC Joint Superfund Project Monthly Analysis

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R80963**	RunNo: **80963**
Prep Date:	Analysis Date: **9/1/2021**	SeqNo: **2858553** 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	8.3		10.00		83.0	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	8.3		10.00		83.4	70	130			
Surr: Toluene-d8	9.6		10.00		96.4	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 Quanitative 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 Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **City of Las Cruces** Work Order Number: **2108F97** RcptNo: **1**

Received By: **Juan Rojas** **8/27/2021 9:45:00 AM** Juan Rojas

Completed By: **Isaiah Ortiz** **8/27/2021 1:22:20 PM** I-O-L

Reviewed By: SPA 8.30.21

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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☑	No ☐	NA ☐
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: KPG 8/30/21

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	2.9	Good	Not Present			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
Mailing Address: P.O. Box 20000
Las Cruces, NM 88004
Phone #: 575-528-3609
email or Fax#: lguerra@las-cruces.org
QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☑ EDD (Type) EXCEL

Turn-Around Time:
☑ Standard ☐ Rush
Project Name: Joint Superfund Project Monthly Analysis
Project #: CLC JSP Griggs Walnut
Project Manager: Luis Guerra (575)528-3609
Sampler: Guangelina Dominguez
On Ice: ☑ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 2.9+0=2.9 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2108F97	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) VOC	8270 (Semi-VOA)	Total Coliform (Present/Absent)
8/26/21	0812	Drinking water	CLC 18-210826	3-40ml Vials	HgCl2	001								X		
	0825		CLC 37-210826			002								X		
	0842		CLC I51-210826			003								X		
	0844		CLC C1-210826			004								X		
	0845		CLC C1-Dup-210826			005								X		
	0847		CLC C2-210826			006								X		
8/26/21	0850	Drinking water	CLC E51-210826	3-40ml Vials	HgCl2	007								X		

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
8/26/21	1500	Guangelina Dominguez		FedEx	8/27/21	9:45
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Send Results to:
Luis Guerra: lguerra@las-cruces.org
Joshua Rosenblatt: jrosenblatt@las-cruces.org
(Send invoice 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

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

October 12, 2021

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.: 2109D61

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 5 sample(s) on 9/22/2021 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,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-210921
Project: CLC Joint Superfund Project Monthly An
Collection Date: 9/21/2021 8:12:00 AM
Lab ID: 2109D61-001
Matrix: AQUEOUS
Received Date: 9/22/2021 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
Toluene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
Ethylbenzene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
Naphthalene	ND	2.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
1-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
2-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
Acetone	ND	10		µg/L	1	10/1/2021 3:31:00 PM	R81735
Bromobenzene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
Bromodichloromethane	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
Bromoform	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
Bromomethane	ND	3.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
2-Butanone	ND	10		µg/L	1	10/1/2021 3:31:00 PM	R81735
Carbon disulfide	ND	10		µg/L	1	10/1/2021 3:31:00 PM	R81735
Carbon Tetrachloride	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
Chlorobenzene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
Chloroethane	ND	2.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
Chloroform	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
Chloromethane	ND	3.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
2-Chlorotoluene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
4-Chlorotoluene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
cis-1,2-DCE	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
Dibromochloromethane	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
Dibromomethane	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
1,1-Dichloroethane	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
1,1-Dichloroethene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
1,2-Dichloropropane	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
1,3-Dichloropropane	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
2,2-Dichloropropane	ND	2.0		µg/L	1	10/1/2021 3:31:00 PM	R81735

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

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 Quanitative 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 Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-210921
Project: CLC Joint Superfund Project Monthly An
Collection Date: 9/21/2021 8:12:00 AM
Lab ID: 2109D61-001
Matrix: AQUEOUS
Received Date: 9/22/2021 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
Hexachlorobutadiene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
2-Hexanone	ND	10		µg/L	1	10/1/2021 3:31:00 PM	R81735
Isopropylbenzene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
4-Isopropyltoluene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
4-Methyl-2-pentanone	ND	10		µg/L	1	10/1/2021 3:31:00 PM	R81735
Methylene Chloride	ND	3.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
n-Butylbenzene	ND	3.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
n-Propylbenzene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
sec-Butylbenzene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
Styrene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
tert-Butylbenzene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
Tetrachloroethene (PCE)	4.1	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
trans-1,2-DCE	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
Trichlorofluoromethane	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
Vinyl chloride	ND	1.0		µg/L	1	10/1/2021 3:31:00 PM	R81735
Xylenes, Total	ND	1.5		µg/L	1	10/1/2021 3:31:00 PM	R81735
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	10/1/2021 3:31:00 PM	R81735
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	10/1/2021 3:31:00 PM	R81735
Surr: Dibromofluoromethane	106	70-130		%Rec	1	10/1/2021 3:31:00 PM	R81735
Surr: Toluene-d8	93.6	70-130		%Rec	1	10/1/2021 3:31:00 PM	R81735

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

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 Quanitative 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 Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-210921 DUP
Project: CLC Joint Superfund Project Monthly An
Collection Date: 9/21/2021 8:13:00 AM
Lab ID: 2109D61-002 **Matrix:** AQUEOUS **Received Date:** 9/22/2021 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
Toluene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
Ethylbenzene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
Naphthalene	ND	2.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
1-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
2-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
Acetone	ND	10		µg/L	1	10/1/2021 3:54:00 PM	R81735
Bromobenzene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
Bromodichloromethane	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
Bromoform	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
Bromomethane	ND	3.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
2-Butanone	ND	10		µg/L	1	10/1/2021 3:54:00 PM	R81735
Carbon disulfide	ND	10		µg/L	1	10/1/2021 3:54:00 PM	R81735
Carbon Tetrachloride	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
Chlorobenzene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
Chloroethane	ND	2.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
Chloroform	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
Chloromethane	ND	3.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
2-Chlorotoluene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
4-Chlorotoluene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
cis-1,2-DCE	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
Dibromochloromethane	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
Dibromomethane	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
1,1-Dichloroethane	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
1,1-Dichloroethene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
1,2-Dichloropropane	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
1,3-Dichloropropane	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
2,2-Dichloropropane	ND	2.0		µg/L	1	10/1/2021 3:54:00 PM	R81735

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-210921 DUP
Project: CLC Joint Superfund Project Monthly An
Collection Date: 9/21/2021 8:13:00 AM
Lab ID: 2109D61-002 **Matrix:** AQUEOUS **Received Date:** 9/22/2021 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
Hexachlorobutadiene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
2-Hexanone	ND	10		µg/L	1	10/1/2021 3:54:00 PM	R81735
Isopropylbenzene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
4-Isopropyltoluene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
4-Methyl-2-pentanone	ND	10		µg/L	1	10/1/2021 3:54:00 PM	R81735
Methylene Chloride	ND	3.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
n-Butylbenzene	ND	3.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
n-Propylbenzene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
sec-Butylbenzene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
Styrene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
tert-Butylbenzene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
Tetrachloroethene (PCE)	4.3	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
trans-1,2-DCE	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
Trichlorofluoromethane	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
Vinyl chloride	ND	1.0		µg/L	1	10/1/2021 3:54:00 PM	R81735
Xylenes, Total	ND	1.5		µg/L	1	10/1/2021 3:54:00 PM	R81735
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	10/1/2021 3:54:00 PM	R81735
Surr: 4-Bromofluorobenzene	97.4	70-130		%Rec	1	10/1/2021 3:54:00 PM	R81735
Surr: Dibromofluoromethane	104	70-130		%Rec	1	10/1/2021 3:54:00 PM	R81735
Surr: Toluene-d8	94.0	70-130		%Rec	1	10/1/2021 3:54:00 PM	R81735

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-210921
Project: CLC Joint Superfund Project Monthly An
Collection Date: 9/21/2021 8:21:00 AM
Lab ID: 2109D61-003 **Matrix:** AQUEOUS **Received Date:** 9/22/2021 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
Toluene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
Ethylbenzene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
Naphthalene	ND	2.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
1-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
2-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
Acetone	ND	10		µg/L	1	10/1/2021 5:04:00 PM	R81735
Bromobenzene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
Bromodichloromethane	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
Bromoform	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
Bromomethane	ND	3.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
2-Butanone	ND	10		µg/L	1	10/1/2021 5:04:00 PM	R81735
Carbon disulfide	ND	10		µg/L	1	10/1/2021 5:04:00 PM	R81735
Carbon Tetrachloride	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
Chlorobenzene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
Chloroethane	ND	2.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
Chloroform	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
Chloromethane	ND	3.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
2-Chlorotoluene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
4-Chlorotoluene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
cis-1,2-DCE	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
Dibromochloromethane	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
Dibromomethane	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
1,1-Dichloroethane	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
1,1-Dichloroethene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
1,2-Dichloropropane	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
1,3-Dichloropropane	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
2,2-Dichloropropane	ND	2.0		µg/L	1	10/1/2021 5:04:00 PM	R81735

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-210921
Project: CLC Joint Superfund Project Monthly An
Collection Date: 9/21/2021 8:21:00 AM
Lab ID: 2109D61-003 **Matrix:** AQUEOUS **Received Date:** 9/22/2021 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
Hexachlorobutadiene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
2-Hexanone	ND	10		µg/L	1	10/1/2021 5:04:00 PM	R81735
Isopropylbenzene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
4-Isopropyltoluene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
4-Methyl-2-pentanone	ND	10		µg/L	1	10/1/2021 5:04:00 PM	R81735
Methylene Chloride	ND	3.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
n-Butylbenzene	ND	3.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
n-Propylbenzene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
sec-Butylbenzene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
Styrene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
tert-Butylbenzene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
Tetrachloroethene (PCE)	14	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
trans-1,2-DCE	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
Trichlorofluoromethane	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
Vinyl chloride	ND	1.0		µg/L	1	10/1/2021 5:04:00 PM	R81735
Xylenes, Total	ND	1.5		µg/L	1	10/1/2021 5:04:00 PM	R81735
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	10/1/2021 5:04:00 PM	R81735
Surr: 4-Bromofluorobenzene	99.2	70-130		%Rec	1	10/1/2021 5:04:00 PM	R81735
Surr: Dibromofluoromethane	105	70-130		%Rec	1	10/1/2021 5:04:00 PM	R81735
Surr: Toluene-d8	93.6	70-130		%Rec	1	10/1/2021 5:04:00 PM	R81735

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-210921
Project: CLC Joint Superfund Project Monthly An
Collection Date: 9/21/2021 8:32:00 AM
Lab ID: 2109D61-004 **Matrix:** AQUEOUS **Received Date:** 9/22/2021 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
Toluene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
Ethylbenzene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
Naphthalene	ND	2.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
1-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
2-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
Acetone	ND	10		µg/L	1	10/1/2021 5:27:00 PM	R81735
Bromobenzene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
Bromodichloromethane	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
Bromoform	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
Bromomethane	ND	3.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
2-Butanone	ND	10		µg/L	1	10/1/2021 5:27:00 PM	R81735
Carbon disulfide	ND	10		µg/L	1	10/1/2021 5:27:00 PM	R81735
Carbon Tetrachloride	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
Chlorobenzene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
Chloroethane	ND	2.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
Chloroform	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
Chloromethane	ND	3.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
2-Chlorotoluene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
4-Chlorotoluene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
cis-1,2-DCE	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
Dibromochloromethane	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
Dibromomethane	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
1,1-Dichloroethane	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
1,1-Dichloroethene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
1,2-Dichloropropane	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
1,3-Dichloropropane	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
2,2-Dichloropropane	ND	2.0		µg/L	1	10/1/2021 5:27:00 PM	R81735

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

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 Quanitative 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 Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-210921
Project: CLC Joint Superfund Project Monthly An
Collection Date: 9/21/2021 8:32:00 AM
Lab ID: 2109D61-004 **Matrix:** AQUEOUS **Received Date:** 9/22/2021 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
Hexachlorobutadiene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
2-Hexanone	ND	10		µg/L	1	10/1/2021 5:27:00 PM	R81735
Isopropylbenzene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
4-Isopropyltoluene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
4-Methyl-2-pentanone	ND	10		µg/L	1	10/1/2021 5:27:00 PM	R81735
Methylene Chloride	ND	3.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
n-Butylbenzene	ND	3.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
n-Propylbenzene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
sec-Butylbenzene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
Styrene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
tert-Butylbenzene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
Tetrachloroethene (PCE)	11	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
trans-1,2-DCE	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
Trichlorofluoromethane	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
Vinyl chloride	ND	1.0		µg/L	1	10/1/2021 5:27:00 PM	R81735
Xylenes, Total	ND	1.5		µg/L	1	10/1/2021 5:27:00 PM	R81735
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	10/1/2021 5:27:00 PM	R81735
Surr: 4-Bromofluorobenzene	99.2	70-130		%Rec	1	10/1/2021 5:27:00 PM	R81735
Surr: Dibromofluoromethane	101	70-130		%Rec	1	10/1/2021 5:27:00 PM	R81735
Surr: Toluene-d8	93.8	70-130		%Rec	1	10/1/2021 5:27:00 PM	R81735

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-210921
Project: CLC Joint Superfund Project Monthly An
Collection Date: 9/21/2021 8:37:00 AM
Lab ID: 2109D61-005 **Matrix:** AQUEOUS **Received Date:** 9/22/2021 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
Toluene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
Ethylbenzene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
Naphthalene	ND	2.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
1-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
2-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
Acetone	ND	10		µg/L	1	10/1/2021 5:50:00 PM	R81735
Bromobenzene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
Bromodichloromethane	1.6	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
Bromoform	4.4	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
Bromomethane	ND	3.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
2-Butanone	ND	10		µg/L	1	10/1/2021 5:50:00 PM	R81735
Carbon disulfide	ND	10		µg/L	1	10/1/2021 5:50:00 PM	R81735
Carbon Tetrachloride	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
Chlorobenzene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
Chloroethane	ND	2.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
Chloroform	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
Chloromethane	ND	3.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
2-Chlorotoluene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
4-Chlorotoluene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
cis-1,2-DCE	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
Dibromochloromethane	3.8	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
Dibromomethane	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
1,1-Dichloroethane	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
1,1-Dichloroethene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
1,2-Dichloropropane	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
1,3-Dichloropropane	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
2,2-Dichloropropane	ND	2.0		µg/L	1	10/1/2021 5:50:00 PM	R81735

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-210921
Project: CLC Joint Superfund Project Monthly An
Collection Date: 9/21/2021 8:37:00 AM
Lab ID: 2109D61-005 **Matrix:** AQUEOUS **Received Date:** 9/22/2021 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
Hexachlorobutadiene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
2-Hexanone	ND	10		µg/L	1	10/1/2021 5:50:00 PM	R81735
Isopropylbenzene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
4-Isopropyltoluene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
4-Methyl-2-pentanone	ND	10		µg/L	1	10/1/2021 5:50:00 PM	R81735
Methylene Chloride	ND	3.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
n-Butylbenzene	ND	3.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
n-Propylbenzene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
sec-Butylbenzene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
Styrene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
tert-Butylbenzene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
trans-1,2-DCE	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
Trichlorofluoromethane	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
Vinyl chloride	ND	1.0		µg/L	1	10/1/2021 5:50:00 PM	R81735
Xylenes, Total	ND	1.5		µg/L	1	10/1/2021 5:50:00 PM	R81735
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	10/1/2021 5:50:00 PM	R81735
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	10/1/2021 5:50:00 PM	R81735
Surr: Dibromofluoromethane	106	70-130		%Rec	1	10/1/2021 5:50:00 PM	R81735
Surr: Toluene-d8	96.3	70-130		%Rec	1	10/1/2021 5:50:00 PM	R81735

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2109D61**

12-Oct-21

Client: City of Las Cruces

Project: CLC Joint Superfund Project Monthly Analysis

Sample ID: **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R81735**	RunNo: **81735**
Prep Date:	Analysis Date: **10/1/2021**	SeqNo: **2889618** 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	97.2	70	130			
Chlorobenzene	20	1.0	20.00	0	98.6	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	96.3	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	99.8	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.3		10.00		93.0	70	130			

Sample ID: **mb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R81735**	RunNo: **81735**
Prep Date:	Analysis Date: **10/1/2021**	SeqNo: **2889619** 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 Quanitative 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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2109D61**
12-Oct-21

