2022 System Operation and Remedial Action Progress

Griggs-Walnut Ground Water Plume Superfund Site

Prepared for

Joint Superfund Project
Las Cruces, New Mexico

Prepared by

DBS&A
a Geo-Logic Company

6020 Academy NE, Suite 100
Albuquerque, New Mexico 87109
www.dbstephens.com

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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 tenth 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 2022 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 2022, 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:

- CLC 18 was operated two times a week at approximately 88 gpm for 6 hours a day. CLC 27 was operated between 135 and 223 gpm for 24 hours a day, 7 days a week. The average CLC 27 pumping rate for 2022 was 199 gpm, which is below the recommended range (Appendix A, Table 4). Additional discussion regarding the pumping rates of CLC 27 are provided in Section 3.3.
- 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 November 2022 as described in Appendix C.

During this reporting period, the extraction and treatment system operated for more than 98 percent of the year.

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, 2019). 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 November 2022 water level elevation contours for the Shallow Zone overlaid on the accompanying PCE concentrations in the Shallow Zone. Figure 10 of Appendix A shows the November 2022 water level elevation contours for the Intermediate Zone overlaid on the corresponding PCE concentrations. Figure 11 of Appendix A shows the November 2022 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 12.2 pounds of PCE was removed from the GWP in 2022, bringing the total PCE mass removed from the GWP since system startup to approximately 127 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, 2021a) through 2022.

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. Table 1 summarizes the analytical method for air emissions monitoring. Table 2 summarizes the groundwater analytical methods and analytes that are being monitored.

Table 3 summarizes the frequency of remediation system sampling. Table 4 lists the alternative remediation system sampling locations. These sampling locations can be used to monitor specific components of the treatment process, including volume of antiscalant injection, performance of individual air strippers, and combined treated water characteristics from the equalization tank prior to chlorination. Table 5 summarizes the monthly volume pumped from CLC 18 and CLC 27 as reported from the supervisory control and data acquisition (SCADA) system, as well as the monthly measured PCE concentration in each well. Appendix D

summarizes daily volumes pumped and treated for each well. SCADA issues with the daily volumes and associated corrective actions are explained in Section 6.

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 2022, 12.2 pounds of PCE was removed, bringing the total PCE mass removed to approximately 127 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 12.8 µg/L in April 2022 and a maximum concentration of 15.7 µg/L in January and May 2022 (Figure 5). CLC 18 PCE concentrations ranged from a maximum of 4.4 µg/L in February 2022 to a minimum of 3.3 µg/L in December 2022, with an average of 3.9 µg/L over the year. The average PCE concentration in CLC 27 was 14.6 µg/L, which is higher than the last annual report value of 13.4 µg/L. The maximum reported value in CLC 27 was 16 µg/L in January and May 2022. The minimum value was 13 µg/L in April 2022.

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 2022, the remediation system experienced only minor operational interruptions. The two extraction wells, CLC 18 and CLC 27, pumped a combined volume of 106,200,857 gallons of contaminated water, which is approximately 25 million gallons less than in 2021. 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 98 percent of the time during the reporting period. There were approximately 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 18 operated for 615 hours during the year at a pumping rate of 88 gpm. CLC 27 operated for 8,604 hours out of a possible 8,760 hours during the reporting period at an average rate of 199 gpm. As shown in Table 4 of Appendix A, the CLC 27 pumping rate declined significantly starting in August 2022. Further investigation determined that the age of the pump (more than 10 years) was causing the decline in production, and that a new pump would be required in order to achieve the required pumping rates. A new pump, motor, and variable frequency drive (VFD) were installed at the end of January 2023. Preliminary pumping data from February 2023 indicate that the replacement pump has resolved the issue and that the pump is running consistently between 230 and 240 gpm.

Based on monthly maintenance memoranda from LCU staff and hours recorded by the SCADA system, the system was down for approximately 6 days in 2022. Scheduled periodic maintenance was performed on the treatment system and required shutting down the system. Additional maintenance is discussed in Section 3.4.

3.4 Summary of Maintenance Records

Regular semiannual maintenance was performed on the treatment system in April and August 2022. In June 2022, the CLC Water Production Operators shut down the system for a few hours to replace a broken valve. In August 2022, the system was shut down twice. A flow meter was

replaced on August 11, 2023, and a three-way control valve was replaced on August 26, 2022. At the end of 2022, plans were established to replace the well pump in CLC 27. A Grundfos 230S250-8 pump and MS6000C motor were installed in January 2023. A custom motor control panel and Danfoss VFD were installed in March 2023.

4. Groundwater Monitoring and Evaluation

The 2022 annual groundwater monitoring event summarized in this report (including the sampling report in Appendix C) was conducted in November 2022.

During 2022, 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, 2021a), 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 2022 was completed in November 2022 in accordance with the SAP issued on April 26, 2021. Figures 7, 8, and 9 show the PCE plume delineations within the Shallow, Intermediate, and Deep monitoring zones, respectively. A report summarizing the activities and data collection of the annual monitoring event is provided as Appendix C. Monitoring well elevations were provided by CLC in 2018 for all wells in the groundwater monitoring network. A survey of the newly installed monitoring 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 Hydrologic Zones

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 are used in this report and its associated appendices. 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.

4.2 Groundwater Hydrologic and Water Quality Evaluation

A full description of changes in the plume in the Shallow, Intermediate, and Deep Zones is provided in Appendix A. 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 November 2022 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).

PCE is the primary contaminant of concern (COC) at the GWP site, and was detected in 2022 at concentrations at or above the MCL of 5 µg/L in samples from wells CLC 27, GWMW-01I, GWMW-09D1, GWMW-10I, GWMW-15I, GWMW-16S, GWMW-16D, and MW-SF10. The maximum PCE detection was 33 µg/L in the sample from well GWMW-10I. Figures 7, 8, and 9

show PCE concentrations with Shallow, Intermediate, and Deep Zone plume delineations, respectively. 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 (GWMW-15I is classified as a Deep Zone well along with GWMW-15D).

Although plume diagrams (Figures 7, 8, and 9) indicate areas of "dashing" where the outermost monitoring 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, previous sampling results, and knowledge of groundwater flow directions. Sampling of inactive production wells CLC 19, CLC 20, and CLC 21 in December 2021 improved delineation of the plume in the Intermediate and Deep Zones.

4.2.2.1 Horizontal Delineation

The Shallow Zone PCE plume (PCE >5 µg/L) has fluctuated in shape and extent over the last few years. In 2020, the Shallow Zone plume extended around GWMW-16S close to GWMW-10S. A decrease in the PCE concentration at GWMW-10S in 2021 led to the removal of a lobe of the plume that had been depicted extending toward that well. In 2022, the Shallow Zone plume widened slightly to include GWMW-16S, where the PCE concentration increased from 4.6 µg/L to 6.5 µg/L. Generally, the Shallow Zone plume remains well constrained by the current monitoring network except for the area cross-gradient and north of well MW-SF10 (Figure 7).

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 monitoring wells located north or south of the inferred PCE plume (Figure 8); however, production well CLC 21 and the Paz Park municipal well are located north of the impacted monitoring 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. No PCE was detected in production well CLC 20 when it was sampled in December 2021. Due to the proximity to the plume, CLC 20 helps constrain the Intermediate Zone to the southeast.

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. Historical PCE analytical results from these wells have been below 5 µg/L. PCE was not detected in the 12 samples collected from the Paz Park well between 1998 and 2017.