Client: City of Las Cruces
Project: CLC Joint Superfund Project Monthly Analysis

Sample ID: **mb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R81735**	RunNo: **81735**
Prep Date:	Analysis Date: **10/1/2021**	SeqNo: **2889619** 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 Quanitative 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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2109D61**
12-Oct-21

Client: City of Las Cruces
Project: CLC Joint Superfund Project Monthly Analysis

Sample ID: **mb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R81735**	RunNo: **81735**
Prep Date:	Analysis Date: **10/1/2021**	SeqNo: **2889619** 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		99.7	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.3	70	130			
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	9.3		10.00		92.8	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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
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J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **City of Las Cruces** Work Order Number: **2109D61** RcptNo: 1

Received By: **Sean Livingston** **9/22/2021 10:15:00 AM** S Livingston

Completed By: **Sean Livingston** **9/23/2021 5:00:02 PM** S Livingston

Reviewed By: KPG 9/24/21

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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☑	No ☐	NA ☐
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: JR 9/24/21

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				

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
Mailing Address: P.O. Box 20000
Las Cruces, N.M 88004
Phone #: 575-528-3609
email or Fax#: lguerra@las-cruces.org
QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☑ EDD (Type) EXCEL

Turn-Around Time:
☑ Standard ☐ Rush
Project Name: Joint Superfund Project Monthly Analysis
Project #: CLC JSP Griggs Walnut
Project Manager: Luis Guerra (575) 528-3609
Sampler: Yadira Reyna
On Ice: ☑ Yes ☐ No
# of Coolers: 1
Cooler Temp (including CF): 0.4 - 0.3 = 0.1 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2109D61	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~~) VOC	8270 (Semi-VOA)	Total Coliform (Present/Absent)
9-21-21	1818	Drinking Water	CLC 18-210921	3-40ml VOAs	$HgCl_2$	001								X		
	0813		CLC 18-210921 DUP			002								X		
	0821		CLC 27-210921			003								X		
	0832		CLC ISI-210921			004								X		
9-21-21	0837	Drinking Water	CLC ESI-210921	3-40ml VOAs	$HgCl_2$	005								X		

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
9-21-21	1500	Yadira Reyna	SGC	FedEx	9/22/21	10:15
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Send results to:
Luis Guerra: lguerra@las-cruces.org
Joshua Rosenblatt: jrosenblatt@las-cruces.org
(Send invoice 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

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

October 27, 2021

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.: 2110747

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 10/15/2021 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,



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 - 211014
Project: Joint Superfund Project Monthly Analysi
Collection Date: 10/14/2021 8:09:00 AM
Lab ID: 2110747-001
Matrix: DRINKING W
Received Date: 10/15/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
Toluene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
Ethylbenzene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
Naphthalene	ND	2.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
1-Methylnaphthalene	ND	4.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
2-Methylnaphthalene	ND	4.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
Acetone	ND	10		µg/L	1	10/21/2021 3:36:00 PM	R82246
Bromobenzene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
Bromodichloromethane	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
Bromoform	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
Bromomethane	ND	3.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
2-Butanone	ND	10		µg/L	1	10/21/2021 3:36:00 PM	R82246
Carbon disulfide	ND	10		µg/L	1	10/21/2021 3:36:00 PM	R82246
Carbon Tetrachloride	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
Chlorobenzene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
Chloroethane	ND	2.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
Chloroform	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
Chloromethane	ND	3.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
2-Chlorotoluene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
4-Chlorotoluene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
cis-1,2-DCE	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
Dibromochloromethane	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
Dibromomethane	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
1,1-Dichloroethane	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
1,1-Dichloroethene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
1,2-Dichloropropane	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
1,3-Dichloropropane	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
2,2-Dichloropropane	ND	2.0		µg/L	1	10/21/2021 3:36:00 PM	R82246

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18 - 211014
Project: Joint Superfund Project Monthly Analysi
Collection Date: 10/14/2021 8:09:00 AM
Lab ID: 2110747-001
Matrix: DRINKING W
Received Date: 10/15/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
Hexachlorobutadiene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
2-Hexanone	ND	10		µg/L	1	10/21/2021 3:36:00 PM	R82246
Isopropylbenzene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
4-Isopropyltoluene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
4-Methyl-2-pentanone	ND	10		µg/L	1	10/21/2021 3:36:00 PM	R82246
Methylene Chloride	ND	3.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
n-Butylbenzene	ND	3.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
n-Propylbenzene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
sec-Butylbenzene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
Styrene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
tert-Butylbenzene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
Tetrachloroethene (PCE)	3.9	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
trans-1,2-DCE	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
Trichlorofluoromethane	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
Vinyl chloride	ND	1.0		µg/L	1	10/21/2021 3:36:00 PM	R82246
Xylenes, Total	ND	1.5		µg/L	1	10/21/2021 3:36:00 PM	R82246
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	10/21/2021 3:36:00 PM	R82246
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	10/21/2021 3:36:00 PM	R82246
Surr: Dibromofluoromethane	102	70-130		%Rec	1	10/21/2021 3:36:00 PM	R82246
Surr: Toluene-d8	103	70-130		%Rec	1	10/21/2021 3:36:00 PM	R82246

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times 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		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27 - 211014
Project: Joint Superfund Project Monthly Analysi
Collection Date: 10/14/2021 8:39:00 AM
Lab ID: 2110747-002
Matrix: DRINKING W
Received Date: 10/15/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
Toluene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
Ethylbenzene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
Naphthalene	ND	2.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
1-Methylnaphthalene	ND	4.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
2-Methylnaphthalene	ND	4.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
Acetone	ND	10		µg/L	1	10/21/2021 4:56:38 PM	R82246
Bromobenzene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
Bromodichloromethane	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
Bromoform	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
Bromomethane	ND	3.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
2-Butanone	ND	10		µg/L	1	10/21/2021 4:56:38 PM	R82246
Carbon disulfide	ND	10		µg/L	1	10/21/2021 4:56:38 PM	R82246
Carbon Tetrachloride	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
Chlorobenzene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
Chloroethane	ND	2.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
Chloroform	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
Chloromethane	ND	3.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
2-Chlorotoluene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
4-Chlorotoluene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
cis-1,2-DCE	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
Dibromochloromethane	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
Dibromomethane	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
1,1-Dichloroethane	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
1,1-Dichloroethene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
1,2-Dichloropropane	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
1,3-Dichloropropane	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
2,2-Dichloropropane	ND	2.0		µg/L	1	10/21/2021 4:56:38 PM	R82246

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27 - 211014
Project: Joint Superfund Project Monthly Analysi
Collection Date: 10/14/2021 8:39:00 AM
Lab ID: 2110747-002
Matrix: DRINKING W
Received Date: 10/15/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
Hexachlorobutadiene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
2-Hexanone	ND	10		µg/L	1	10/21/2021 4:56:38 PM	R82246
Isopropylbenzene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
4-Isopropyltoluene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
4-Methyl-2-pentanone	ND	10		µg/L	1	10/21/2021 4:56:38 PM	R82246
Methylene Chloride	ND	3.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
n-Butylbenzene	ND	3.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
n-Propylbenzene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
sec-Butylbenzene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
Styrene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
tert-Butylbenzene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
Tetrachloroethene (PCE)	13	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
trans-1,2-DCE	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
Trichlorofluoromethane	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
Vinyl chloride	ND	1.0		µg/L	1	10/21/2021 4:56:38 PM	R82246
Xylenes, Total	ND	1.5		µg/L	1	10/21/2021 4:56:38 PM	R82246
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	10/21/2021 4:56:38 PM	R82246
Surr: 4-Bromofluorobenzene	98.3	70-130		%Rec	1	10/21/2021 4:56:38 PM	R82246
Surr: Dibromofluoromethane	101	70-130		%Rec	1	10/21/2021 4:56:38 PM	R82246
Surr: Toluene-d8	99.4	70-130		%Rec	1	10/21/2021 4:56:38 PM	R82246

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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S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1 - 211014
Project: Joint Superfund Project Monthly Analysi
Collection Date: 10/14/2021 8:15:00 AM
Lab ID: 2110747-003
Matrix: DRINKING W
Received Date: 10/15/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
Toluene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
Ethylbenzene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
Naphthalene	ND	2.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
1-Methylnaphthalene	ND	4.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
2-Methylnaphthalene	ND	4.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
Acetone	ND	10		µg/L	1	10/21/2021 5:23:44 PM	R82246
Bromobenzene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
Bromodichloromethane	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
Bromoform	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
Bromomethane	ND	3.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
2-Butanone	ND	10		µg/L	1	10/21/2021 5:23:44 PM	R82246
Carbon disulfide	ND	10		µg/L	1	10/21/2021 5:23:44 PM	R82246
Carbon Tetrachloride	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
Chlorobenzene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
Chloroethane	ND	2.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
Chloroform	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
Chloromethane	ND	3.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
2-Chlorotoluene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
4-Chlorotoluene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
cis-1,2-DCE	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
Dibromochloromethane	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
Dibromomethane	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
1,1-Dichloroethane	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
1,1-Dichloroethene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
1,2-Dichloropropane	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
1,3-Dichloropropane	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
2,2-Dichloropropane	ND	2.0		µg/L	1	10/21/2021 5:23:44 PM	R82246

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1 - 211014
Project: Joint Superfund Project Monthly Analysi
Collection Date: 10/14/2021 8:15:00 AM
Lab ID: 2110747-003
Matrix: DRINKING W
Received Date: 10/15/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
Hexachlorobutadiene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
2-Hexanone	ND	10		µg/L	1	10/21/2021 5:23:44 PM	R82246
Isopropylbenzene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
4-Isopropyltoluene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
4-Methyl-2-pentanone	ND	10		µg/L	1	10/21/2021 5:23:44 PM	R82246
Methylene Chloride	ND	3.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
n-Butylbenzene	ND	3.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
n-Propylbenzene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
sec-Butylbenzene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
Styrene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
tert-Butylbenzene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
Tetrachloroethene (PCE)	8.3	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
trans-1,2-DCE	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
Trichlorofluoromethane	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
Vinyl chloride	ND	1.0		µg/L	1	10/21/2021 5:23:44 PM	R82246
Xylenes, Total	ND	1.5		µg/L	1	10/21/2021 5:23:44 PM	R82246
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	10/21/2021 5:23:44 PM	R82246
Surr: 4-Bromofluorobenzene	98.9	70-130		%Rec	1	10/21/2021 5:23:44 PM	R82246
Surr: Dibromofluoromethane	103	70-130		%Rec	1	10/21/2021 5:23:44 PM	R82246
Surr: Toluene-d8	99.1	70-130		%Rec	1	10/21/2021 5:23:44 PM	R82246

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C1 - 211014
Project: Joint Superfund Project Monthly Analysi
Collection Date: 10/14/2021 8:19:00 AM
Lab ID: 2110747-004
Matrix: DRINKING W
Received Date: 10/15/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
Toluene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
Ethylbenzene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
Naphthalene	ND	2.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
1-Methylnaphthalene	ND	4.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
2-Methylnaphthalene	ND	4.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
Acetone	ND	10		µg/L	1	10/21/2021 5:50:32 PM	R82246
Bromobenzene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
Bromodichloromethane	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
Bromoform	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
Bromomethane	ND	3.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
2-Butanone	ND	10		µg/L	1	10/21/2021 5:50:32 PM	R82246
Carbon disulfide	ND	10		µg/L	1	10/21/2021 5:50:32 PM	R82246
Carbon Tetrachloride	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
Chlorobenzene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
Chloroethane	ND	2.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
Chloroform	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
Chloromethane	ND	3.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
2-Chlorotoluene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
4-Chlorotoluene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
cis-1,2-DCE	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
Dibromochloromethane	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
Dibromomethane	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
1,1-Dichloroethane	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
1,1-Dichloroethene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
1,2-Dichloropropane	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
1,3-Dichloropropane	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
2,2-Dichloropropane	ND	2.0		µg/L	1	10/21/2021 5:50:32 PM	R82246

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C1 - 211014
Project: Joint Superfund Project Monthly Analysi
Collection Date: 10/14/2021 8:19:00 AM
Lab ID: 2110747-004
Matrix: DRINKING W
Received Date: 10/15/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
Hexachlorobutadiene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
2-Hexanone	ND	10		µg/L	1	10/21/2021 5:50:32 PM	R82246
Isopropylbenzene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
4-Isopropyltoluene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
4-Methyl-2-pentanone	ND	10		µg/L	1	10/21/2021 5:50:32 PM	R82246
Methylene Chloride	ND	3.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
n-Butylbenzene	ND	3.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
n-Propylbenzene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
sec-Butylbenzene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
Styrene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
tert-Butylbenzene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
trans-1,2-DCE	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
Trichlorofluoromethane	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
Vinyl chloride	ND	1.0		µg/L	1	10/21/2021 5:50:32 PM	R82246
Xylenes, Total	ND	1.5		µg/L	1	10/21/2021 5:50:32 PM	R82246
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	10/21/2021 5:50:32 PM	R82246
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	10/21/2021 5:50:32 PM	R82246
Surr: Dibromofluoromethane	104	70-130		%Rec	1	10/21/2021 5:50:32 PM	R82246
Surr: Toluene-d8	98.1	70-130		%Rec	1	10/21/2021 5:50:32 PM	R82246

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C2 - 211014
Project: Joint Superfund Project Monthly Analysi
Collection Date: 10/14/2021 8:21:00 AM
Lab ID: 2110747-005
Matrix: DRINKING W
Received Date: 10/15/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
Toluene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
Ethylbenzene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
Naphthalene	ND	2.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
1-Methylnaphthalene	ND	4.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
2-Methylnaphthalene	ND	4.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
Acetone	ND	10		µg/L	1	10/21/2021 6:17:21 PM	R82246
Bromobenzene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
Bromodichloromethane	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
Bromoform	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
Bromomethane	ND	3.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
2-Butanone	ND	10		µg/L	1	10/21/2021 6:17:21 PM	R82246
Carbon disulfide	ND	10		µg/L	1	10/21/2021 6:17:21 PM	R82246
Carbon Tetrachloride	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
Chlorobenzene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
Chloroethane	ND	2.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
Chloroform	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
Chloromethane	ND	3.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
2-Chlorotoluene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
4-Chlorotoluene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
cis-1,2-DCE	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
Dibromochloromethane	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
Dibromomethane	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
1,1-Dichloroethane	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
1,1-Dichloroethene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
1,2-Dichloropropane	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
1,3-Dichloropropane	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
2,2-Dichloropropane	ND	2.0		µg/L	1	10/21/2021 6:17:21 PM	R82246

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C2 - 211014
Project: Joint Superfund Project Monthly Analysi
Collection Date: 10/14/2021 8:21:00 AM
Lab ID: 2110747-005 **Matrix:** DRINKING W **Received Date:** 10/15/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
Hexachlorobutadiene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
2-Hexanone	ND	10		µg/L	1	10/21/2021 6:17:21 PM	R82246
Isopropylbenzene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
4-Isopropyltoluene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
4-Methyl-2-pentanone	ND	10		µg/L	1	10/21/2021 6:17:21 PM	R82246
Methylene Chloride	ND	3.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
n-Butylbenzene	ND	3.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
n-Propylbenzene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
sec-Butylbenzene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
Styrene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
tert-Butylbenzene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
trans-1,2-DCE	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
Trichlorofluoromethane	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
Vinyl chloride	ND	1.0		µg/L	1	10/21/2021 6:17:21 PM	R82246
Xylenes, Total	ND	1.5		µg/L	1	10/21/2021 6:17:21 PM	R82246
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	10/21/2021 6:17:21 PM	R82246
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	10/21/2021 6:17:21 PM	R82246
Surr: Dibromofluoromethane	102	70-130		%Rec	1	10/21/2021 6:17:21 PM	R82246
Surr: Toluene-d8	102	70-130		%Rec	1	10/21/2021 6:17:21 PM	R82246