A data gap exists in the Intermediate and Deep Zones southeast of CLC 27 in the vicinity of Lohman Avenue. The gap will be further investigated to determine the extent of the plume and confirm appropriate remedial activities. Two new monitoring wells are proposed approximately 1,750 feet southeast of CLC 27. One will be screened in the Intermediate Zone and one will be screened in the Deep Zone to define the plume extent, hydraulic heads, and groundwater gradients in this area south of CLC 27. The potential area for these monitoring wells is shown on Figures 1, 8, and 9, as well as the cross section provided in Appendix A, Figure F11. The final location will be determined in cooperation with JSP and EPA. A separate well installation plan will be provided for EPA approval within 60 days of acceptance of the annual report.

4.2.2.2 Vertical Delineation

Installation of the FLUTe replacement wells in 2021 has improved delineation of the base of the impacted aquifer in certain locations, including at well nests GWMW-01, GWMW-10, and GWMW-15 (Figures 4, 5, and 6 of Appendix A). However, in the area of the highest PCE concentrations, north of production well CLC 27, the deepest monitoring wells (GWMW-16D and GWMW-09D2) contain PCE concentrations above the MCL. The screened interval of GWMW-16D is at the top of the Deep Zone, which is nearly the same elevation as that of GWMW-10I, screened at the bottom of the Intermediate Zone. The depth of the impacted aquifer in the vicinity of GWMW-16D is therefore constrained by the data from the surrounding deeper monitoring points. Although the horizontal extent of the PCE plume in the Intermediate and Deep Zones is not fully delineated, the hydraulic gradients throughout this area are directed toward extraction well CLC 27 (Appendices A and B). As discussed in the FLUTe well replacement and repair assessment memorandum (DBS&A, 2019), it is possible that PCE was introduced to the Deep Zone via a deteriorated FLUTe well liner in well GWMW-09, which was removed in 2021 and replaced by the dedicated, zone-specific monitoring well GWMW-09D2 (DBS&A, 2019 and 2021b).

Previous data analysis indicated that pumping CLC 61 at a high rate could increase downward movement of the PCE plume. Pumping of CLC 61 at rates on the order of 1,500 acre-feet per

year (ac-ft/yr) ceased after 2018. CLC 27 pumps directly from the Deep Zone, and creates vertical and horizontal plume containment and capture in the Intermediate and Deep Zones. CLC 61 is screened in a stratigraphic interval below the Deep Zone, and there is no indication that previous pumping at CLC 61 significantly affected the horizontal movement or hydraulic capture of the PCE plume by extraction well CLC 27. Further discussion of CLC 61 is provided in Appendices A and B.

It is important to note that CLC 61 is a valuable asset to the water system, and monthly pumping to purge the well volume (at a minimum of 0.5 acre-feet) is recommended as a maintenance procedure for all municipal wells. Without routine maintenance, the well screens may become damaged and the well would need to be replaced. Approximately 5 acre-feet was withdrawn from CLC 61 in May 2022 for O&M purposes, with negligible additional withdrawals in June and July 2022.

Based on the technical evaluation provided in Appendix A, DBS&A recommends a 300 ac-ft/yr withdrawal limit as a conservative measure. This recommendation has been provided in Section 8. When operational, CLC 61 pumps at an approximate rate of 1,100 gpm, and 300 ac-ft/yr is equivalent to approximately 2 months of continuous operations.

4.2.2.3 Other Constituents

TCE was the only PCE degradation product detected in groundwater at the GWP site during the annual groundwater monitoring event in November 2022. TCE was detected in GWMW-16D at a concentration of 1.1 µg/L in 2022, below the 5 µg/L MCL for TCE. In May 2022, TCE was detected in CLC 27 at a concentration below the MCL. The sample result was also flagged by the laboratory as being below the quantitative limit. Analytical results for cis-1,2-DCE and trans-1,2-DCE were below reporting limits for all samples collected during the November 2022 monitoring event.

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 concentration in Deep Zone monitoring well GWMW-01D was 16 µg/L, which is a decrease from the previous year's result of 49 µg/L. 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 MTBE were also detected at low concentrations in the samples from well GWMW-01D and GWMW-09(D1,D2) (toluene is known to leach from FLUTe liners) (DBS&A, 2019). All concentrations were below the applicable MCLs.

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 (2.1 µg/L) (Table 11). 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 December 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 monitoring wells occurred in November 2022 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 monitoring 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 to evaluate whether modification of system operations is warranted to more efficiently and effectively proceed with contaminant mass capture and removal. Recommendations are summarized in Section 8.3 and 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.

Significant actions initiated based on these events include the following:

- 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 monitoring wells. Based on comments EPA provided on the 2021 annual report, the sampling frequency of these wells will be changed to align with EPA's future FYR schedule so that monitoring data will be obtained during each FYR period. Per EPA's 2021 request, monitoring at these locations will be performed in calendar year 2024 and every five years thereafter. This change is reflected in the 2023 SAP revision accepted by EPA on December 14, 2023.

- 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 conducted a soil vapor survey including concurrent exterior, sub-slab, and residential indoor air assessments in February 2023 during the heating season. Work was performed in accordance with the SAP approved by EPA on January 3, 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, including the resolution to the decreased pumping rates in CLC 27. 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, monitoring 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. As reported in the 2021 annual report, because no sample could be collected in 2022, JSP is proposing that this monitoring well be removed from the groundwater monitoring plan. This change will be included in the proposed revision to the SAP.

6.2 Sampling Techniques

The 2020 sampling event demonstrated that Hydrasleeve is an effective sampling method at the GWP site (DBS&A, 2021c). As detailed in Appendix C, during 2022 sampling, Hydrasleeves for

GWMW-10I and GWMW-10D had to be redeployed to correct depths, and were only able to equilibrate in the wells for 1 hour due to traffic control schedules. Standard operating procedure is to equilibrate the Hydrasleeves for 24 hours. These sampling results have been flagged with an "A1" designation, defined as "sample not collected according to SOP." Data collected during this sampling event meet the quality objective of 90 percent completeness, per Table 3 of the SAP (DBS&A, 2021a).

6.3 SCADA System

The CLC 27 SCADA issues encountered in 2021 have been resolved. CLC 18 SCADA data continued to have minor errors in 2022. The SCADA daily runtime reports from well CLC 18 recorded duplicate daily runtimes and total flow for January, February, March, November, and December 2022. The corrective action performed was to delete the duplicated data. Corrected monthly volume totals for CLC 18 are consistent with the reported operation of CLC 18 at 88 gpm 2 days a week for 6 hours a day. JSAI and DBS&A continue to 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 November 2022 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. As stated above, sampling results for samples where insufficient Hydrasleeve equilibration was achieved have been flagged with an "A1" designation, defined as "sample not collected according to SOP."

8. Conclusions

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

- Through the end of 2022, a total of 1,257,202,062 gallons of groundwater have been extracted from the dissolved-phase plume at the GWP site.
- A total of 127.3 pounds of PCE has been removed from the extracted groundwater, including approximately 12.2 pounds removed in 2022.
- COCs have not been detected in the treated groundwater that has been returned to the public water supply distribution system at Griggs Reservoir.
- Hydrasleeves continue 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 well 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 is currently being revised to incorporate CLC 19, CLC 20, and CLC 21 into the groundwater monitoring network to be sampled at a frequency corresponding to the FYR schedule and to remove MW-5. The health

and safety plan (HASP) was updated in August 2021 to reflect changes to COVID-19 related guidance.

EPA has approved the 2020 annual report, as documented in an approval letter dated September 9, 2022. The 2021 annual report was submitted to EPA on June 30, 2022. Comments were received September 30, 2022. The final report was issued on November 1, 2022 after addressing EPA comments. The 2021 annual report has yet to be approved by EPA.

The SOW requires an annual meeting to discuss the annual report; a virtual meeting was held on August 31, 2022, and several additional conference calls were held with the JSP, EPA, and NMED during 2022.