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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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Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C2 - 211014 Dup
Project: Joint Superfund Project Monthly Analysi
Collection Date: 10/14/2021 8:22:00 AM
Lab ID: 2110747-006 **Matrix:** DRINKING W **Received Date:** 10/15/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
Toluene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
Ethylbenzene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
Naphthalene	ND	2.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
1-Methylnaphthalene	ND	4.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
2-Methylnaphthalene	ND	4.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
Acetone	ND	10		µg/L	1	10/21/2021 6:44:09 PM	R82246
Bromobenzene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
Bromodichloromethane	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
Bromoform	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
Bromomethane	ND	3.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
2-Butanone	ND	10		µg/L	1	10/21/2021 6:44:09 PM	R82246
Carbon disulfide	ND	10		µg/L	1	10/21/2021 6:44:09 PM	R82246
Carbon Tetrachloride	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
Chlorobenzene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
Chloroethane	ND	2.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
Chloroform	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
Chloromethane	ND	3.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
2-Chlorotoluene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
4-Chlorotoluene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
cis-1,2-DCE	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
Dibromochloromethane	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
Dibromomethane	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
1,1-Dichloroethane	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
1,1-Dichloroethene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
1,2-Dichloropropane	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
1,3-Dichloropropane	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
2,2-Dichloropropane	ND	2.0		µg/L	1	10/21/2021 6:44:09 PM	R82246

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1,1-Dichloropropene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
Hexachlorobutadiene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
2-Hexanone	ND	10		µg/L	1	10/21/2021 6:44:09 PM	R82246
Isopropylbenzene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
4-Isopropyltoluene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
4-Methyl-2-pentanone	ND	10		µg/L	1	10/21/2021 6:44:09 PM	R82246
Methylene Chloride	ND	3.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
n-Butylbenzene	ND	3.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
n-Propylbenzene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
sec-Butylbenzene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
Styrene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
tert-Butylbenzene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
trans-1,2-DCE	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
Trichlorofluoromethane	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
Vinyl chloride	ND	1.0		µg/L	1	10/21/2021 6:44:09 PM	R82246
Xylenes, Total	ND	1.5		µg/L	1	10/21/2021 6:44:09 PM	R82246
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	10/21/2021 6:44:09 PM	R82246
Surr: 4-Bromofluorobenzene	99.7	70-130		%Rec	1	10/21/2021 6:44:09 PM	R82246
Surr: Dibromofluoromethane	102	70-130		%Rec	1	10/21/2021 6:44:09 PM	R82246
Surr: Toluene-d8	100	70-130		%Rec	1	10/21/2021 6:44:09 PM	R82246

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CLIENT: City of Las Cruces
Client Sample ID: CLC ES1 - 211014
Project: Joint Superfund Project Monthly Analysi
Collection Date: 10/14/2021 8:24:00 AM
Lab ID: 2110747-007
Matrix: DRINKING W
Received Date: 10/15/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
Toluene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
Ethylbenzene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
Naphthalene	ND	2.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
1-Methylnaphthalene	ND	4.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
2-Methylnaphthalene	ND	4.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
Acetone	ND	10		µg/L	1	10/21/2021 7:10:56 PM	R82246
Bromobenzene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
Bromodichloromethane	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
Bromoform	7.2	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
Bromomethane	ND	3.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
2-Butanone	ND	10		µg/L	1	10/21/2021 7:10:56 PM	R82246
Carbon disulfide	ND	10		µg/L	1	10/21/2021 7:10:56 PM	R82246
Carbon Tetrachloride	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
Chlorobenzene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
Chloroethane	ND	2.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
Chloroform	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
Chloromethane	ND	3.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
2-Chlorotoluene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
4-Chlorotoluene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
cis-1,2-DCE	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
Dibromochloromethane	2.1	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
Dibromomethane	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
1,1-Dichloroethane	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
1,1-Dichloroethene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
1,2-Dichloropropane	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
1,3-Dichloropropane	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
2,2-Dichloropropane	ND	2.0		µg/L	1	10/21/2021 7:10:56 PM	R82246

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Hexachlorobutadiene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
2-Hexanone	ND	10		µg/L	1	10/21/2021 7:10:56 PM	R82246
Isopropylbenzene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
4-Isopropyltoluene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
4-Methyl-2-pentanone	ND	10		µg/L	1	10/21/2021 7:10:56 PM	R82246
Methylene Chloride	ND	3.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
n-Butylbenzene	ND	3.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
n-Propylbenzene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
sec-Butylbenzene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
Styrene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
tert-Butylbenzene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
trans-1,2-DCE	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
Trichlorofluoromethane	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
Vinyl chloride	ND	1.0		µg/L	1	10/21/2021 7:10:56 PM	R82246
Xylenes, Total	ND	1.5		µg/L	1	10/21/2021 7:10:56 PM	R82246
Surr: 1,2-Dichloroethane-d4	99.6	70-130		%Rec	1	10/21/2021 7:10:56 PM	R82246
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	10/21/2021 7:10:56 PM	R82246
Surr: Dibromofluoromethane	98.0	70-130		%Rec	1	10/21/2021 7:10:56 PM	R82246
Surr: Toluene-d8	102	70-130		%Rec	1	10/21/2021 7:10:56 PM	R82246

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2110747**

27-Oct-21

Client: City of Las Cruces

Project: Joint Superfund Project Monthly Analysis

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R82246**	RunNo: **82246**
Prep Date:	Analysis Date: **10/21/2021**	SeqNo: **2917972** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.8	70	130			
Toluene	19	1.0	20.00	0	94.3	70	130			
Chlorobenzene	18	1.0	20.00	0	91.1	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	86.1	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	87.7	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.4	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R82246**	RunNo: **82246**
Prep Date:	Analysis Date: **10/21/2021**	SeqNo: **2917990** 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 Quanitative 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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2110747**
27-Oct-21

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

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R82246**	RunNo: **82246**
Prep Date:	Analysis Date: **10/21/2021**	SeqNo: **2917990** 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 Quanitative 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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2110747**

27-Oct-21

Client: City of Las Cruces

Project: Joint Superfund Project Monthly Analysis

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R82246**	RunNo: **82246**
Prep Date:	Analysis Date: **10/21/2021**	SeqNo: **2917990** 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		106	70	130			
Surr: Dibromofluoromethane	10		10.00		101	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 Quanitative 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 Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: City of Las Cruces Work Order Number: 2110747 RcptNo: 1

Received By: JTAlderette 10/15/2021 9:30:00 AM

Completed By: Isaiah Ortiz 10/15/2021 11:10:23 AM

Reviewed By: KPA 10/15/21

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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☑	No ☐	NA ☐
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: JR 10/15/21

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	4.8	Good	Not Present			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
Mailing Address: P.O. Box 20000
Las Cruces, NM 88004
Phone #: 575-528-3609
email or Fax#: lguerra@las-cruces.org
QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☑ EDD (Type) EXCELL

Turn-Around Time:
☑ Standard ☐ Rush
Project Name: Joint Superfund Project Monthly Analysis
Project #: CLC JSP Griggs Walnut
Project Manager: Luis Guerra (575) 528-3609
Sampler: Evangelina Dominguez
On Ice: ☑ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 4.8-0=4.8 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2110747	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) VOC	8270 (Semi-VOA)	Total Coliform (Present/Absent)
10/14/21	0809	Drinking Water	CLC 18-211014	3-40 ml vials	HgCl2	001								X		
	0839		CLC 27-211014			002								X		
	0815		CLC 151-211014			003								X		
	0819		CLC C1-211014			004								X		
	0821		CLC C2-211014			005								X		
	0823		CLC C-2-211014 (Dup)			006								X		
10/14/21	0824	Drinking Water	CLC ES1-211014	3-40ml vials	HgCl2	007								X		

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
10/14/21	1500			Fedex	10.15.21	9:30
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Send results to:
luis guerra : lguerra@las-cruces.org
Joshua Rosenblatt: jrosenblatt@las-cruces.org
(Send invoice 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

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

October 29, 2021

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.: 2110758

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 3 sample(s) on 10/15/2021 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,



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 -211014
Project: Joint Superfund Project Monthly Analysi
Collection Date: 10/14/2021 8:26:00 AM
Lab ID: 2110758-001 **Matrix:** AIR
Received Date: 10/15/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
Toluene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
Ethylbenzene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
Naphthalene	ND	0.20		µg/L	1	10/26/2021 12:28:00 PM	R82345
1-Methylnaphthalene	ND	0.40		µg/L	1	10/26/2021 12:28:00 PM	R82345
2-Methylnaphthalene	ND	0.40		µg/L	1	10/26/2021 12:28:00 PM	R82345
Acetone	ND	1.0		µg/L	1	10/26/2021 12:28:00 PM	R82345
Bromobenzene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
Bromodichloromethane	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
Bromoform	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
Bromomethane	ND	0.20		µg/L	1	10/26/2021 12:28:00 PM	R82345
2-Butanone	ND	1.0		µg/L	1	10/26/2021 12:28:00 PM	R82345
Carbon disulfide	ND	1.0		µg/L	1	10/26/2021 12:28:00 PM	R82345
Carbon tetrachloride	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
Chlorobenzene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
Chloroethane	ND	0.20		µg/L	1	10/26/2021 12:28:00 PM	R82345
Chloroform	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
Chloromethane	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
2-Chlorotoluene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
4-Chlorotoluene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
cis-1,2-DCE	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	10/26/2021 12:28:00 PM	R82345
Dibromochloromethane	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
Dibromomethane	ND	0.20		µg/L	1	10/26/2021 12:28:00 PM	R82345
1,2-Dichlorobenzene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
1,3-Dichlorobenzene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
1,4-Dichlorobenzene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
Dichlorodifluoromethane	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
1,1-Dichloroethane	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
1,1-Dichloroethene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
1,2-Dichloropropane	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
1,3-Dichloropropane	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
2,2-Dichloropropane	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345

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

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 Quanitative 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 Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC AS1 -211014
Project: Joint Superfund Project Monthly Analysi
Collection Date: 10/14/2021 8:26:00 AM
Lab ID: 2110758-001 **Matrix:** AIR
Received Date: 10/15/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
Hexachlorobutadiene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
2-Hexanone	ND	1.0		µg/L	1	10/26/2021 12:28:00 PM	R82345
Isopropylbenzene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
4-Isopropyltoluene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
4-Methyl-2-pentanone	ND	1.0		µg/L	1	10/26/2021 12:28:00 PM	R82345
Methylene chloride	ND	0.30		µg/L	1	10/26/2021 12:28:00 PM	R82345
n-Butylbenzene	ND	0.30		µg/L	1	10/26/2021 12:28:00 PM	R82345
n-Propylbenzene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
sec-Butylbenzene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
Styrene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
tert-Butylbenzene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
trans-1,2-DCE	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
1,1,1-Trichloroethane	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
1,1,2-Trichloroethane	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
Trichloroethene (TCE)	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
Trichlorofluoromethane	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
1,2,3-Trichloropropane	ND	0.20		µg/L	1	10/26/2021 12:28:00 PM	R82345
Vinyl chloride	ND	0.10		µg/L	1	10/26/2021 12:28:00 PM	R82345
Xylenes, Total	ND	0.15		µg/L	1	10/26/2021 12:28:00 PM	R82345
Surr: Dibromofluoromethane	104	70-130		%Rec	1	10/26/2021 12:28:00 PM	R82345
Surr: 1,2-Dichloroethane-d4	98.6	70-130		%Rec	1	10/26/2021 12:28:00 PM	R82345
Surr: Toluene-d8	92.8	70-130		%Rec	1	10/26/2021 12:28:00 PM	R82345
Surr: 4-Bromofluorobenzene	98.2	70-130		%Rec	1	10/26/2021 12:28:00 PM	R82345

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC AS2 -211014
Project: Joint Superfund Project Monthly Analysi
Collection Date: 10/14/2021 8:28:00 AM
Lab ID: 2110758-002 **Matrix:** AIR
Received Date: 10/15/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
Toluene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
Ethylbenzene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
Naphthalene	ND	0.20		µg/L	1	10/26/2021 1:15:00 PM	R82345
1-Methylnaphthalene	ND	0.40		µg/L	1	10/26/2021 1:15:00 PM	R82345
2-Methylnaphthalene	ND	0.40		µg/L	1	10/26/2021 1:15:00 PM	R82345
Acetone	ND	1.0		µg/L	1	10/26/2021 1:15:00 PM	R82345
Bromobenzene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
Bromodichloromethane	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
Bromoform	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
Bromomethane	ND	0.20		µg/L	1	10/26/2021 1:15:00 PM	R82345
2-Butanone	ND	1.0		µg/L	1	10/26/2021 1:15:00 PM	R82345
Carbon disulfide	ND	1.0		µg/L	1	10/26/2021 1:15:00 PM	R82345
Carbon tetrachloride	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
Chlorobenzene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
Chloroethane	ND	0.20		µg/L	1	10/26/2021 1:15:00 PM	R82345
Chloroform	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
Chloromethane	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
2-Chlorotoluene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
4-Chlorotoluene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
cis-1,2-DCE	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	10/26/2021 1:15:00 PM	R82345
Dibromochloromethane	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
Dibromomethane	ND	0.20		µg/L	1	10/26/2021 1:15:00 PM	R82345
1,2-Dichlorobenzene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
1,3-Dichlorobenzene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
1,4-Dichlorobenzene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
Dichlorodifluoromethane	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
1,1-Dichloroethane	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
1,1-Dichloroethene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
1,2-Dichloropropane	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
1,3-Dichloropropane	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
2,2-Dichloropropane	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC AS2 -211014
Project: Joint Superfund Project Monthly Analysi
Collection Date: 10/14/2021 8:28:00 AM
Lab ID: 2110758-002 **Matrix:** AIR
Received Date: 10/15/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
Hexachlorobutadiene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
2-Hexanone	ND	1.0		µg/L	1	10/26/2021 1:15:00 PM	R82345
Isopropylbenzene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
4-Isopropyltoluene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
4-Methyl-2-pentanone	ND	1.0		µg/L	1	10/26/2021 1:15:00 PM	R82345
Methylene chloride	ND	0.30		µg/L	1	10/26/2021 1:15:00 PM	R82345
n-Butylbenzene	ND	0.30		µg/L	1	10/26/2021 1:15:00 PM	R82345
n-Propylbenzene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
sec-Butylbenzene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
Styrene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
tert-Butylbenzene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
trans-1,2-DCE	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
1,1,1-Trichloroethane	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
1,1,2-Trichloroethane	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
Trichloroethene (TCE)	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
Trichlorofluoromethane	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
1,2,3-Trichloropropane	ND	0.20		µg/L	1	10/26/2021 1:15:00 PM	R82345
Vinyl chloride	ND	0.10		µg/L	1	10/26/2021 1:15:00 PM	R82345
Xylenes, Total	ND	0.15		µg/L	1	10/26/2021 1:15:00 PM	R82345
Surr: Dibromofluoromethane	106	70-130		%Rec	1	10/26/2021 1:15:00 PM	R82345
Surr: 1,2-Dichloroethane-d4	96.4	70-130		%Rec	1	10/26/2021 1:15:00 PM	R82345
Surr: Toluene-d8	90.9	70-130		%Rec	1	10/26/2021 1:15:00 PM	R82345
Surr: 4-Bromofluorobenzene	97.3	70-130		%Rec	1	10/26/2021 1:15:00 PM	R82345