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. The recommendations in the 2021 report have not yet been implemented because the report had not yet been accepted by EPA. CLC 27 pumped 24 hours a day, 7 days a week at an average of 199 gpm, which is lower than the recommended pumping range due to declining pump performance. CLC 18 pumped at approximately 88 gpm for 6 hours a day, 2 days per week.
- The well pump in CLC 27 was replaced in February 2023 to operate within the recommended operation range.
- The monitoring well network was sampled in accordance with the requirements in the 2020 Consent Decree (effective July 30, 2020) and the 2021 SAP, except where noted.
- The JSP QAM and 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.

8.3 Recommendations

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

- DBS&A and JSAI will perform monthly reviews of LCU-provided SCADA data, including runtime and volume totals, in order to identify discrepancies or issues in a timely manner and improve the quality assurance and quality control (QAQC) process.
- Continue to schedule future groundwater sampling to occur prior to the coldest season in Las Cruces (November to February) to avoid sampling difficulties and freezing conditions.
- Per the recommendation provided by JSAI in Appendix A, additional water level measurements should be collected during calendar year 2024 to confirm hydraulic capture of the Intermediate and Deep Zone PCE plumes by CLC 27 under varying seasonal demand at regional pumping wells. September water level measurements should be collected to represent the end of regional peak demand pumping conditions. December water level measurements should be collected to document winter low demand regional pumping conditions.
- Perform the annual groundwater sampling event in September, concurrent with the high-demand season. All data collected in calendar year 2024 will be available for the 2025 FYR by EPA.
- To address the data gap southeast of CLC 27 and complete delineation, we recommend installation of an Intermediate and Deep Zone well pair approximately 1,750 feet southeast of CLC 27, per JSAI's recommendation in Appendix A. The final location will be determined in cooperation with JSP and EPA. JSP will provide a work plan to EPA detailing the new monitor well proposal within 60 days of approval of the annual report.
- Continue to monitor PCE mass removal rate at CLC 27 to determine the effect of the 2020 increase in pumping.
- Discontinue operation of CLC 18 due to decreased mass removal rates and PCE concentrations below the MCL for more than 6 months, per JSAI's recommendation in Appendix B. Annual Shallow Zone monitoring, including CLC 18, will continue.
- Monitor PCE concentrations in CLC 18 monthly to determine if concentrations increase after pumping is stopped.
- Perform a one-time mass removal rate optimization test of CLC 27 by performing iterative steps of increased pumping. Increases would best be made as monthly time steps to coincide with monthly sampling for PCE. It is recommended to start CLC 27 average monthly pumping rate at 200 gpm, and then increase the pumping rate by 10 gpm each

month until the capacity of the replaced pump is achieved (240 gpm). The optimization test will take approximately 4 months.

- Following the optimization test, operate CLC 27 at an average pumping rate between 230 and 240 gpm, per JSAI's recommendation in Appendix B. This pumping rate will be maintained until results of the optimization test are reviewed and approved by EPA.

The following recommendations apply for CLC 61:

- Allow for LCU to pump CLC 61, as long as the total pumping does not exceed 300 ac-ft/yr. In the event that CLC 61 must be pumped more than 300 ac-ft/yr, notify EPA in writing within 30 days.
- As part of annual O&M, sample CLC 61 annually and provide a maintenance and pumping summary as part of the Annual Operation and RA Progress Report.
- Revise LCU standard operating procedures to include the CLC 61 maximum pumping allowance and sampling requirements.

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Figures



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

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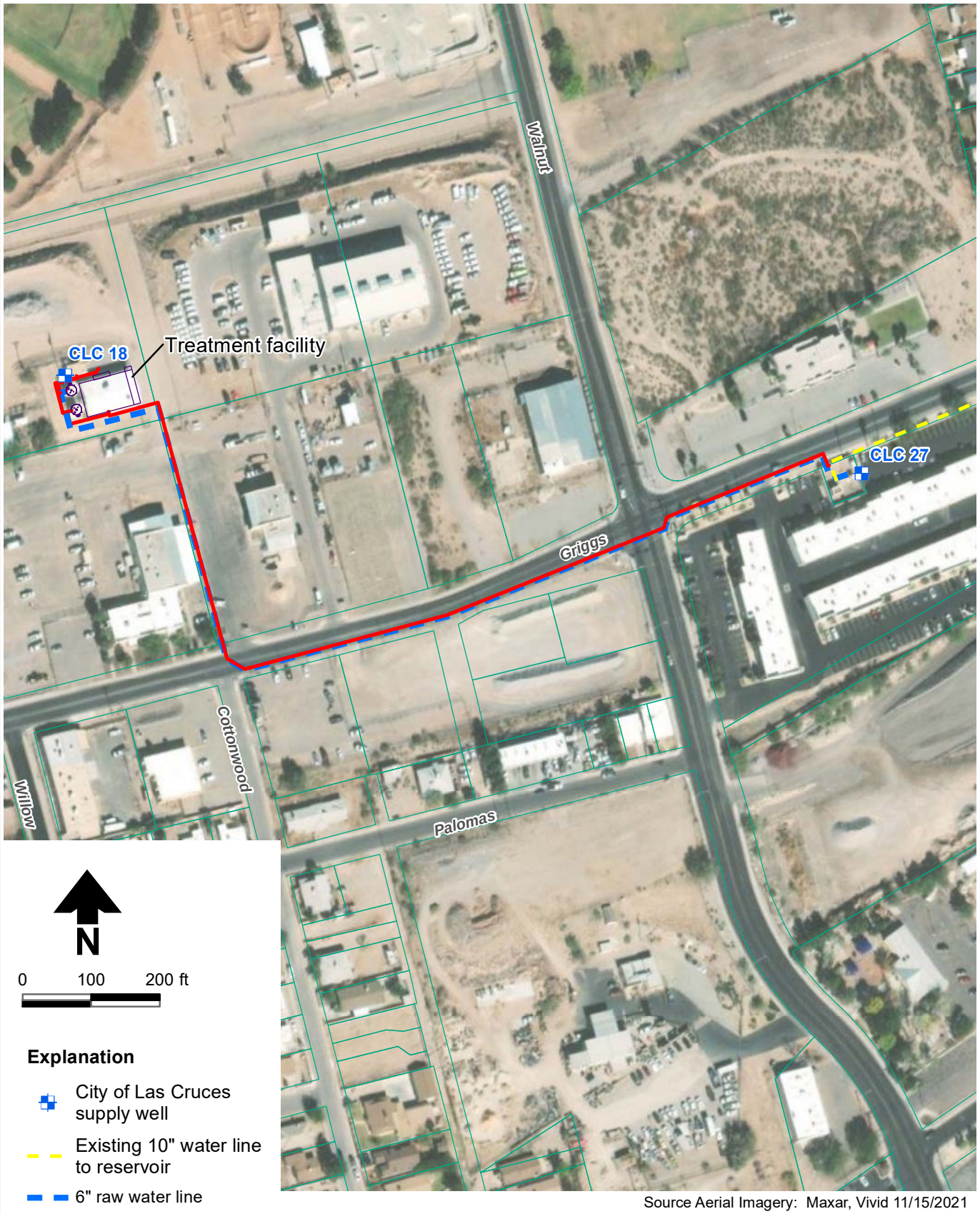
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GRIGGS-WALNUT GROUND WATER PLUME SITE
REMEDIAL ACTION