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC AS2 -211014 Dup
Project: Joint Superfund Project Monthly Analysi
Collection Date: 10/14/2021 8:29:00 AM
Lab ID: 2110758-003 **Matrix:** AIR
Received Date: 10/15/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
Toluene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
Ethylbenzene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
Naphthalene	ND	0.20		µg/L	1	10/26/2021 1:38:00 PM	R82345
1-Methylnaphthalene	ND	0.40		µg/L	1	10/26/2021 1:38:00 PM	R82345
2-Methylnaphthalene	ND	0.40		µg/L	1	10/26/2021 1:38:00 PM	R82345
Acetone	ND	1.0		µg/L	1	10/26/2021 1:38:00 PM	R82345
Bromobenzene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
Bromodichloromethane	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
Bromoform	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
Bromomethane	ND	0.20		µg/L	1	10/26/2021 1:38:00 PM	R82345
2-Butanone	ND	1.0		µg/L	1	10/26/2021 1:38:00 PM	R82345
Carbon disulfide	ND	1.0		µg/L	1	10/26/2021 1:38:00 PM	R82345
Carbon tetrachloride	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
Chlorobenzene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
Chloroethane	ND	0.20		µg/L	1	10/26/2021 1:38:00 PM	R82345
Chloroform	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
Chloromethane	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
2-Chlorotoluene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
4-Chlorotoluene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
cis-1,2-DCE	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	10/26/2021 1:38:00 PM	R82345
Dibromochloromethane	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
Dibromomethane	ND	0.20		µg/L	1	10/26/2021 1:38:00 PM	R82345
1,2-Dichlorobenzene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
1,3-Dichlorobenzene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
1,4-Dichlorobenzene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
Dichlorodifluoromethane	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
1,1-Dichloroethane	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
1,1-Dichloroethene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
1,2-Dichloropropane	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
1,3-Dichloropropane	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
2,2-Dichloropropane	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC AS2 -211014 Dup
Project: Joint Superfund Project Monthly Analysi
Collection Date: 10/14/2021 8:29:00 AM
Lab ID: 2110758-003 **Matrix:** AIR
Received Date: 10/15/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
Hexachlorobutadiene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
2-Hexanone	ND	1.0		µg/L	1	10/26/2021 1:38:00 PM	R82345
Isopropylbenzene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
4-Isopropyltoluene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
4-Methyl-2-pentanone	ND	1.0		µg/L	1	10/26/2021 1:38:00 PM	R82345
Methylene chloride	ND	0.30		µg/L	1	10/26/2021 1:38:00 PM	R82345
n-Butylbenzene	ND	0.30		µg/L	1	10/26/2021 1:38:00 PM	R82345
n-Propylbenzene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
sec-Butylbenzene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
Styrene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
tert-Butylbenzene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
trans-1,2-DCE	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
1,1,1-Trichloroethane	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
1,1,2-Trichloroethane	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
Trichloroethene (TCE)	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
Trichlorofluoromethane	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
1,2,3-Trichloropropane	ND	0.20		µg/L	1	10/26/2021 1:38:00 PM	R82345
Vinyl chloride	ND	0.10		µg/L	1	10/26/2021 1:38:00 PM	R82345
Xylenes, Total	ND	0.15		µg/L	1	10/26/2021 1:38:00 PM	R82345
Surr: Dibromofluoromethane	108	70-130		%Rec	1	10/26/2021 1:38:00 PM	R82345
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	10/26/2021 1:38:00 PM	R82345
Surr: Toluene-d8	91.0	70-130		%Rec	1	10/26/2021 1:38:00 PM	R82345
Surr: 4-Bromofluorobenzene	98.2	70-130		%Rec	1	10/26/2021 1:38:00 PM	R82345

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: City of Las Cruces Work Order Number: 2110758 RcptNo: 1

Received By: Juan Rojas 10/15/2021 9:30:00 AM Juan Rojas

Completed By: Isaiah Ortiz 10/15/2021 12:33:16 PM I-Ox

Reviewed By: JR 10/15/21

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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
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: KPG 10/15/21

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

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
Mailing Address: P.O. Box 20000
Las Cruces, NM 88004
Phone #: 575-528-3609
email or Fax#: lguerra@las-cruces.org
QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☑ EDD (Type) EQuIS

Turn-Around Time:
☑ Standard ☐ Rush
Project Name: Joint Superfund Project Monthly Analysis
Project #: CLC JSP Griggs Walnut
Project Manager: Luis Guerra (575)-528-3609
Sampler: Evangelina Dominguez
On Ice: ☐ Yes ☑ No
# of Coolers: 1
Cooler Temp(including CF): N/A (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2110758	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) VOC	8270 (Semi-VOA)	Total Coliform (Present/Absent)
10/14/21	1500	Air 08836	Air	CLC AS1-211014	Tedlar Bag	N/A	001							X		
1	1500	Air 08838	Air	CLC AS2-211014	1	1	002							X		
10/14/21		Air 08839	Air	CLC AS2-211014(Dup)	Tedlar Bag	N/A	003							X		

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
10/14/21	1500			FedEx	10/15/21	9:30
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Send results to:
Luis Guerra: lguerra@las-cruces.org
Joshua Rosenblatt: jrosenblatt@las-cruces.org
(Send invoice 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

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

December 08, 2021

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.: 2111C23

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 5 sample(s) on 11/24/2021 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,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-211123
Project: CLC Joint Superfund Project Monthly An
Collection Date: 11/23/2021 8:03:00 AM
Lab ID: 2111C23-001 **Matrix:** AQUEOUS **Received Date:** 11/24/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
Toluene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
Ethylbenzene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
Naphthalene	ND	2.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
1-Methylnaphthalene	ND	4.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
2-Methylnaphthalene	ND	4.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
Acetone	ND	10		µg/L	1	12/1/2021 3:26:00 AM	R83161
Bromobenzene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
Bromodichloromethane	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
Bromoform	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
Bromomethane	ND	3.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
2-Butanone	ND	10		µg/L	1	12/1/2021 3:26:00 AM	R83161
Carbon disulfide	ND	10		µg/L	1	12/1/2021 3:26:00 AM	R83161
Carbon Tetrachloride	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
Chlorobenzene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
Chloroethane	ND	2.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
Chloroform	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
Chloromethane	ND	3.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
2-Chlorotoluene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
4-Chlorotoluene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
cis-1,2-DCE	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
Dibromochloromethane	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
Dibromomethane	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
1,1-Dichloroethane	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
1,1-Dichloroethene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
1,2-Dichloropropane	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
1,3-Dichloropropane	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
2,2-Dichloropropane	ND	2.0		µg/L	1	12/1/2021 3:26:00 AM	R83161

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-211123
Project: CLC Joint Superfund Project Monthly An
Collection Date: 11/23/2021 8:03:00 AM
Lab ID: 2111C23-001 **Matrix:** AQUEOUS **Received Date:** 11/24/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
Hexachlorobutadiene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
2-Hexanone	ND	10		µg/L	1	12/1/2021 3:26:00 AM	R83161
Isopropylbenzene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
4-Isopropyltoluene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
4-Methyl-2-pentanone	ND	10		µg/L	1	12/1/2021 3:26:00 AM	R83161
Methylene Chloride	ND	3.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
n-Butylbenzene	ND	3.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
n-Propylbenzene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
sec-Butylbenzene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
Styrene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
tert-Butylbenzene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
Tetrachloroethene (PCE)	4.8	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
trans-1,2-DCE	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
Trichlorofluoromethane	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
Vinyl chloride	ND	1.0		µg/L	1	12/1/2021 3:26:00 AM	R83161
Xylenes, Total	ND	1.5		µg/L	1	12/1/2021 3:26:00 AM	R83161
Surr: 1,2-Dichloroethane-d4	97.0	70-130		%Rec	1	12/1/2021 3:26:00 AM	R83161
Surr: 4-Bromofluorobenzene	96.3	70-130		%Rec	1	12/1/2021 3:26:00 AM	R83161
Surr: Dibromofluoromethane	104	70-130		%Rec	1	12/1/2021 3:26:00 AM	R83161
Surr: Toluene-d8	97.4	70-130		%Rec	1	12/1/2021 3:26:00 AM	R83161

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-211123
Project: CLC Joint Superfund Project Monthly An
Collection Date: 11/23/2021 8:22:00 AM
Lab ID: 2111C23-002 **Matrix:** AQUEOUS **Received Date:** 11/24/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
Toluene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
Ethylbenzene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
Naphthalene	ND	2.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
1-Methylnaphthalene	ND	4.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
2-Methylnaphthalene	ND	4.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
Acetone	ND	10		µg/L	1	12/1/2021 4:36:00 AM	R83161
Bromobenzene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
Bromodichloromethane	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
Bromoform	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
Bromomethane	ND	3.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
2-Butanone	ND	10		µg/L	1	12/1/2021 4:36:00 AM	R83161
Carbon disulfide	ND	10		µg/L	1	12/1/2021 4:36:00 AM	R83161
Carbon Tetrachloride	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
Chlorobenzene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
Chloroethane	ND	2.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
Chloroform	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
Chloromethane	ND	3.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
2-Chlorotoluene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
4-Chlorotoluene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
cis-1,2-DCE	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
Dibromochloromethane	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
Dibromomethane	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
1,1-Dichloroethane	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
1,1-Dichloroethene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
1,2-Dichloropropane	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
1,3-Dichloropropane	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
2,2-Dichloropropane	ND	2.0		µg/L	1	12/1/2021 4:36:00 AM	R83161

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-211123
Project: CLC Joint Superfund Project Monthly An
Collection Date: 11/23/2021 8:22:00 AM
Lab ID: 2111C23-002 **Matrix:** AQUEOUS **Received Date:** 11/24/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
Hexachlorobutadiene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
2-Hexanone	ND	10		µg/L	1	12/1/2021 4:36:00 AM	R83161
Isopropylbenzene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
4-Isopropyltoluene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
4-Methyl-2-pentanone	ND	10		µg/L	1	12/1/2021 4:36:00 AM	R83161
Methylene Chloride	ND	3.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
n-Butylbenzene	ND	3.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
n-Propylbenzene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
sec-Butylbenzene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
Styrene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
tert-Butylbenzene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
Tetrachloroethene (PCE)	14	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
trans-1,2-DCE	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
Trichlorofluoromethane	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
Vinyl chloride	ND	1.0		µg/L	1	12/1/2021 4:36:00 AM	R83161
Xylenes, Total	ND	1.5		µg/L	1	12/1/2021 4:36:00 AM	R83161
Surr: 1,2-Dichloroethane-d4	94.2	70-130		%Rec	1	12/1/2021 4:36:00 AM	R83161
Surr: 4-Bromofluorobenzene	96.3	70-130		%Rec	1	12/1/2021 4:36:00 AM	R83161
Surr: Dibromofluoromethane	99.8	70-130		%Rec	1	12/1/2021 4:36:00 AM	R83161
Surr: Toluene-d8	97.0	70-130		%Rec	1	12/1/2021 4:36:00 AM	R83161

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-211123 DUP
Project: CLC Joint Superfund Project Monthly An
Collection Date: 11/23/2021 8:23:00 AM
Lab ID: 2111C23-003 **Matrix:** AQUEOUS **Received Date:** 11/24/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
Toluene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
Ethylbenzene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
Naphthalene	ND	2.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
1-Methylnaphthalene	ND	4.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
2-Methylnaphthalene	ND	4.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
Acetone	ND	10		µg/L	1	12/1/2021 4:59:00 AM	R83161
Bromobenzene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
Bromodichloromethane	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
Bromoform	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
Bromomethane	ND	3.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
2-Butanone	ND	10		µg/L	1	12/1/2021 4:59:00 AM	R83161
Carbon disulfide	ND	10		µg/L	1	12/1/2021 4:59:00 AM	R83161
Carbon Tetrachloride	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
Chlorobenzene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
Chloroethane	ND	2.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
Chloroform	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
Chloromethane	ND	3.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
2-Chlorotoluene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
4-Chlorotoluene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
cis-1,2-DCE	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
Dibromochloromethane	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
Dibromomethane	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
1,1-Dichloroethane	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
1,1-Dichloroethene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
1,2-Dichloropropane	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
1,3-Dichloropropane	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
2,2-Dichloropropane	ND	2.0		µg/L	1	12/1/2021 4:59:00 AM	R83161

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-211123 DUP
Project: CLC Joint Superfund Project Monthly An
Collection Date: 11/23/2021 8:23:00 AM
Lab ID: 2111C23-003 **Matrix:** AQUEOUS **Received Date:** 11/24/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
Hexachlorobutadiene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
2-Hexanone	ND	10		µg/L	1	12/1/2021 4:59:00 AM	R83161
Isopropylbenzene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
4-Isopropyltoluene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
4-Methyl-2-pentanone	ND	10		µg/L	1	12/1/2021 4:59:00 AM	R83161
Methylene Chloride	ND	3.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
n-Butylbenzene	ND	3.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
n-Propylbenzene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
sec-Butylbenzene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
Styrene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
tert-Butylbenzene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
Tetrachloroethene (PCE)	15	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
trans-1,2-DCE	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
Trichlorofluoromethane	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
Vinyl chloride	ND	1.0		µg/L	1	12/1/2021 4:59:00 AM	R83161
Xylenes, Total	ND	1.5		µg/L	1	12/1/2021 4:59:00 AM	R83161
Surr: 1,2-Dichloroethane-d4	95.3	70-130		%Rec	1	12/1/2021 4:59:00 AM	R83161
Surr: 4-Bromofluorobenzene	97.3	70-130		%Rec	1	12/1/2021 4:59:00 AM	R83161
Surr: Dibromofluoromethane	102	70-130		%Rec	1	12/1/2021 4:59:00 AM	R83161
Surr: Toluene-d8	96.3	70-130		%Rec	1	12/1/2021 4:59:00 AM	R83161

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-211123
Project: CLC Joint Superfund Project Monthly An
Collection Date: 11/23/2021 8:09:00 AM
Lab ID: 2111C23-004 **Matrix:** AQUEOUS **Received Date:** 11/24/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
Toluene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
Ethylbenzene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
Naphthalene	ND	2.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
1-Methylnaphthalene	ND	4.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
2-Methylnaphthalene	ND	4.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
Acetone	ND	10		µg/L	1	12/1/2021 5:23:00 AM	R83161
Bromobenzene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
Bromodichloromethane	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
Bromoform	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
Bromomethane	ND	3.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
2-Butanone	ND	10		µg/L	1	12/1/2021 5:23:00 AM	R83161
Carbon disulfide	ND	10		µg/L	1	12/1/2021 5:23:00 AM	R83161
Carbon Tetrachloride	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
Chlorobenzene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
Chloroethane	ND	2.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
Chloroform	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
Chloromethane	ND	3.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
2-Chlorotoluene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
4-Chlorotoluene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
cis-1,2-DCE	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
Dibromochloromethane	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
Dibromomethane	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
1,1-Dichloroethane	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
1,1-Dichloroethene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
1,2-Dichloropropane	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
1,3-Dichloropropane	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
2,2-Dichloropropane	ND	2.0		µg/L	1	12/1/2021 5:23:00 AM	R83161

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-211123
Project: CLC Joint Superfund Project Monthly An
Collection Date: 11/23/2021 8:09:00 AM
Lab ID: 2111C23-004 **Matrix:** AQUEOUS **Received Date:** 11/24/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
Hexachlorobutadiene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
2-Hexanone	ND	10		µg/L	1	12/1/2021 5:23:00 AM	R83161
Isopropylbenzene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
4-Isopropyltoluene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
4-Methyl-2-pentanone	ND	10		µg/L	1	12/1/2021 5:23:00 AM	R83161
Methylene Chloride	ND	3.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
n-Butylbenzene	ND	3.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
n-Propylbenzene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
sec-Butylbenzene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
Styrene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
tert-Butylbenzene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
Tetrachloroethene (PCE)	11	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
trans-1,2-DCE	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
Trichlorofluoromethane	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
Vinyl chloride	ND	1.0		µg/L	1	12/1/2021 5:23:00 AM	R83161
Xylenes, Total	ND	1.5		µg/L	1	12/1/2021 5:23:00 AM	R83161
Surr: 1,2-Dichloroethane-d4	92.2	70-130		%Rec	1	12/1/2021 5:23:00 AM	R83161
Surr: 4-Bromofluorobenzene	95.8	70-130		%Rec	1	12/1/2021 5:23:00 AM	R83161
Surr: Dibromofluoromethane	99.4	70-130		%Rec	1	12/1/2021 5:23:00 AM	R83161
Surr: Toluene-d8	96.3	70-130		%Rec	1	12/1/2021 5:23:00 AM	R83161

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-211123
Project: CLC Joint Superfund Project Monthly An
Collection Date: 11/23/2021 8:13:00 AM
Lab ID: 2111C23-005 **Matrix:** AQUEOUS **Received Date:** 11/24/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
Toluene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
Ethylbenzene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
Naphthalene	ND	2.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
1-Methylnaphthalene	ND	4.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
2-Methylnaphthalene	ND	4.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
Acetone	ND	10		µg/L	1	12/1/2021 5:46:00 AM	R83161
Bromobenzene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
Bromodichloromethane	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
Bromoform	5.4	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
Bromomethane	ND	3.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
2-Butanone	ND	10		µg/L	1	12/1/2021 5:46:00 AM	R83161
Carbon disulfide	ND	10		µg/L	1	12/1/2021 5:46:00 AM	R83161
Carbon Tetrachloride	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
Chlorobenzene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
Chloroethane	ND	2.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
Chloroform	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
Chloromethane	ND	3.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
2-Chlorotoluene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
4-Chlorotoluene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
cis-1,2-DCE	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
Dibromochloromethane	3.4	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
Dibromomethane	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
1,1-Dichloroethane	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
1,1-Dichloroethene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
1,2-Dichloropropane	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
1,3-Dichloropropane	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
2,2-Dichloropropane	ND	2.0		µg/L	1	12/1/2021 5:46:00 AM	R83161

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-211123
Project: CLC Joint Superfund Project Monthly An
Collection Date: 11/23/2021 8:13:00 AM
Lab ID: 2111C23-005 **Matrix:** AQUEOUS **Received Date:** 11/24/2021 9:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
Hexachlorobutadiene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
2-Hexanone	ND	10		µg/L	1	12/1/2021 5:46:00 AM	R83161
Isopropylbenzene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
4-Isopropyltoluene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
4-Methyl-2-pentanone	ND	10		µg/L	1	12/1/2021 5:46:00 AM	R83161
Methylene Chloride	ND	3.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
n-Butylbenzene	ND	3.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
n-Propylbenzene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
sec-Butylbenzene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
Styrene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
tert-Butylbenzene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
trans-1,2-DCE	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
Trichlorofluoromethane	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
Vinyl chloride	ND	1.0		µg/L	1	12/1/2021 5:46:00 AM	R83161
Xylenes, Total	ND	1.5		µg/L	1	12/1/2021 5:46:00 AM	R83161
Surr: 1,2-Dichloroethane-d4	94.6	70-130		%Rec	1	12/1/2021 5:46:00 AM	R83161
Surr: 4-Bromofluorobenzene	97.4	70-130		%Rec	1	12/1/2021 5:46:00 AM	R83161
Surr: Dibromofluoromethane	99.8	70-130		%Rec	1	12/1/2021 5:46:00 AM	R83161
Surr: Toluene-d8	98.3	70-130		%Rec	1	12/1/2021 5:46:00 AM	R83161

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2111C23**
08-Dec-21

Client: City of Las Cruces
Project: CLC Joint Superfund Project Monthly Analysis

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R83161**	RunNo: **83161**
Prep Date:	Analysis Date: **11/30/2021**	SeqNo: **2954750** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.2	70	130			
Toluene	20	1.0	20.00	0	100	70	130			
Chlorobenzene	21	1.0	20.00	0	104	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	93.5	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	95.7	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		94.6	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		94.9	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.8		10.00		98.4	70	130			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R83161**	RunNo: **83161**
Prep Date:	Analysis Date: **11/30/2021**	SeqNo: **2955135** 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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2111C23**
08-Dec-21

Client: City of Las Cruces
Project: CLC Joint Superfund Project Monthly Analysis

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R83161**	RunNo: **83161**
Prep Date:	Analysis Date: **11/30/2021**	SeqNo: **2955135** 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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2111C23**
08-Dec-21

Client: City of Las Cruces
Project: CLC Joint Superfund Project Monthly Analysis

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R83161**	RunNo: **83161**
Prep Date:	Analysis Date: **11/30/2021**	SeqNo: **2955135** 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		96.1	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.6	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.8		10.00		98.2	70	130			

Sample ID: **100ng 8260 lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R83161**	RunNo: **83161**
Prep Date:	Analysis Date: **11/30/2021**	SeqNo: **2955602** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	93.8	70	130			
Toluene	20	1.0	20.00	0	99.3	70	130			
Chlorobenzene	21	1.0	20.00	0	103	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	91.9	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	94.4	70	130			
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.9	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.4	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.7	70	130			
Surr: Toluene-d8	9.7		10.00		96.9	70	130			

Sample ID: **mb 2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R83161**	RunNo: **83161**
Prep Date:	Analysis Date: **11/30/2021**	SeqNo: **2955603** 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.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2111C23**
08-Dec-21

Client: City of Las Cruces
Project: CLC Joint Superfund Project Monthly Analysis

Sample ID: **mb 2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R83161**	RunNo: **83161**	
Prep Date:	Analysis Date: **11/30/2021**	SeqNo: **2955603**	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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2111C23**
08-Dec-21

Client: City of Las Cruces
Project: CLC Joint Superfund Project Monthly Analysis

Sample ID: **mb 2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R83161**	RunNo: **83161**
Prep Date:	Analysis Date: **11/30/2021**	SeqNo: **2955603** 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	9.3		10.00		93.4	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.5	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.8		10.00		98.4	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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
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 Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: City of Las Cruces Work Order Number: 2111C23 RcptNo: 1

Received By: Juan Rojas 11/24/2021 9:30:00 AM

Completed By: Sean Livingston 11/24/2021 9:59:25 AM

Reviewed By: JR 11/24/21

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. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☑	No ☐	NA ☐
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 ☐	

cm 11/24/21

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

Adjusted? _____

Checked by: cm 11/24/21

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: 1 VOA from Sample 005 Received Broken cm 11/24/21

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.3	Good				

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
Mailing Address: P.O. Box 20000
Las Cruces N.M 88004
Phone #: 575-528-3609
email or Fax#: lguerra@las-cruces.org
QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush
Project Name: Joint Superfund Project Monthly Analysis
Project #: CLC JSP Griggs Walnut
Project Manager: Luis Guerra (575) 528-3609
Sampler: Yadira Reyna
On Ice: ☑ Yes ☐ No
# of Coolers: 1
Cooler Temp (including CF): 3.3-0=3.3 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2111C23	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~~)VOC	8270 (Semi-VOA)	Total Coliform (Present/Absent)
11-23-21	0803	drinking water	CLC 18-211123	3-40ml Vials	HgCl2	001								X		
	0822		CLC 27-211123			002								X		
	0823		CLC 27-211123 DUP			003								X		
	0809		CLC I51-211123			004								X		
11-23-21	0813	drinking water	CLC ES1-211123	3-40ml Vials	HgCl2	005								X		

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
11-23-21	1400	Yadira Reyna		FedEx	11/24/21	9:30
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Send results to:
Luis Guerra: lguerra@las-cruces.org
Joshua Rosenblatt@las-cruces.org
(Send invoice 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

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

December 28, 2021

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.: 2112A45

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 5 sample(s) on 12/15/2021 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,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-211214
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/14/2021 8:03:00 AM
Lab ID: 2112A45-001
Matrix: DRINKING W
Received Date: 12/15/2021 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Toluene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Ethylbenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Naphthalene	ND	2.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1-Methylnaphthalene	ND	4.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
2-Methylnaphthalene	ND	4.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Acetone	ND	10		µg/L	1	12/20/2021 11:26:32 PM	R84705
Bromobenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Bromodichloromethane	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Bromoform	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Bromomethane	ND	3.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
2-Butanone	ND	10		µg/L	1	12/20/2021 11:26:32 PM	R84705
Carbon disulfide	ND	10		µg/L	1	12/20/2021 11:26:32 PM	R84705
Carbon Tetrachloride	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Chlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Chloroethane	ND	2.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Chloroform	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Chloromethane	ND	3.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
2-Chlorotoluene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
4-Chlorotoluene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
cis-1,2-DCE	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Dibromochloromethane	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Dibromomethane	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,1-Dichloroethane	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,1-Dichloroethene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,2-Dichloropropane	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,3-Dichloropropane	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
2,2-Dichloropropane	ND	2.0		µg/L	1	12/20/2021 11:26:32 PM	R84705

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-211214
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/14/2021 8:03:00 AM
Lab ID: 2112A45-001
Matrix: DRINKING W
Received Date: 12/15/2021 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Hexachlorobutadiene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
2-Hexanone	ND	10		µg/L	1	12/20/2021 11:26:32 PM	R84705
Isopropylbenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
4-Isopropyltoluene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
4-Methyl-2-pentanone	ND	10		µg/L	1	12/20/2021 11:26:32 PM	R84705
Methylene Chloride	ND	3.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
n-Butylbenzene	ND	3.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
n-Propylbenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
sec-Butylbenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Styrene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
tert-Butylbenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Tetrachloroethene (PCE)	4.5	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
trans-1,2-DCE	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Trichlorofluoromethane	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Vinyl chloride	ND	1.0		µg/L	1	12/20/2021 11:26:32 PM	R84705
Xylenes, Total	ND	1.5		µg/L	1	12/20/2021 11:26:32 PM	R84705
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	12/20/2021 11:26:32 PM	R84705
Surr: 4-Bromofluorobenzene	97.7	70-130		%Rec	1	12/20/2021 11:26:32 PM	R84705
Surr: Dibromofluoromethane	105	70-130		%Rec	1	12/20/2021 11:26:32 PM	R84705
Surr: Toluene-d8	101	70-130		%Rec	1	12/20/2021 11:26:32 PM	R84705

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-211214
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/14/2021 8:11:00 AM
Lab ID: 2112A45-002
Matrix: DRINKING W
Received Date: 12/15/2021 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Toluene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Ethylbenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Naphthalene	ND	2.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1-Methylnaphthalene	ND	4.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
2-Methylnaphthalene	ND	4.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Acetone	ND	10		µg/L	1	12/20/2021 11:53:10 PM	R84705
Bromobenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Bromodichloromethane	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Bromoform	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Bromomethane	ND	3.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
2-Butanone	ND	10		µg/L	1	12/20/2021 11:53:10 PM	R84705
Carbon disulfide	ND	10		µg/L	1	12/20/2021 11:53:10 PM	R84705
Carbon Tetrachloride	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Chlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Chloroethane	ND	2.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Chloroform	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Chloromethane	ND	3.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
2-Chlorotoluene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
4-Chlorotoluene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
cis-1,2-DCE	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Dibromochloromethane	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Dibromomethane	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,1-Dichloroethane	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,1-Dichloroethene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,2-Dichloropropane	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,3-Dichloropropane	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
2,2-Dichloropropane	ND	2.0		µg/L	1	12/20/2021 11:53:10 PM	R84705

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-211214
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/14/2021 8:11:00 AM
Lab ID: 2112A45-002
Matrix: DRINKING W
Received Date: 12/15/2021 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Hexachlorobutadiene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
2-Hexanone	ND	10		µg/L	1	12/20/2021 11:53:10 PM	R84705
Isopropylbenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
4-Isopropyltoluene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
4-Methyl-2-pentanone	ND	10		µg/L	1	12/20/2021 11:53:10 PM	R84705
Methylene Chloride	ND	3.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
n-Butylbenzene	ND	3.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
n-Propylbenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
sec-Butylbenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Styrene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
tert-Butylbenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Tetrachloroethene (PCE)	11	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
trans-1,2-DCE	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Trichlorofluoromethane	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Vinyl chloride	ND	1.0		µg/L	1	12/20/2021 11:53:10 PM	R84705
Xylenes, Total	ND	1.5		µg/L	1	12/20/2021 11:53:10 PM	R84705
Surr: 1,2-Dichloroethane-d4	99.0	70-130		%Rec	1	12/20/2021 11:53:10 PM	R84705
Surr: 4-Bromofluorobenzene	95.3	70-130		%Rec	1	12/20/2021 11:53:10 PM	R84705
Surr: Dibromofluoromethane	107	70-130		%Rec	1	12/20/2021 11:53:10 PM	R84705
Surr: Toluene-d8	100	70-130		%Rec	1	12/20/2021 11:53:10 PM	R84705

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-211214
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/14/2021 8:13:00 AM
Lab ID: 2112A45-003
Matrix: DRINKING W
Received Date: 12/15/2021 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Toluene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Ethylbenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Naphthalene	ND	2.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
2-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Acetone	ND	10		µg/L	1	12/21/2021 12:19:44 AM	R84705
Bromobenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Bromodichloromethane	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Bromoform	5.7	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Bromomethane	ND	3.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
2-Butanone	ND	10		µg/L	1	12/21/2021 12:19:44 AM	R84705
Carbon disulfide	ND	10		µg/L	1	12/21/2021 12:19:44 AM	R84705
Carbon Tetrachloride	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Chlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Chloroethane	ND	2.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Chloroform	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Chloromethane	ND	3.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
2-Chlorotoluene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
4-Chlorotoluene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
cis-1,2-DCE	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Dibromochloromethane	2.1	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Dibromomethane	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,1-Dichloroethane	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,1-Dichloroethene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,2-Dichloropropane	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,3-Dichloropropane	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
2,2-Dichloropropane	ND	2.0		µg/L	1	12/21/2021 12:19:44 AM	R84705

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-211214
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/14/2021 8:13:00 AM
Lab ID: 2112A45-003
Matrix: DRINKING W
Received Date: 12/15/2021 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Hexachlorobutadiene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
2-Hexanone	ND	10		µg/L	1	12/21/2021 12:19:44 AM	R84705
Isopropylbenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
4-Isopropyltoluene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
4-Methyl-2-pentanone	ND	10		µg/L	1	12/21/2021 12:19:44 AM	R84705
Methylene Chloride	ND	3.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
n-Butylbenzene	ND	3.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
n-Propylbenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
sec-Butylbenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Styrene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
tert-Butylbenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
trans-1,2-DCE	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Trichlorofluoromethane	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Vinyl chloride	ND	1.0		µg/L	1	12/21/2021 12:19:44 AM	R84705
Xylenes, Total	ND	1.5		µg/L	1	12/21/2021 12:19:44 AM	R84705
Surr: 1,2-Dichloroethane-d4	98.2	70-130		%Rec	1	12/21/2021 12:19:44 AM	R84705
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	12/21/2021 12:19:44 AM	R84705
Surr: Dibromofluoromethane	102	70-130		%Rec	1	12/21/2021 12:19:44 AM	R84705
Surr: Toluene-d8	101	70-130		%Rec	1	12/21/2021 12:19:44 AM	R84705

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-211214 (Dup)
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/14/2021 8:13:00 AM
Lab ID: 2112A45-004
Matrix: DRINKING W
Received Date: 12/15/2021 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Toluene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Ethylbenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Naphthalene	ND	2.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
2-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Acetone	ND	10		µg/L	1	12/21/2021 12:46:18 AM	R84705
Bromobenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Bromodichloromethane	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Bromoform	5.3	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Bromomethane	ND	3.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
2-Butanone	ND	10		µg/L	1	12/21/2021 12:46:18 AM	R84705
Carbon disulfide	ND	10		µg/L	1	12/21/2021 12:46:18 AM	R84705
Carbon Tetrachloride	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Chlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Chloroethane	ND	2.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Chloroform	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Chloromethane	ND	3.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
2-Chlorotoluene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
4-Chlorotoluene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
cis-1,2-DCE	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Dibromochloromethane	2.3	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Dibromomethane	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,1-Dichloroethane	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,1-Dichloroethene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,2-Dichloropropane	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,3-Dichloropropane	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
2,2-Dichloropropane	ND	2.0		µg/L	1	12/21/2021 12:46:18 AM	R84705

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-211214 (Dup)
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/14/2021 8:13:00 AM
Lab ID: 2112A45-004 **Matrix:** DRINKING W **Received Date:** 12/15/2021 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Hexachlorobutadiene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
2-Hexanone	ND	10		µg/L	1	12/21/2021 12:46:18 AM	R84705
Isopropylbenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
4-Isopropyltoluene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
4-Methyl-2-pentanone	ND	10		µg/L	1	12/21/2021 12:46:18 AM	R84705
Methylene Chloride	ND	3.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
n-Butylbenzene	ND	3.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
n-Propylbenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
sec-Butylbenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Styrene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
tert-Butylbenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
trans-1,2-DCE	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Trichlorofluoromethane	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Vinyl chloride	ND	1.0		µg/L	1	12/21/2021 12:46:18 AM	R84705
Xylenes, Total	ND	1.5		µg/L	1	12/21/2021 12:46:18 AM	R84705
Surr: 1,2-Dichloroethane-d4	99.0	70-130		%Rec	1	12/21/2021 12:46:18 AM	R84705
Surr: 4-Bromofluorobenzene	97.2	70-130		%Rec	1	12/21/2021 12:46:18 AM	R84705
Surr: Dibromofluoromethane	107	70-130		%Rec	1	12/21/2021 12:46:18 AM	R84705
Surr: Toluene-d8	105	70-130		%Rec	1	12/21/2021 12:46:18 AM	R84705