Project Area Map

Figure 1



Source Aerial Imagery: Maxar, Vivid 11/15/2021

GRIGGS-WALNUT GROUND WATER PLUME SITE
REMEDIAL ACTION

Groundwater Extraction Site

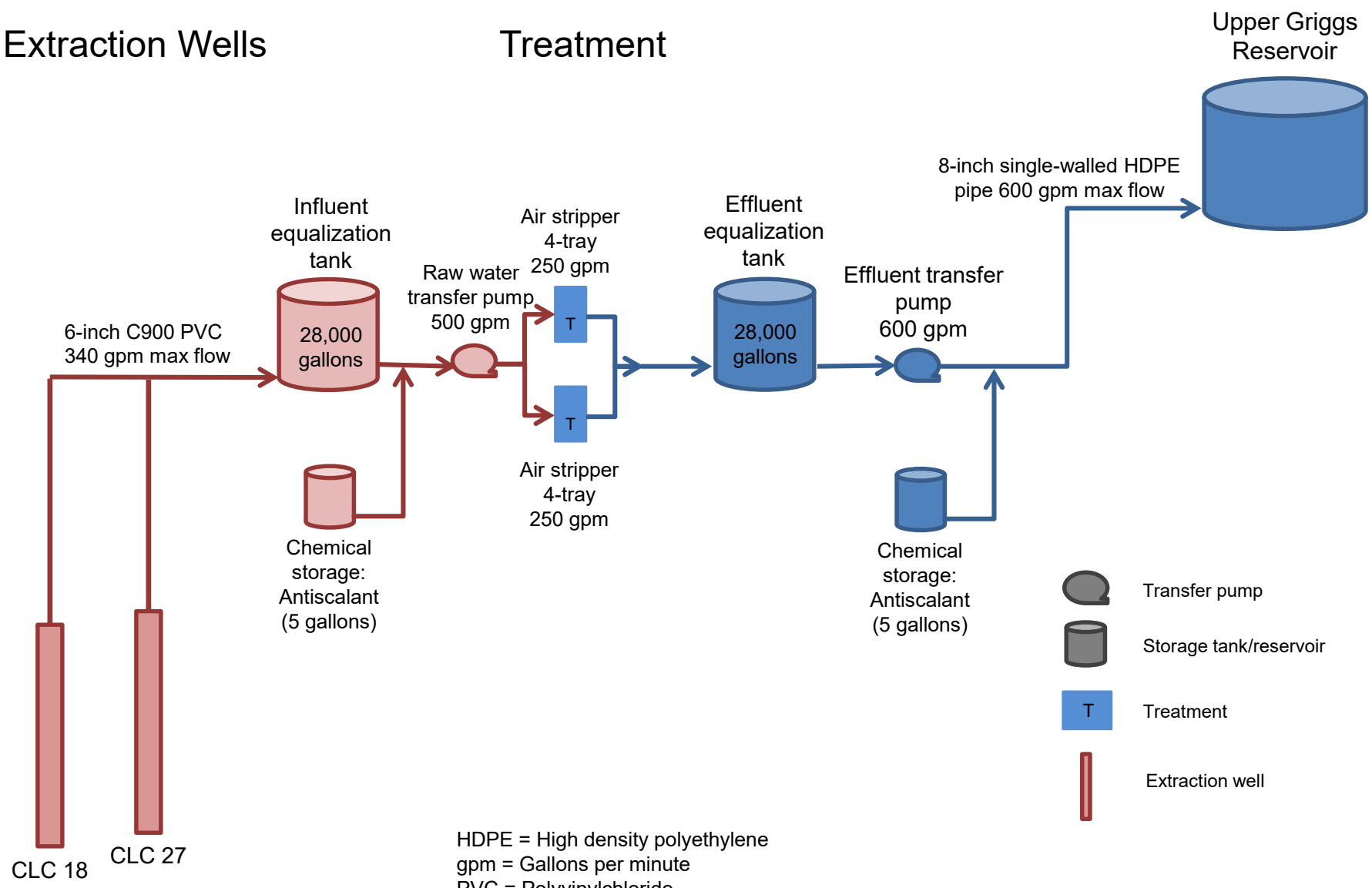
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Figure 2

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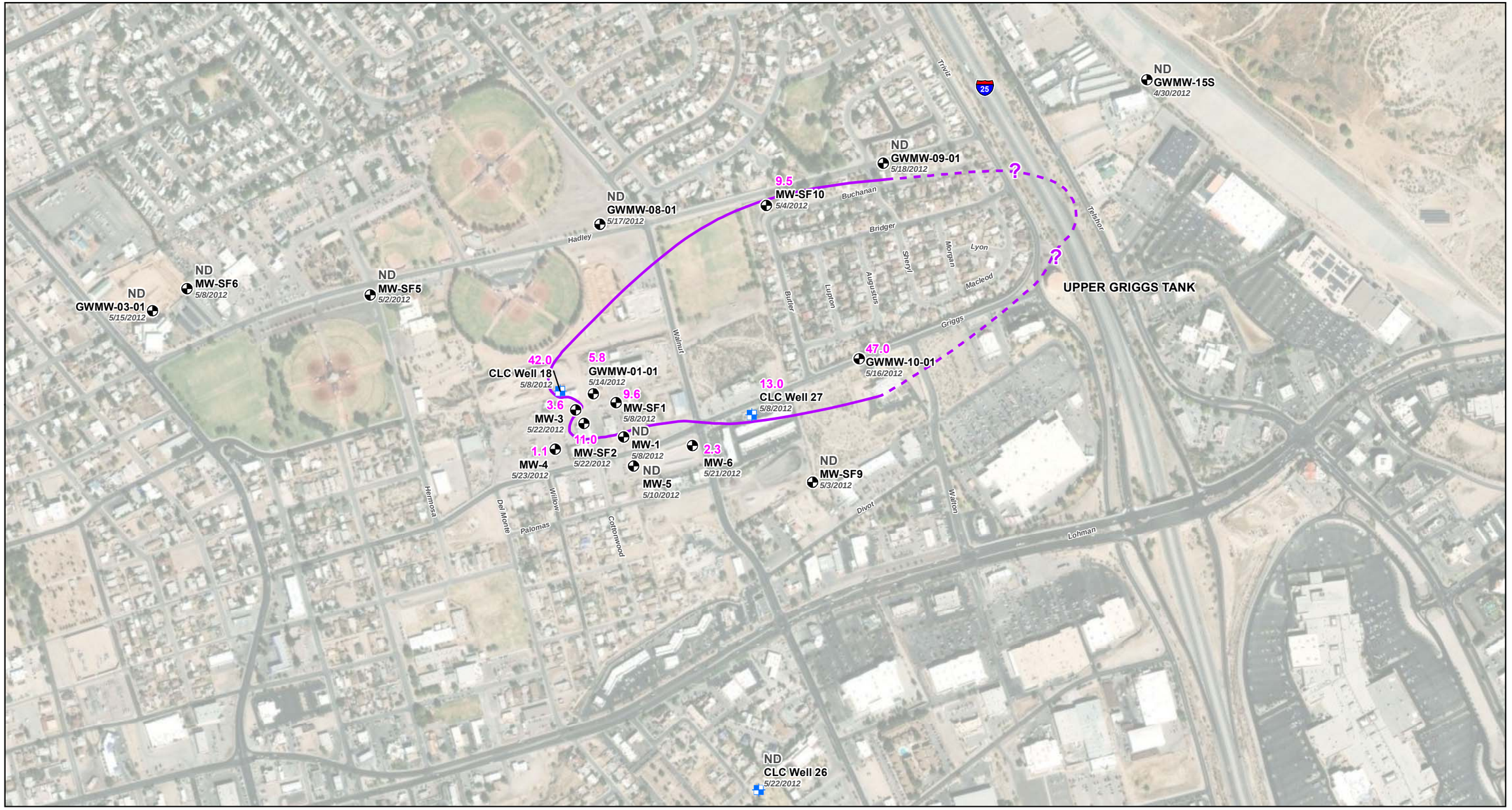
GRIGGS-WALNUT GROUND WATER PLUME SUPERFUND SITE
REMEDIAL ACTION

Remediation System Process Flow

Figure 3

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Explanation

- Monitoring 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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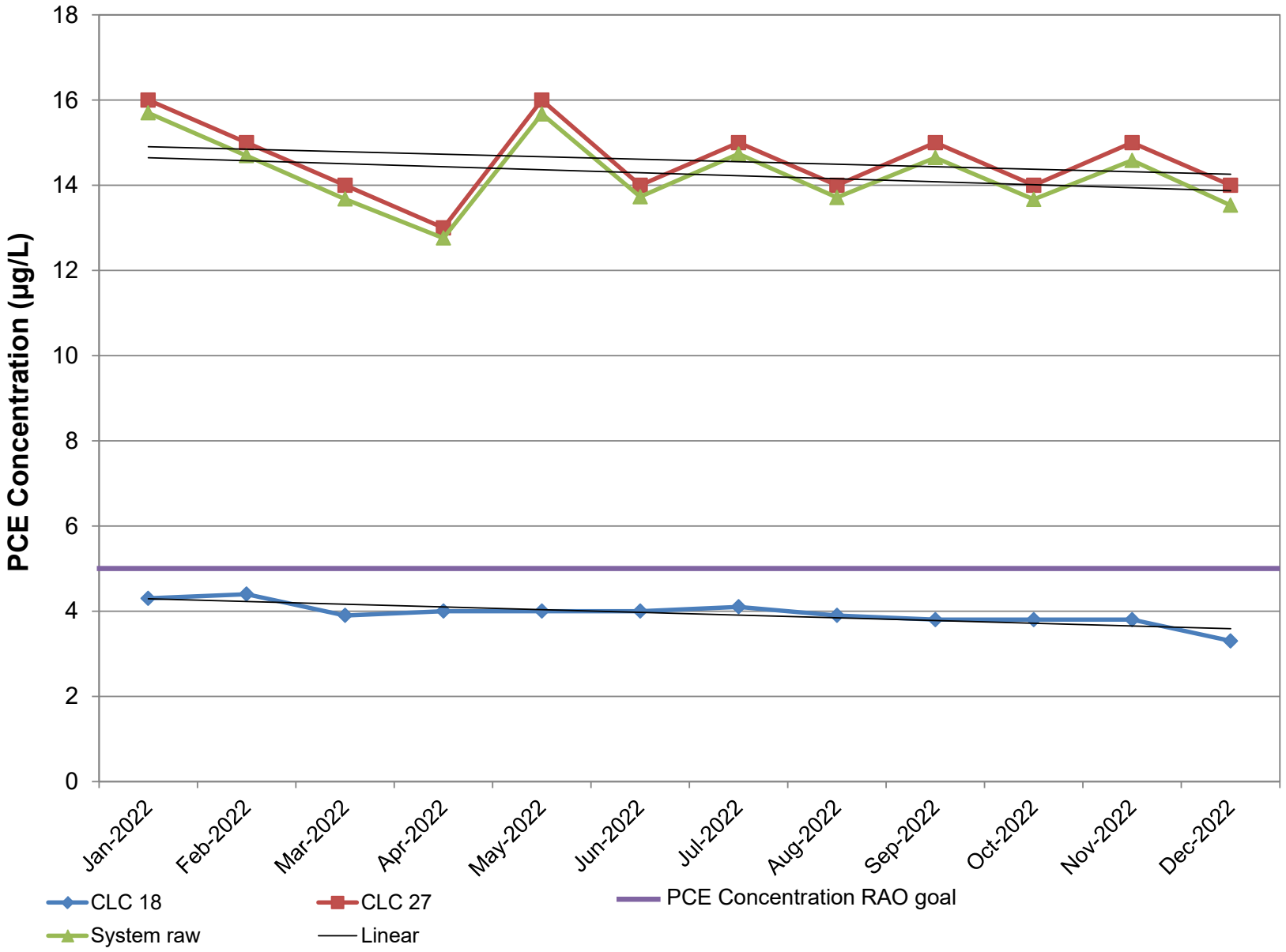
GRIGGS-WALNUT GROUND WATER PLUME SITE
REMEDIAL ACTION