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-211214
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/14/2021 8:30:00 AM
Lab ID: 2112A45-005
Matrix: DRINKING W
Received Date: 12/15/2021 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Toluene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Ethylbenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Naphthalene	ND	2.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
2-Methylnaphthalene	ND	4.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Acetone	ND	10		µg/L	1	12/21/2021 1:12:53 AM	R84705
Bromobenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Bromodichloromethane	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Bromoform	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Bromomethane	ND	3.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
2-Butanone	ND	10		µg/L	1	12/21/2021 1:12:53 AM	R84705
Carbon disulfide	ND	10		µg/L	1	12/21/2021 1:12:53 AM	R84705
Carbon Tetrachloride	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Chlorobenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Chloroethane	ND	2.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Chloroform	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Chloromethane	ND	3.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
2-Chlorotoluene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
4-Chlorotoluene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
cis-1,2-DCE	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Dibromochloromethane	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Dibromomethane	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,1-Dichloroethane	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,1-Dichloroethene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,2-Dichloropropane	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,3-Dichloropropane	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
2,2-Dichloropropane	ND	2.0		µg/L	1	12/21/2021 1:12:53 AM	R84705

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-211214
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/14/2021 8:30:00 AM
Lab ID: 2112A45-005
Matrix: DRINKING W
Received Date: 12/15/2021 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Hexachlorobutadiene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
2-Hexanone	ND	10		µg/L	1	12/21/2021 1:12:53 AM	R84705
Isopropylbenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
4-Isopropyltoluene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
4-Methyl-2-pentanone	ND	10		µg/L	1	12/21/2021 1:12:53 AM	R84705
Methylene Chloride	ND	3.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
n-Butylbenzene	ND	3.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
n-Propylbenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
sec-Butylbenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Styrene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
tert-Butylbenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Tetrachloroethene (PCE)	16	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
trans-1,2-DCE	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Trichlorofluoromethane	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Vinyl chloride	ND	1.0		µg/L	1	12/21/2021 1:12:53 AM	R84705
Xylenes, Total	ND	1.5		µg/L	1	12/21/2021 1:12:53 AM	R84705
Surr: 1,2-Dichloroethane-d4	99.7	70-130		%Rec	1	12/21/2021 1:12:53 AM	R84705
Surr: 4-Bromofluorobenzene	94.0	70-130		%Rec	1	12/21/2021 1:12:53 AM	R84705
Surr: Dibromofluoromethane	105	70-130		%Rec	1	12/21/2021 1:12:53 AM	R84705
Surr: Toluene-d8	104	70-130		%Rec	1	12/21/2021 1:12:53 AM	R84705

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2112A45**
28-Dec-21

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

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R84705**	RunNo: **84705**
Prep Date:	Analysis Date: **12/20/2021**	SeqNo: **2978557** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	88.8	70	130			
Toluene	18	1.0	20.00	0	92.1	70	130			
Chlorobenzene	17	1.0	20.00	0	84.3	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	85.7	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	86.7	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	9.3		10.00		92.9	70	130			
Surr: Toluene-d8	9.7		10.00		97.0	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R84705**	RunNo: **84705**
Prep Date:	Analysis Date: **12/20/2021**	SeqNo: **2978579** 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 Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
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 Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2112A45**
28-Dec-21

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

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R84705**	RunNo: **84705**
Prep Date:	Analysis Date: **12/20/2021**	SeqNo: **2978579** 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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2112A45**

28-Dec-21

Client: City of Las Cruces

Project: Joint Superfund Project Monthly Analysis

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R84705**	RunNo: **84705**
Prep Date:	Analysis Date: **12/20/2021**	SeqNo: **2978579** 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		93.6	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.1	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.0	70	130			
Surr: Toluene-d8	9.4		10.00		93.9	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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: City of Las Cruces Work Order Number: 2112A45 RcptNo: 1

Received By: **Joseph Alderette** 12/15/2021 10:10:00 AM

Completed By: **Tracy Casarrubias** 12/16/2021 10:43:15 AM

Reviewed By: JR 12/16/21

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 ☐
   Samples not frozen.
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. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
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: MRG 12/16/21

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	Not Present			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
Mailing Address: P.O. Box 20000
Las Cruces NM 88004
Phone #: 575-528-3607
email or Fax#: lguerra@las-cruces.org
QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush
Project Name: Joint Superfund Project
Monthly Analysis
Project #:
CLC JSP Griggs Walnut
Project Manager:
Luis Guerra (575)-528-3607
Sampler: Evangelina Dominguez
On Ice: ☐ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): -0.4 -0.3 = -0.1 (°C)

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2112A45	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) (VOC)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12/14/21	0803	Drinking water	CLC 18-2111A 2112A14	3-Home vials	HgCl2	001								X		
	0811		CLC IS1-2112A14			002								X		
	0813		CLC ES1-2112A14			003								X		
	0813		CLC ES1-2112A14 (Dup)			004								X		
12/14/21	0830	Drinking water	CLC 27-2112A14	3-Home vials	HgCl2	005								X		

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
12/14/21	1200			Fedex	12-15-21	10:10
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Send Results:
Luis Guerra: lguerra@lascruces.org
Joshua Rosenblatt@las-cruces.org
(Send invoice 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.

Appendix F

Letter Sent to Agencies and Agency Responses

DBS&A
Daniel B. Stephens & Associates, Inc.

Joint Superfund Project

City of Las Cruces and Doña Ana County

April 18, 2022

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 issued a Consent Decree (CD) with a July 30, 2020 effective date.

In accordance with the CD Statement of Work, Paragraph 11.e., an Institutional Control Implementation and Assurance Plan (ICIAP) was previously 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. Thank you for providing us feedback last year related to any releases during 2020. We are requesting any information related to releases during 2021 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

We truly appreciate your consideration in this matter and hope we can receive your response prior to May 13, 2022, 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

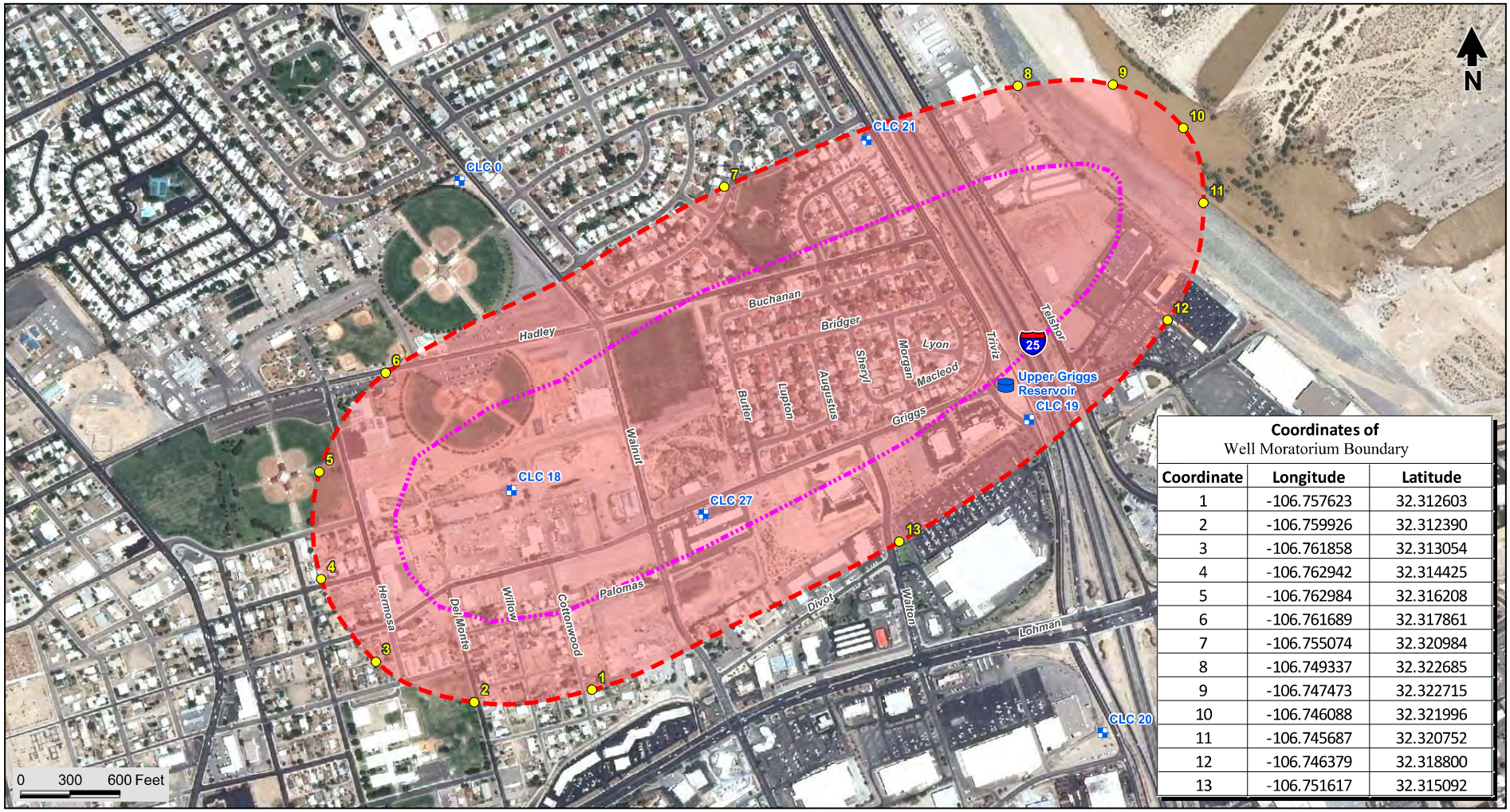
Sincerely,



Adrienne L. Widmer, P.E.
Project Coordinator, Griggs and Walnut Groundwater Plume Superfund Site
Assistant Utilities Director, City of Las Cruces Utilities

Attachment: As noted

cc: Delilah A. Walsh, Las Cruces Utilities Director, via email
Dave Medeiros, Attorney Contract Attorney, Dona Ana County and JSP, via email
Michelle Hunter, Bureau Chief, NMED Ground Water Quality Bureau, via email
Karen Menetrey, Program Manager, Remediation Oversight Section,
Ground Water Quality Bureau, via email
Dana Bahar, Bureau Chief, NMED Petroleum Storage Tank Bureau, via email
Martyne Kieling, NMED Superfund Oversight Section, via email
Anthony McGlown, NMED Superfund Oversight Section, via email
Grace Herrmann, E.I., 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
- PCE in groundwater greater than 5 µg/L
- Well moratorium boundary
- Coordinate of well moratorium boundary

Sources: 1. National Agricultural Imagery Program
August 2009
Downloaded from RGIS
2. JSAI, 2009

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Daniel B. Stephens & Associates, Inc.
2/14/2019 JN ES09.0306

GRIGGS-WALNUT GROUND WATER PLUME SITE
Well Moratorium Boundary

Figure 1

From:	Garman, Mark, ENV
To:	awidmer
Cc:	Delilah Walsh; Medeiros, David; Hunter, Michelle, NMENV; Menetrey, Karen, ENV; Bahar, Dana, ENV; Kieling, Martyne, ENV; McGlown, Anthony, ENV; Herrmann, Grace
Subject:	RE: [EXTERNAL] Griggs and Walnut Ground Water Plume Superfund Site - Institutional Controls and Assurance
Date:	Monday, April 18, 2022 12:47:03 PM

Hello Adrienne,

The NMED Superfund Oversight Section is not aware of any releases within the Griggs and Walnut Superfund Site Well Moratorium footprint since your last inquiry in June 2021.

Thank you,

Mark Garman, Manager
Superfund Oversight Section
New Mexico Environment Department
Ground Water Quality Bureau
1190 St Francis Drive, Santa Fe, NM 87505
(Office) 505-660-8464
mark.garman@state.nm.us
www.env.nm.gov

From: Adrienne Widmer <awidmer@las-cruces.org>
Sent: Monday, April 18, 2022 11:18 AM
To: Garman, Mark, ENV <Mark.Garman@state.nm.us>
Cc: Delilah Walsh <dwalsh@las-cruces.org>; Medeiros, David <davem@donaanacounty.org>; Hunter, Michelle, NMENV <Michelle.Hunter@state.nm.us>; Menetrey, Karen, ENV <karen.menetrey@state.nm.us>; Bahar, Dana, ENV <dana.bahar@state.nm.us>; Kieling, Martyne, ENV <Martyne.Kieling@state.nm.us>; McGlown, Anthony, ENV <Anthony.McGlown@state.nm.us>; Herrmann, Grace <gherrmann@geo-logic.com>
Subject: [EXTERNAL] Griggs and Walnut Ground Water Plume Superfund Site - Institutional Controls and Assurance
Importance: High

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Hi Mark,

Hope all is well with you. Attached is a letter being sent out today requesting information related to the institutional controls for the GW Superfund project.
Please feel free to respond via email, and if you have any questions or need additional information, please let me know.

Look forward to hearing from you and thank you!

Adrienne L. Widmer, P.E.
Assistant Director/Las Cruces Utilities/Administration
Direct: 575-528-4566 Main: 575-528-3500, Fax: 575-528-3691, awidmer@las-cruces.org



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Joint Superfund Project

City of Las Cruces and Doña Ana County

April 18, 2022

Mr. Craig Cathey
District IV Supervisor
New Mexico Office of the State Engineer
1680 Hickory Loop, Suite J
Las Cruces, NM 88005-6598

Dear Mr. Cathey:

Thank you for your office's 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 Dam 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 issued a Consent Decree (CD) with a July 30, 2020 effective date. In accordance with the CD Statement of Work, Paragraph 11.e., an Institutional Control Implementation and Assurance Plan (ICIAP) was previously developed and approved by 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. Thank you for providing us feedback last year for 2020. We are requesting if any activities related to the Order inside the plume footprint during 2021 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 Dam 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.

Thank you for your consideration in this matter and hope we can receive your response prior to May 13, 2022, 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

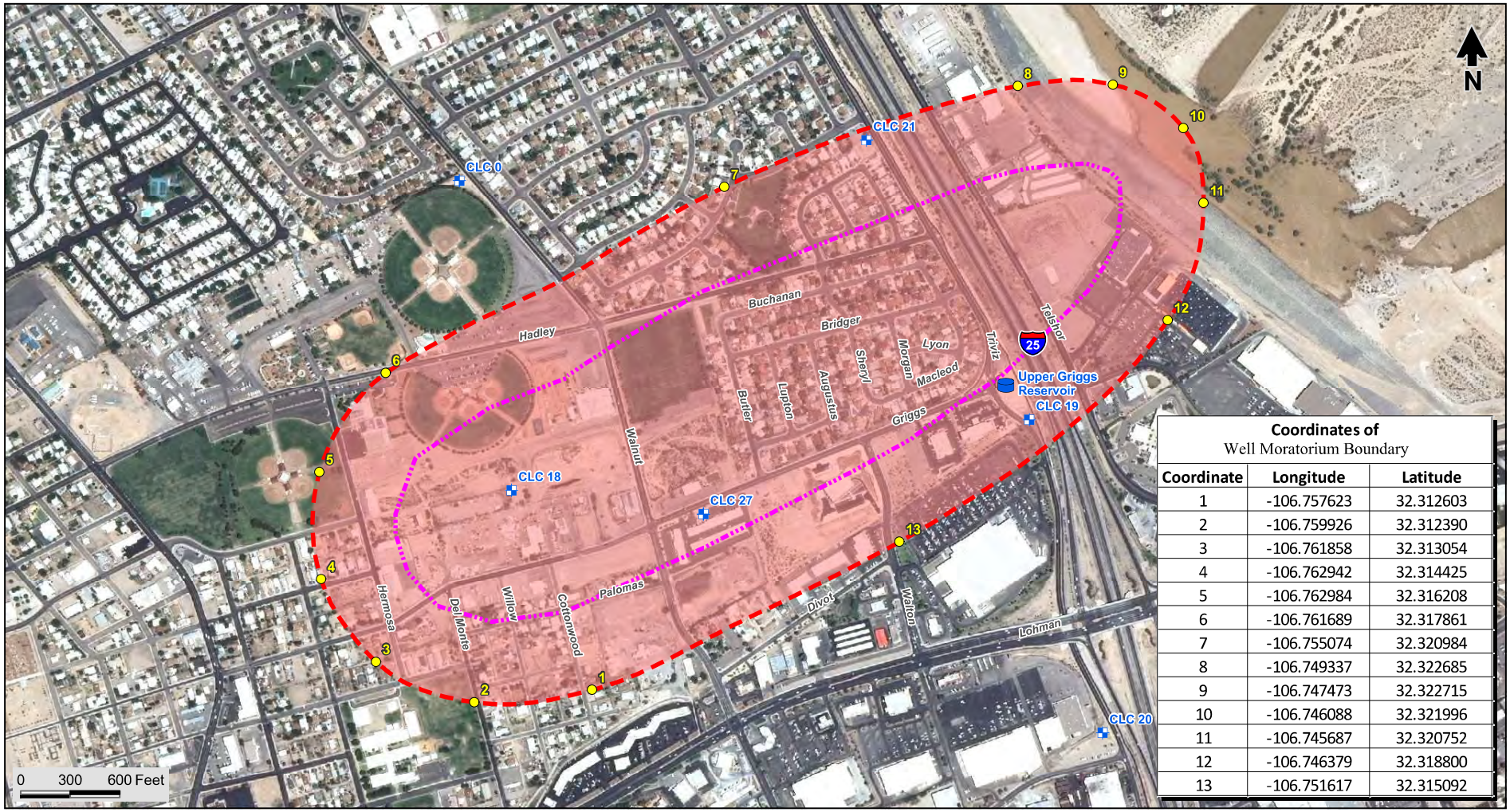
Sincerely,



Adrienne L. Widmer, P.E.
Project Coordinator, Griggs and Walnut Groundwater Plume Superfund Site
Assistant Utilities Director, City of Las Cruces Utilities

Attachment: As noted

cc: Delilah A. Walsh, Las Cruces Utilities Director, via email
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
Grace Herrmann, E.I., 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
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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
- PCE in groundwater greater than 5 µg/L
- Well moratorium boundary
- Coordinate of well moratorium boundary

Sources: 1. National Agricultural Imagery Program
August 2009
Downloaded from RGIS
2. JSAI, 2009

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Daniel B. Stephens & Associates, Inc.
2/14/2019 JN ES09.0306

GRIGGS-WALNUT GROUND WATER PLUME SITE
Well Moratorium Boundary

Figure 1

From:	Cathey, Craig D., OSE
To:	awidmer
Cc:	Delilah Walsh; Medeiros, David; Pohl, Jerri, OSE; Herrmann, Grace
Subject:	RE: [EXTERNAL] Griggs and Walnut Ground Water Plume Superfund Site - Institutional Control Implementation and Assurance
Date:	Monday, April 18, 2022 12:12:00 PM

Hi Adrienne,

My response is the same as Andrea's response last year (thanks for sending that). A search of our records did not find any new appropriations of groundwater including NMSA 72-12-1.1, 72-12-1.2 or 72-12-1.3 wells within the plume footprint during 2021. There have also been no transfers of water to existing wells within the plume footprint during 2021.