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

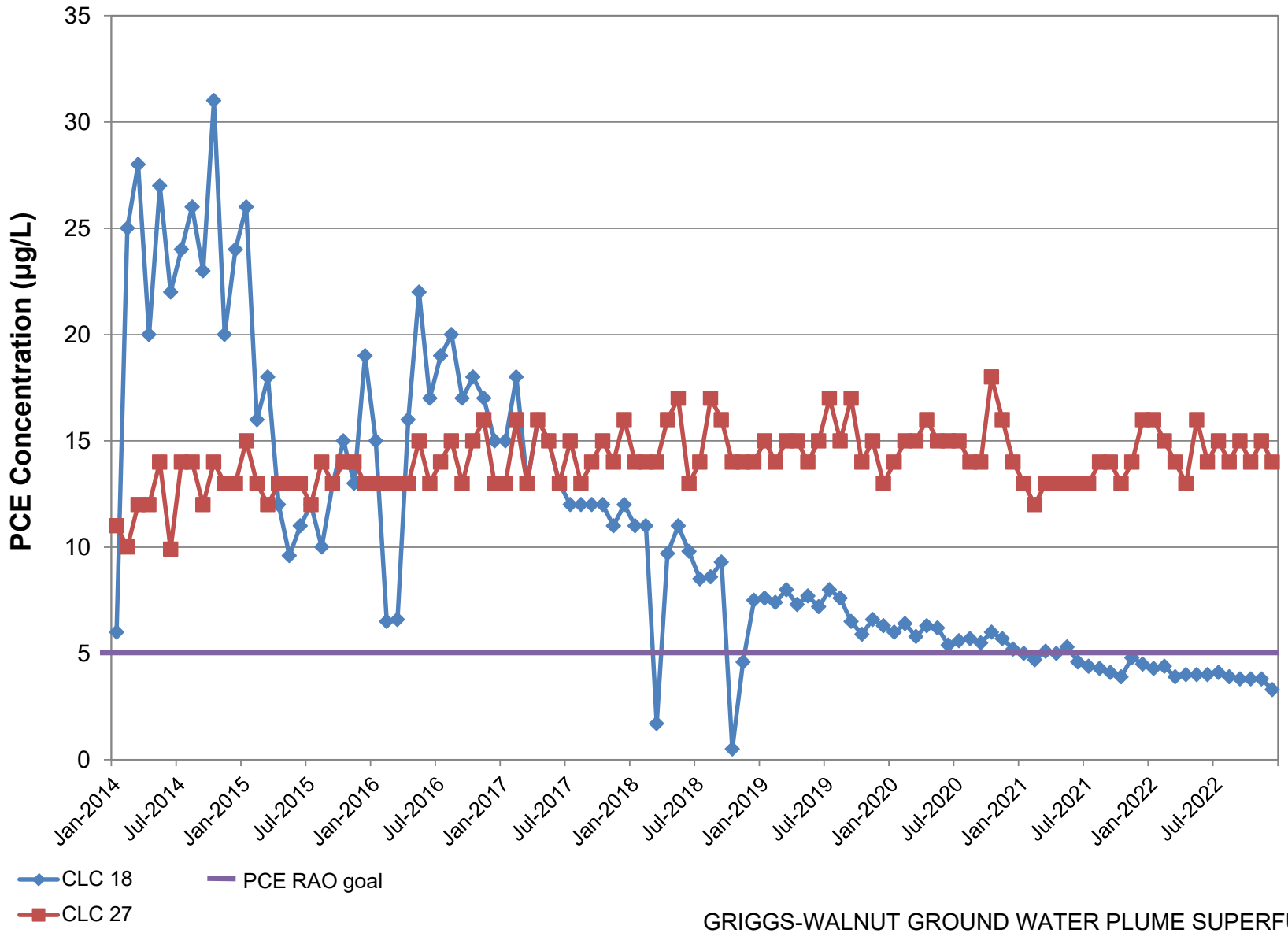
GRIGGS-WALNUT GROUND WATER PLUME SUPERFUND SITE
REMEDIAL ACTION

Remediation System PCE Concentration

DBS&A a Geo-Logic Company

4/28/2023 DB22.1354

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

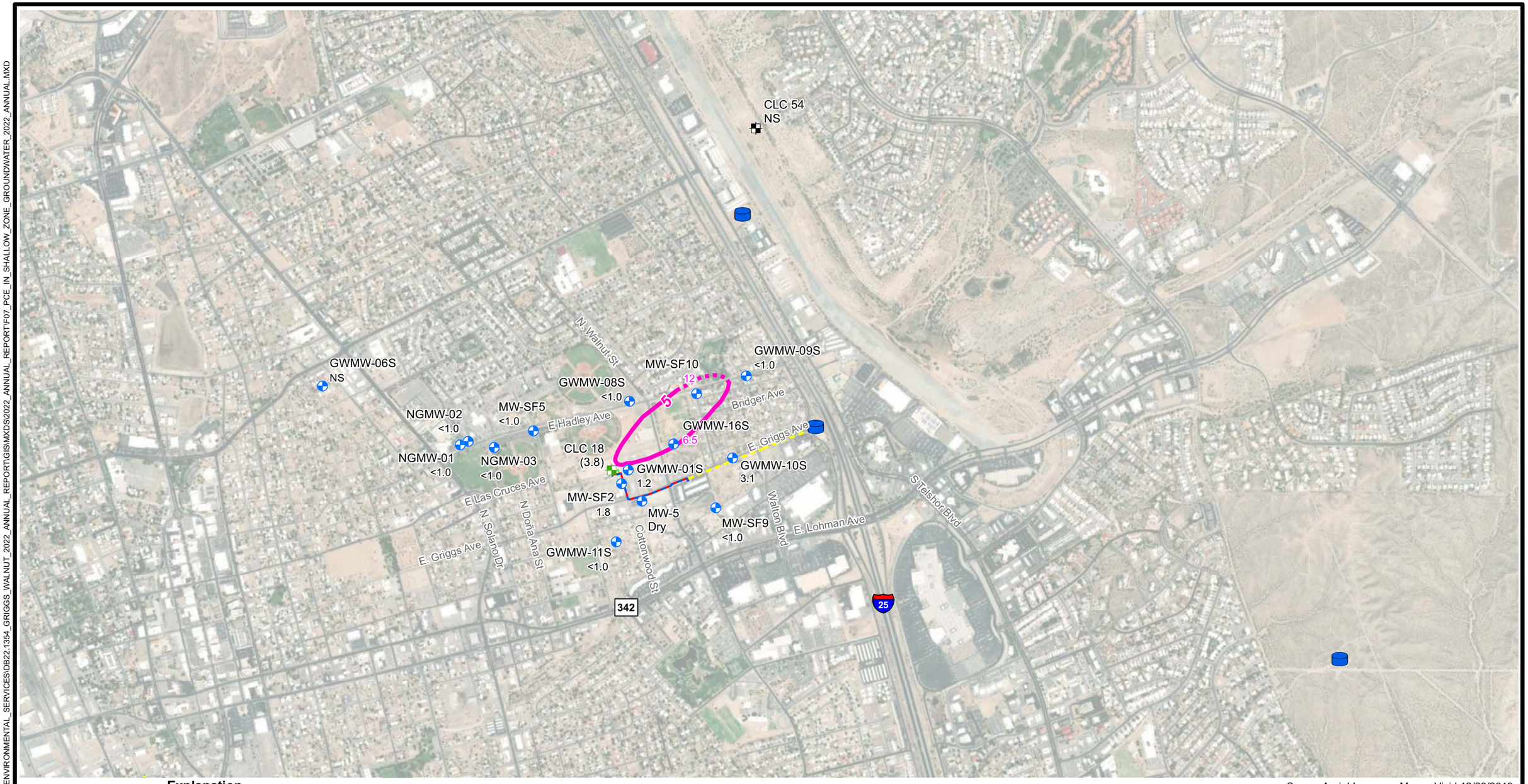
GRIGGS-WALNUT GROUND WATER PLUME SUPERFUND SITE
REMEDIAL ACTION

Monthly PCE Concentration in CLC 18 and CLC 27
January 2014–December 2022

Figure 6

DBS&A a Geo-Logic Company

4/28/2023 DB22.1354



Explanation

- Monitoring well
- CLC capture well
- CLC municipal 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. 12 Concentration is above the Regulatory Maximum Limit of 5 µg/L
2. CLC 18 screen is in deep zone, however thick gravel envelope allows for commingling of shallow and intermediate zones

N

0 700 1400 ft

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

DBS&A a Geo-Logic Company

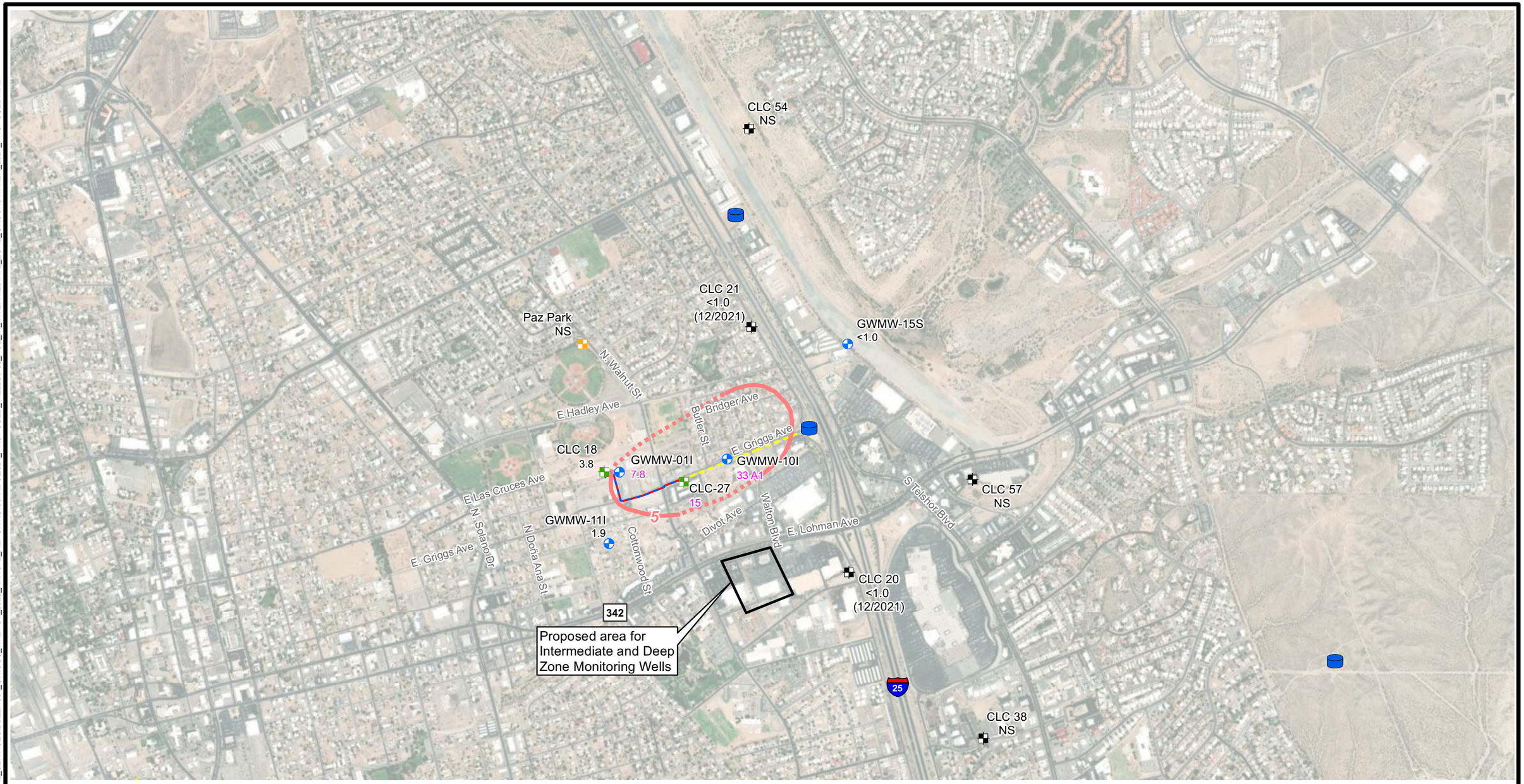
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GRIGGS-WALNUT GROUND WATER PLUME SITE
REMEDIAL ACTION

PCE in Shallow Zone Groundwater Wells, November 2022

Figure 7

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

Explanation

- Monitoring well
- CLC capture well
- CLC irrigation well
- CLC municipal 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

Notes:
1. GWMW-15S is screened in the Intermediate Zone
2. 33 Concentration is above the Regulatory Maximum Limit of 5 µg/L
3. A1=Sample not collected according to SOP
4. CLC-27 is completed in the Deep Zone
5. CLC 18 screen is in deep zone; however, thick gravel envelope allows for commingling of shallow and intermediate zones

DBS&A a Geo-Logic Company

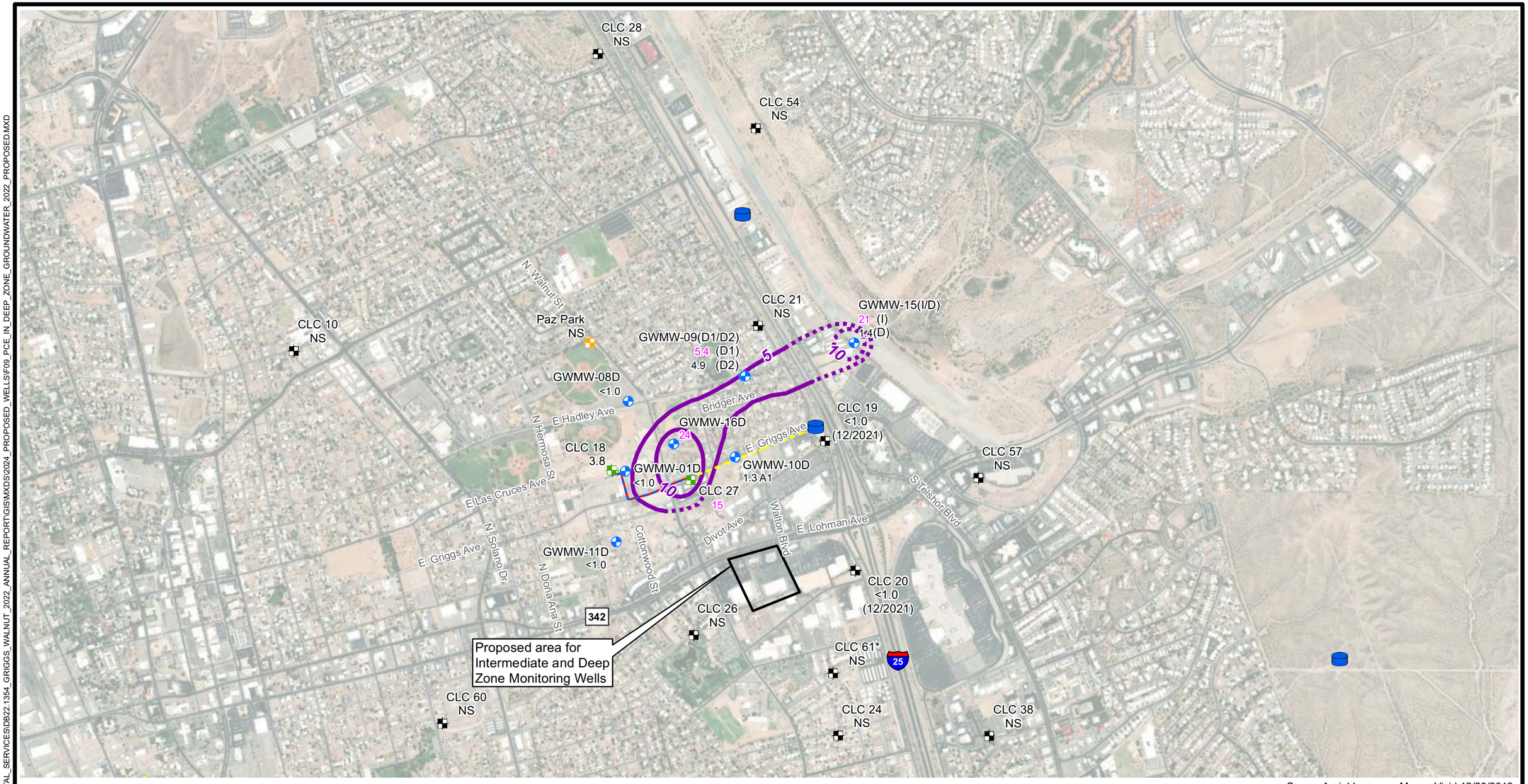
3/14/2024 JN DB22.1354

GRIGGS-WALNUT GROUND WATER PLUME SITE
REMEDIAL ACTION

PCE in Intermediate Zone Groundwater Wells, November 2022

Figure 8

S:\PROJECTS\ES13.0251_CLC_ENVIRONMENTAL_SERVICES\DB22.1354_GRIGGS_WALNUT_2022_ANNUAL_REPORT\GIS\MXDS\2024_PROPOSED_WELLS\F08_PCE_IN_INTERMEDIATE_ZONE_GROUNDWATER_2024_PROPOSED.MXD



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

Explanation

- Monitoring well
- CLC capture well
- CLC irrigation well
- CLC municipal 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

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
3. 21 Concentration is above the Regulatory Maximum Limit of 5 µg/L
4. A1=Sample not collected according to SOP
5. *Well CLC 61 completed below the Deep Zone

DBS&A a Geo-Logic Company

3/14/2024 JN DB21.1359

GRIGGS-WALNUT GROUND WATER PLUME SITE
REMEDIAL ACTION

PCE in Deep Zone Groundwater Wells, November 2022

Figure 9

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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 2022	252,835	4.3	9,580,472	16
February 2022	252,800	4.4	8,528,362	15
March 2022	313,393	3.9	9,485,469	14
April 2022	219,000	4.0	8,007,373	13
May 2022	277,426	4.0	9,945,414	16
June 2022	263,915	4.0	9,493,104	14
July 2022	244,692	4.1	9,811,596	15
August 2022	264,800	3.9	9,042,227	14
September 2022	276,197	3.8	8,501,292	15
October 2022	256,428	3.8	7,619,810	14
November 2022	267,670	3.8	6,948,834	15
December 2022	278,888	3.3	6,068,860	14
Total	3,168,045		103,032,813	