Thank you,
Craig

From: Adrienne Widmer <awidmer@las-cruces.org>
Sent: Monday, April 18, 2022 11:30 AM
To: Cathey, Craig D., OSE <craig.cathey@state.nm.us>
Cc: Delilah Walsh <dwalsh@las-cruces.org>; Medeiros, David <davem@donaanacounty.org>; Pohl, Jerri, OSE <Jerri.Pohl@state.nm.us>; Herrmann, Grace <gherrmann@geo-logic.com>
Subject: [EXTERNAL] Griggs and Walnut Ground Water Plume Superfund Site - Institutional Control Implementation and Assurance
Importance: High

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Hi Craig,

Annually we are required to obtain responses from different agencies related to the GW Superfund project.
Attached is the letter we are sending out today to you. I have also attached the response we obtained last year, just in case it is helpful.

Please feel free to respond via email, and if you have any questions or need additional information, please let me know.

Thank you and we look forward to hearing from you.

Adrienne L. Widmer, P.E.
Assistant Director/Las Cruces Utilities/Administration
Direct: 575-528-4566 Main: 575-528-3500, Fax: 575-528-3691, awidmer@las-cruces.org
City of Las Cruces
P.O. BOX 20000 • LAS CRUCES, NM 88004

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Joint Superfund Project

City of Las Cruces and Doña Ana County

April 18, 2022

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 Consent Decree (CD) with a July 30, 2020 effective date.

In accordance with the CD Statement of Work, Paragraph 11.e., an Institutional Control Implementation and Assurance Plan (ICIAP) was previously 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. Thank you for providing us feedback last year related to any releases during 2020. We are requesting any information related to releases during 2021 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

We truly appreciate your consideration in this matter and hope we can receive your response prior to May 13, 2022, 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

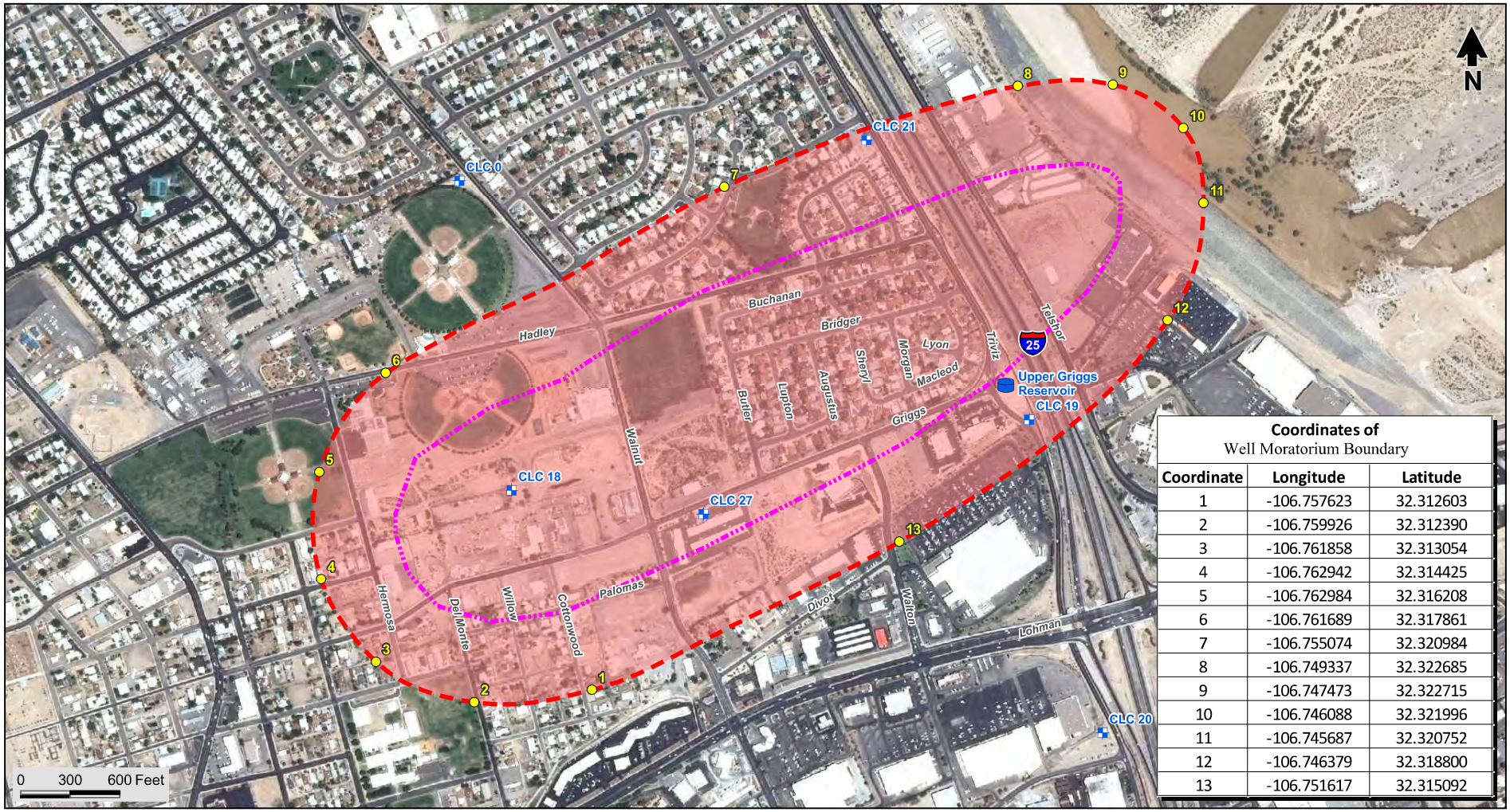
Sincerely,



Adrienne L. Widmer, P.E.
Project Coordinator, Griggs and Walnut Groundwater Plume Superfund Site
Assistant Utilities Director, City of Las Cruces Utilities

Attachment: As noted

cc: Delilah A. Walsh, Las Cruces Utilities Director, via email
Dave Medeiros, Attorney Contract Attorney, Dona Ana County and JSP, via email
Michelle Hunter, Bureau Chief, NMED Ground Water Quality Bureau, via email
Karen Menetrey, Program Manager, Remediation Oversight Section,
Ground Water Quality Bureau, via email
Dana Bahar, Bureau Chief, NMED Petroleum Storage Tank Bureau, via email
Martyne Kieling, NMED Superfund Oversight Section, via email
Anthony McGlown, NMED Superfund Oversight Section, via email
Grace Herrmann, E.I., 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
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August 2009
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Daniel B. Stephens & Associates, Inc.
2/14/2019 JN ES09.0306

GRIGGS-WALNUT GROUND WATER PLUME SITE
Well Moratorium Boundary

Figure 1

From: Goerger, Lorena, ENV
To: awidmer; Godwin, Joe, ENV
Cc: Herrmann, Grace; Raucci, Jason
Subject: RE: [EXTERNAL] Griggs and Walnut Ground Water Plume Superfund Site - Institutional Controls and Assurance
Date: Thursday, May 12, 2022 11:33:04 AM

Hello Adrienne,

I've looked through the database and I don't see any new releases in the outlined area.

If you have other questions, or need other information, please let us know.

Thank you
Lorena

Lorena Goerger
cell: (505) 670-9618

From: Adrienne Widmer <awidmer@las-cruces.org>
Sent: Monday, May 9, 2022 10:57 AM
To: Goerger, Lorena, ENV <lorena.goerger@state.nm.us>; Bahar, Dana, ENV <dana.bahar@state.nm.us>; Godwin, Joe, ENV <joe.godwin@state.nm.us>
Cc: Herrmann, Grace <gherrmann@geo-logic.com>; Raucci, Jason <jraucci@geo-logic.com>
Subject: RE: [EXTERNAL] Griggs and Walnut Ground Water Plume Superfund Site - Institutional Controls and Assurance

Thank you Lorena!

Adrienne L. Widmer, P.E.
Assistant Director/Las Cruces Utilities/Administration
Direct: 575-528-4566 Main: 575-528-3500, Fax: 575-528-3691, awidmer@las-cruces.org
City of Las Cruces
P.O. BOX 20000 • LAS CRUCES, NM 88004

From: Goerger, Lorena, ENV <lorena.goerger@state.nm.us>
Sent: Monday, May 9, 2022 10:45 AM
To: Adrienne Widmer <awidmer@las-cruces.org>; Bahar, Dana, ENV <dana.bahar@state.nm.us>; Godwin, Joe, ENV <joe.godwin@state.nm.us>
Cc: Herrmann, Grace <gherrmann@geo-logic.com>; Raucci, Jason <jraucci@geo-logic.com>
Subject: RE: [EXTERNAL] Griggs and Walnut Ground Water Plume Superfund Site - Institutional Controls and Assurance

Hello Adrienne,

I'll be looking at it this week. I don't think there have been any new releases, but I will double check.

Lorena

Lorena Goerger
cell: (505) 670-9618

From: Adrienne Widmer <awidmer@las-cruces.org>
Sent: Monday, May 9, 2022 9:18 AM
To: Bahar, Dana, ENV <dana.bahar@state.nm.us>; Goerger, Lorena, ENV <lorena.goerger@state.nm.us>; Godwin, Joe, ENV <joe.godwin@state.nm.us>
Cc: Herrmann, Grace <gherrmann@geo-logic.com>; Raucci, Jason <jraucci@geo-logic.com>
Subject: [EXTERNAL] Griggs and Walnut Ground Water Plume Superfund Site - Institutional Controls and Assurance
Importance: High

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Lorena and/or Joe,

Have you had an opportunity to review?
We would love to have a response before May 13, 2022.
Previous responses have stated that there has been no releases affecting the plume for the year.
Please let me know if you have any questions, and an email suffices.

Thanks so much!

Adrienne L. Widmer, P.E.
Assistant Director/Las Cruces Utilities/Administration
Direct: 575-528-4566 Main: 575-528-3500, Fax: 575-528-3691, awidmer@las-cruces.org
City of Las Cruces
P.O. BOX 20000 • LAS CRUCES, NM 88004

From: Bahar, Dana, ENV <dana.bahar@state.nm.us>
Sent: Monday, April 18, 2022 11:34 AM
To: Adrienne Widmer <awidmer@las-cruces.org>
Cc: Goerger, Lorena, ENV <lorena.goerger@state.nm.us>; Godwin, Joe, ENV <joe.godwin@state.nm.us>
Subject: RE: [EXTERNAL] Griggs and Walnut Ground Water Plume Superfund Site - Institutional Controls and Assurance

Hi Adrienne,

I am no longer with the PSTB. I am forwarding this to Lorena Goerger and Joe Godwin who will work with staff and respond to you accordingly.

Respectfully,

Dana Bahar
Acting Director, Environmental Protection Division
Cell Phone: (505) 660-4307 **Please note new number**
dana.bahar@state.nm.us
Twitter @NMEnvDep; #IamNMED.
https://www.env.nm.gov/

From: Adrienne Widmer <awidmer@las-cruces.org>
Sent: Monday, April 18, 2022 11:20 AM
To: Bahar, Dana, ENV <dana.bahar@state.nm.us>
Cc: Delilah Walsh <dwalsh@las-cruces.org>; Medeiros, David <davem@donaanacounty.org>; Hunter, Michelle, NMENV <Michelle.Hunter@state.nm.us>; Menetrey, Karen, ENV <karen.menetrey@state.nm.us>; Kieling, Martyne, ENV <Martyne.Kieling@state.nm.us>; McGlown, Anthony, ENV <Anthony.McGlown@state.nm.us>; Herrmann, Grace <gherrmann@geo-logic.com>
Subject: [EXTERNAL] Griggs and Walnut Ground Water Plume Superfund Site - Institutional Controls and Assurance
Importance: High

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Hi Dana,

Hope all is well with you. Attached is a letter being sent out today requesting information related to the institutional controls for the GW Superfund project.
Please feel free to respond via email, and if you have any questions or need additional information, please let me know.

Look forward to hearing from you and thank you!

Adrienne L. Widmer, P.E.
Assistant Director/Las Cruces Utilities/Administration
Direct: 575-528-4566 Main: 575-528-3500, Fax: 575-528-3691, awidmer@las-cruces.org
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Appendix G

Data Validation Report

DBS&A
Daniel B. Stephens & Associates, Inc.

Appendix G. Data Validation Report

A total of 124 samples were collected between January 25 and December 17, 2021 as part of the Griggs-Walnut Ground Water Plume Superfund Site (GWP site) remedial action. These samples include 81 remediation system (process) samples collected by City of Las Cruces (CLC) staff and 43 samples associated with the annual sampling event completed between December 14 and 17, 2021 collected by Daniel B. Stephens & Associates, Inc. (DBS&A). During the annual event, samples were primarily collected using a dedicated Hydrasleeve, with 2 samples collected using bladder pumps. 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 electronic data deliverables (EDDs). Analyses included volatile organic compounds (VOCs) using U.S. Environmental Protection Agency (EPA) method 8260B, and dissolved and total uranium and arsenic using EPA method 200.8. Table G-1 summarizes the groundwater samples that were required to be collected for the annual event, along with those actually collected.

Table G-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 project sampling and analysis plan (SAP).

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 2 matrix spikes (MSs) and matrix spike duplicates (MSDs) were analyzed at a frequency of approximately 6 percent of the primary samples collected during the annual sampling event. A total of 20 field duplicate samples were analyzed, including 1 per month for process sampling along with 4 quarterly air samples, and at a frequency of 13 percent for the annual sampling event.

QC for the air and water samples is evaluated in Table G-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.

- One sample location included in the groundwater sampling plan was not sampled as part of the annual sampling event. MW-5 was not sampled because the well was dry. Between monthly process sampling and the annual sampling event, the SAP called for a total of 93 primary samples to be collected during this period. There were a total of 92 primary samples included in the data verification and validation process, which is approximately 99 percent. Data completeness meets the control limit of 90 percent.
- The SAP states that a temperature blank can be provided by the analytical laboratory and included in each sample cooler, or that the laboratory performing the analysis may elect to measure temperature of samples by use of infrared thermometer. Temperature blanks were not listed as samples on any of the chain of custody forms associated with the process sampling completed by CLC staff. HEAL monitored the temperature of incoming samples using an infrared thermometer. The laboratory reported that most samples were received at the appropriate temperature except for process samples collected December 14, 2021. The temperature of these samples was indicated as being less than 0°C. Because the samples were not frozen, no flags were issued by the laboratory, and follow-up communication confirmed that sample results were not impacted by temperature. Temperature blanks were submitted with each cooler during the annual sampling event, and the laboratory reported that the samples were received within the required temperature range.
- As part of the data validation process, approximately 10 percent of the EDD sample results (2 of 17) were reviewed against the PDF deliverable to verify consistency. No discrepancies were identified as a result of this review.
- All analytical results are reported in units of micrograms per liter (µg/L). The method detection limit and reporting limit (reported as practical quantitation limits [PQLs]) for each analyte were below the maximum contaminant levels for all samples. No samples were diluted. The sensitivity requirements for the analyses were satisfied.
- Results from 18 laboratory control sample (LCS) analyses were provided by HEAL. LCS recoveries were provided for EPA method 300.8 analyses of arsenic and uranium. Accuracy of the LCS analyses is acceptable, with recoveries ranging between 92 and 102 percent (compared to control limits of 85 to 115 percent). LCS recoveries were provided for EPA method 8260B analyses for benzene, toluene, chlorobenzene, 1,1-dichloroethene (1,1-DCE), and trichloroethene (TCE). Accuracy of the LCS analyses is acceptable, with recoveries ranging from 81 to 111 percent (compared to control limits of 70 to 130 percent).

- HEAL provided results for 2 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 89 to 109 percent (compared to control limits of 70 to 130 percent). The maximum relative percent difference (RPD) between MS and MSD recoveries was 5 percent for 1,1-DCE and TCE (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.
- Equipment blanks are required to be submitted at a rate of one per day when non-dedicated sampling equipment is used. Equipment blanks were collected on December 14 and 17, 2021—one for each day a bladder pump was used during the annual sampling event. The equipment blank submitted on December 14, 2021 had positive detections for chloroform, bromodichloromethane, and dibromochloromethane, with the results included in Table G-4. These contaminants are known disinfectant byproducts and are most likely associated with the source water used to collect the equipment blanks. None of these analytes were detected in any of the samples submitted with the batch and therefore no flags were issued.
- Field blanks were required to be collected at a frequency of 10 percent during the annual sampling event. Results from 4 field blanks were provided out of 29 primary samples, which exceeds the minimum requirement of 3 samples. None of the field blank samples had any positive detections.
- Trip blanks are required to be submitted at a rate of 1 per sample cooler during process and annual sampling. Trip blanks are typically supplied by the laboratory and are transported with the sample containers to the field site and back again. Trip blanks were not submitted during process sampling. Two coolers were used to store and transport samples during the groundwater sampling, and 2 trip blanks were submitted for analyses; this frequency meets the QC criteria. Analysis of the trip blanks did not result in any positive detections.
- A total of 20 sets of field duplicate samples were submitted to HEAL as part of the QC criteria, including 16 groundwater samples and 4 air stripper samples. Field duplicates are required at a rate of 1 per month for process sampling, 1 per quarter for vapor sampling, and at a rate of 10 percent during the annual sampling event. For process sampling, 13 sets of process sample duplicates were submitted, which is above the appropriate rate of 1 per month. For vapor sampling, quarterly duplicates were submitted. For the annual event,

3 sets of duplicates were submitted out of 29 primary samples, which meets QC criteria. Precision is evaluated based on a maximum allowable RPD of 50 percent. The maximum RPD for each duplicate sample with a detection is provided in Table G-5. Of the 20 duplicate sets of samples, 19 met the QC criteria. An RPD value greater than 50 percent was calculated for 1 analyte associated with sample CLC AS1-210430 DUP. Although the calculated RPD is greater than the acceptance criteria, the data are considered acceptable based on the consistency of results with prior data, the results of the laboratory verification processes, and the results from other field QA/QC samples.

Performance was acceptable with the following exceptions:

- Trip blanks were not submitted with the 12 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.
- Based on Tables 9 and 10 in the SAP, duplicate sample IDs should be recorded with the sample ID name followed by "_DUP." Several duplicate samples collected did not follow this criterion. In total, seven different identifiers for duplicate samples were submitted, with one sample having no indication it was collected as a duplicate. Although the sample IDs did not follow SAP guidance, the identification and subsequent analyses of the samples were not compromised and the data are considered acceptable.

Table G-1. Groundwater Samples Collected

Well Name	Required Number of Samples	Actual Number of Samples
CLC 18	1	1
CLC 27	1	1
CLC 19	0	1
CLC 20	0	1
CLC 21	0	1
GWMW-01-S	1	1
GWMW-01-I	1	1
GWMW-01-D	1	1
GWMW-08-S	1	1
GWMW-08-D	1	1
GWMW-09-S	1	1
GWMW-09-D1	1	1
GWMW-09-D2	1	1
GWMW-10-S	1	1
GWMW-10-I	1	1
GWMW-10-D	1	1
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	1
MW-SF5	1	1
MW-SF9	1	1
MW-SF10	1	1
NGMW-01	1	1
NGMW-02	1	1
NGMW-03	1	1

Table G-2. Sample Information
Page 1 of 4

Client Sample ID	Sample Date	Lab Sample ID	Dilutions / Comments
CLC 18-210125	1/25/2021	2101940-001a	No dilution
CLC 27-210125	1/25/2021	2101940-002a	No dilution
CLC 27-210125-Dup	1/25/2021	2101940-003a	No dilution/field duplicate
CLC IS1-210125	1/25/2021	2101940-004a	No dilution
CLC ES1-210125	1/25/2021	2101940-005a	No dilution
CLC 18-210223	2/23/2021	2102B60-001	No dilution
CLC 27-210223	2/23/2021	2102B60-002	No dilution
CLC IS1-210223	2/23/2021	2102B60-003	No dilution
CLC ES1-210223	2/23/2021	2102B60-004	No dilution
CLC ES1-210223 Dup	2/23/2021	2102B60-005	No dilution/field duplicate
CLC 18-210323	3/23/2021	2103b67-001a	No dilution
CLC 18-210323	3/23/2021	2103b67-002a	No dilution
CLC 27-210323	3/23/2021	2103b67-003a	No dilution
CLC IS1-210323	3/23/2021	2103b67-004a	No dilution
CLC IS1-210323-D	3/23/2021	2103b67-005a	No dilution/field duplicate
CLC C1-210323	3/23/2021	2103b67-006a	No dilution
CLC C2-210323	3/23/2021	2103b67-007a	No dilution
CLC ES1-210323	3/23/2021	2103b67-008a	No dilution
CLC AS1-210323	3/23/2021	2103b71-001a	No dilution
CLC AS2-210323	3/23/2021	2103b71-002a	No dilution
CLC AS2-210323-DUP	3/23/2021	2103b71-003a	No dilution/field duplicate
CLC 18-210430	4/30/2021	2105081-001a	No dilution
CLC 18-210430 Dup	4/30/2021	2105081-002a	No dilution/field duplicate
CLC IS1-210430	4/30/2021	2105081-003a	No dilution
CLC C1-210430	4/30/2021	2105081-004a	No dilution
CLC C2-210430	4/30/2021	2105081-005a	No dilution
CLC ES1-210430	4/30/2021	2105081-006a	No dilution
CLC 27-210430	4/30/2021	2105081-007a	No dilution
CLC AS1-210430	4/30/2021	2105158-001a	No dilution
CLC AS1-210430 DUP	4/30/2021	2105158-002a	No dilution/field duplicate
CLC AS2-210430	4/30/2021	2105158-003a	No dilution
CLC 18-210525	5/25/2021	2105b10-001a	No dilution

Table G-2. Sample Information
Page 2 of 4

Client Sample ID	Sample Date	Lab Sample ID	Dilutions / Comments
CLC 27-210525	5/25/2021	2105b10-002a	No dilution
CLC 27-210525 Dup	5/25/2021	2105b10-003a	No dilution/field duplicate
CLC IS1-210525	5/25/2021	2105b10-004a	No dilution
CLC ES1-210525	5/25/2021	2105b10-005a	No dilution
CLC 18.210615	6/15/2021	2106840-001a	No dilution
CLC 27.210615	6/15/2021	2106840-002a	No dilution
CLC IS1.210615	6/15/2021	2106840-003a	No dilution
CLC ES1.210615	6/15/2021	2106840-004a	No dilution
CLC ES1.210615 DUP	6/15/2021	2106840-005a	No dilution/field duplicate
CLC 18-210727	7/27/2021	2107D94-001a	No dilution
CLC 27-210727	7/27/2021	2107D94-002a	No dilution
CLC IS1-210727	7/27/2021	2107D94-003a	No dilution
CLC IS1-210727 DUP	7/27/2021	2107D94-004a	No dilution/field duplicate
CLC ES1-210727	7/27/2021	2107D94-005a	No dilution
CLC 18-210826	8/26/2021	2108F97-001a	No dilution
CLC 27-210826	8/26/2021	2108F97-002a	No dilution
CLC IS1-210826	8/26/2021	2108F97-003a	No dilution
CLC C1-210826	8/26/2021	2108F97-004a	No dilution
CLC C1 DUP -210826	8/26/2021	2108F97-005a	No dilution/field duplicate
CLC C2-210826	8/26/2021	2108F97-006a	No dilution
CLC ES1-210826	8/26/2021	2108F97-007a	No dilution
CLC AS1 - 210826	8/26/2021	2108F93-001a	No dilution
CLC AS2 - 210826	8/26/2021	2108F93-002a	No dilution
CLC AS2 - DUP- 210826	8/26/2021	2108F93-003a	No dilution/field duplicate
CLC 18-210921	9/21/2021	2109D61-001a	No dilution
CLC 18-210921 DUP	9/21/2021	2109D61-002a	No dilution/field duplicate
CLC 27-210921	9/21/2021	2109D61-003a	No dilution
CLC IS1-210921	9/21/2021	2109D61-004a	No dilution
CLC ES1-210921	9/21/2021	2109D61-005a	No dilution
CLC 18 - 211014	10/14/2021	2110747-001a	No dilution
CLC 27 - 211014	10/14/2021	2110747-002a	No dilution
CLC IS1 - 211014	10/14/2021	2110747-003a	No dilution

Table G-2. Sample Information
Page 3 of 4

Client Sample ID	Sample Date	Lab Sample ID	Dilutions / Comments
CLC C1 - 211014	10/14/2021	2110747-004a	No dilution
CLC C2 - 211014	10/14/2021	2110747-005a	No dilution
CLC C2 - 211014 Dup	10/14/2021	2110747-006a	No dilution/field duplicate
CLC ES1 - 211014	10/14/2021	2110747-007a	No dilution
CLC AS1 -211014	10/14/2021	2110758-001a	No dilution
CLC AS2 -211014	10/14/2021	2110758-002a	No dilution
CLC AS2 -211014 Dup	10/14/2021	2110758-003a	No dilution/field duplicate
CLC 18-211123	11/23/2021	2111C23-001a	No dilution
CLC 27-211123	11/23/2021	2111C23-002a	No dilution
CLC 27-211123 DUP	11/23/2021	2111C23-003a	No dilution/field duplicate
CLC IS1-211123	11/23/2021	2111C23-004a	No dilution
CLC ES1-211123	11/23/2021	2111C23-005a	No dilution
CLC 18-211214	12/14/2021	2112a45-001a	No dilution
CLC IS1-211214	12/14/2021	2112a45-002a	No dilution
CLC ES1-211214	12/14/2021	2112a45-003a	No dilution
CLC ES1-211214 (Dup)	12/14/2021	2112a45-004a	No dilution/field duplicate
CLC 27-211214	12/14/2021	2112a45-005a	No dilution
CLC 18	12/16/2021	2112B80-001a	No dilution
CLC 27	12/16/2021	2112B80-002a	No dilution
CLC19	12/17/2021	2112b80-003a	No dilution
CLC20	12/14/2021	2112b80-004a	No dilution
CLC20_Dup	12/14/2021	2112b80-005a	No dilution/field duplicate
CLC21	12/14/2021	2112b80-006a	No dilution
GWMW01-S	12/16/2021	2112b80-007a	No dilution
GWMW01-I	12/16/2021	2112b80-008a	No dilution
GWMW01-D	12/16/2021	2112b80-009a	No dilution
GWMW08-S	12/15/2021	2112b80-010a	No dilution
GWMW08-D	12/15/2021	2112b80-011a	No dilution
GWMW09-S	12/16/2021	2112b80-012a	No dilution
GWMW09-D1	12/16/2021	2112b80-013a	No dilution
GWMW09-D2	12/16/2021	2112b80-016a	No dilution
GWMW10-S	12/16/2021	2112b80-017a	No dilution

Table G-2. Sample Information
Page 4 of 4

Client Sample ID	Sample Date	Lab Sample ID	Dilutions / Comments
GWMW10-S_Dup	12/16/2021	2112b80-018a	No dilution/field duplicate
GWMW10-I	12/16/2021	2112b80-019a	No dilution
GWMW10-D	12/16/2021	2112b80-020a	No dilution
GWMW11-S	12/17/2021	2112b80-021a	No dilution
GWMW11-I	12/17/2021	2112b80-022a	No dilution
GWMW11-D	12/17/2021	2112b80-023a	No dilution
GWMW11-D_Dup	12/17/2021	2112b80-024a	No dilution/field duplicate
GWMW15-S	12/16/2021	2112b80-025a	No dilution
GWMW15-I	12/15/2021	2112b80-026a	No dilution
GWMW15-D	12/15/2021	2112b80-029a	No dilution
GWMW16-S	12/16/2021	2112b80-030a	No dilution
GWMW16-D	12/16/2021	2112b80-031a	No dilution
MWSF2	12/15/2021	2112b80-032a	No dilution
MWSF5	12/15/2021	2112b80-033a	No dilution
MWSF9	12/15/2021	2112b80-034a	No dilution
MWSF10	12/15/2021	2112b80-035a	No dilution
NGMW01	12/15/2021	2112b80-036a	No dilution
NGMW02	12/15/2021	2112b80-037a	No dilution
NGMW03	12/15/2021	2112b80-038a	No dilution
NGMW03_Dup	12/15/2021	2112b80-039a	No dilution/field duplicate
EB1	12/14/2021	2112b80-040a	No dilution
EB2	12/17/2021	2112b80-041a	No dilution
FB1	12/15/2021	2112b80-042a	No dilution
FB2	12/16/2021	2112b80-043a	No dilution
FB3	12/16/2021	2112b80-044a	No dilution
FB4	12/17/2021	2112B80-045A	No dilution
Trip Blank 1		2112b80-046a	No dilution
Trip Blank 2		2112b80-047a	No dilution

Table G-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		
Trip blanks	X			X	X
Field blanks	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		
Results quantitation	X		X		

%R = Percent recovery
RPD = Relative percent difference

Table G-4. Detections in the Equipment Blank

Sample ID	Concentration (µg/L)		
	Bromodichloromethane	Chloroform	Dibromochloromethane
EB 1	1.2	1.9	1.3

µg/L = Micrograms per liter

Table G-5. RPD Results for All Duplicate Samples

Duplicate Sample ID	Maximum RPD (%)
CLC AS1-210430 DUP	75.0
CLC ES1-210223 Dup	40.0
CLC ES1-210223 Dup	28.6
CLC AS2-210323-DUP	28.6
CLC ES1.210615 DUP	18.2
CLC 27-210525 Dup	14.3
CLC ES1.210615 DUP	10.5
CLC IS1-210323-D	9.5
CLC AS2 - DUP- 210826	9.5
CLC ES1-211214 (Dup)	9.1
CLC 27-210125-Dup	7.4
CLC ES1-211214 (Dup)	7.3
GWMW10-S_Dup	7.1
CLC 27-211123 DUP	6.9
CLC 18-210921 DUP	4.8
CLC ES1-210223 Dup	4.5
CLC 18-210323	4.0
CLC IS1-210727 DUP	3.1
CLC 18-210430 Dup	0.0
GWMW10-S_Dup	0.0

RPD = Relative percent difference