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 2022	15.7	ND	9,833,307	1.2
February 2022	14.7	ND	8,781,162	1.0
March 2022	13.7	ND	9,798,862	1.1
April 2022	12.8	ND	8,226,372	0.8
May 2022	15.7	ND	10,222,840	1.3
June 2022	13.7	ND	9,757,019	1.1
July 2022	14.7	ND	10,056,289	1.2
August 2022	13.7	ND	9,307,027	1.0
September 2022	14.6	ND	8,777,489	1.0
October 2022	13.7	ND	7,876,238	0.9
November 2022	14.6	ND	7,216,504	0.8
December 2022	13.5	ND	6,347,748	0.7
Total			106,200,857	12.2

[a] For mass removal calculations, non-detect results (<1 µg/L) are assumed to be one-half of the detection limit.
PCE = Tetrachloroethene
µg/L = Micrograms per liter
ND = Not detected

Table 6b. Total PCE Removed, 2013-2022

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
2022	12.2
Total	127.3

Table 7. Calculated Air Emissions, 2022

Month	Calculated PCE Air Emissions (lb/hr)	Calculated PCE Indoor Air Concentration (µg/m^3)
January 2022	0.002	0.0005
February 2022	0.001	0.0005
March 2022	0.001	0.0005
April 2022	0.001	0.0005
May 2022	0.002	0.0005
June 2022	0.001	0.0005
July 2022	0.002	0.0005
August 2022	0.001	0.0005
September 2022	0.001	0.0005
October 2022	0.001	0.0005
November 2022	0.001	0.0005
December 2022	0.001	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, 2013–2022

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}
2022	6.13×10^{-3}

PCE = Tetrachloroethene

Table 9. Monthly Runtime, 2022

Month	Total Runtime (hours)	Percent Runtime
January 2022	744	100.0%
February 2022	672	100.0%
March 2022	744	100.0%
April 2022	604	83.9%
May 2022	743	99.9%
June 2022	715	99.3%
July 2022	744	100.0%
August 2022	741	99.6%
September 2022	719	99.9%
October 2022	712	95.7%
November 2022	722	100.3%
December 2022	744	100.0%
Total	8,604	98.22%

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.

Table 10. Groundwater Monitoring Program Monitoring 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	0	Deep	0	Sampled in 2021 by EPA request in comments regarding the 2020 annual report. Additional comments indicate sampling in calendar year (CY) 2024 for the next five-year review (FYR) and every five years thereafter for subsequent FYRs.
CLC 20	0	Intermediate/ Deep	0	Sampled in 2021 by EPA request in comments regarding the 2020 annual report. Additional comments indicate sampling in CY2024 for the next FYR and every five years thereafter for subsequent FYRs.
CLC 21	0	Intermediate/ Deep	0	Sampled in 2021 by EPA request in comments regarding the 2020 annual report. Additional comments indicate sampling in CY2024 for the next FYR and every five years thereafter for subsequent FYRs.
CLC 27	1	Deep	1	
GWMW-01S	1	Shallow	1	
GWMW-01I	2	Intermediate	1	Number of samples includes duplicate.
GWMW-01D	1	Deep	1	
GWMW-08S	1	Shallow	1	
GWMW-08D	1	Deep	1	
GWMW-09S	1	Shallow	1	
GWMW-09D1	2	Deep	1	Number of samples includes duplicate.
GWMW-09D2	1	Deep	1	
GWMW-10S	1	Shallow	1	
GWMW-10I	1	Intermediate	1	2022 sample not collected according to SOP.
GWMW-10D	1	Deep	1	2022 sample not collected according to SOP.

Notes are provided at the end of the table.

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

Sample Location [a] (Well ID)	No. of Samples Collected	Hydrogeologic Zone	Required Number of Samples	Notes
GWMW-11S	1	Shallow	1	
GWMW-11I	1	Intermediate	1	
GWMW-11D	1	Deep	1	
GWMW-15S	1	Intermediate	1	
GWMW-15I	1	Deep	1	
GWMW-15D	1	Deep	1	
GWMW-16S	1	Shallow	1	
GWMW-16D	2	Deep	1	Number of samples includes duplicate.
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	1	Shallow	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 11. Groundwater Analytical Results for Detected Constituents, November 2022
Page 1 of 3

Sample Location (Well ID)	Well Zone Designation	Sample Method	Concentration (µg/L) Benzene	Toluene	MTBE	PCE	TCE	Bromo-dichloro-methane	Arsenic	Uranium
		EPA MCL	*5*	*1,000*	*6.2*	*5*	*5*	*80* [a]	*10*	*30*
		NMWQCC Standard [b]	*5*	*1,000*	*100*	*5*	*5*	*80*	*10*	*30*
CLC 18	S/I/D [c]	Grab	<1.0	<1.0	<1.0	3.8	<1.0	<1.0	0.0021	0.024
CLC 27	D	Grab	<1.0	<1.0	<1.0	**15**	<1.0	<1.0	0.0015	0.022
GWMW-01S	S	Hydrasleeve	<1.0	<1.0	<1.0	1.2	<1.0	<1.0	—	—
GWMW-01I	I	Hydrasleeve	<1.0	<1.0	<1.0	**7.8**	<1.0	<1.0	—	—
GWMW-01I (DUP)	I	Hydrasleeve	<1.0	<1.0	<1.0	**7.9**	<1.0	<1.0	—	—
GWMW-01D	D	Hydrasleeve	**16**	1.8	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-08S	S	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<1.0	2.1	—	—
GWMW-08D	D	Hydrasleeve	1.7	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-09S	S	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-09D1	D	Hydrasleeve	<1.0	<1.0	1.2	**5.4**	<1.0	<1.0	—	—
GWMW-09D1 (DUP)	D	Hydrasleeve	<1.0	<1.0	1.2	4.9	<1.0	<1.0	—	—
GWMW-09D2	D	Hydrasleeve	1.5	<1.0	<1.0	4.9	<1.0	<1.0	—	—
GWMW-10S	S	Hydrasleeve	<1.0	<1.0	<1.0	3.1	<1.0	<1.0	—	—
GWMW-10I	I	Hydrasleeve	<1.0 A1	<1.0 A1	<1.0 A1	**33 A1**	<1.0 A1	<1.0 A1	—	—
GWMW-10D	D	Hydrasleeve	1.2 A1	<1.0 A1	<1.0 A1	1.3 A1	<1.0 A1	<1.0 A1	—	—
GWMW-11S	S	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-11I	I	Hydrasleeve	<1.0	<1.0	<1.0	1.9	<1.0	<1.0	—	—

Notes are provided at the end of the table.

Table 11. Groundwater Analytical Results for Detected Constituents, November 2022
Page 2 of 3

Sample Location (Well ID)	Well Zone Designation	Sample Method	Concentration (µg/L) Benzene	Toluene	MTBE	PCE	TCE	Bromo-dichloro-methane	Arsenic	Uranium
		EPA MCL	*5*	*1,000*	*6.2*	*5*	*5*	*80* [a]	*10*	*30*
		NMWQCC Standard [b]	*5*	*1,000*	*100*	*5*	*5*	*80*	*10*	*30*
GWMW-11D	D	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-15S	I	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
GWMW-15I	D	Hydrasleeve	<1.0	<1.0	<1.0	**21**	<1.0	<1.0	—	—
GWMW-15D	D	Hydrasleeve	<1.0	<1.0	<1.0	1.4	<1.0	<1.0	—	—
GWMW-16S	S	Hydrasleeve	<1.0	<1.0	<1.0	**6.5**	<1.0	<1.0	—	—
GWMW-16D	D	Hydrasleeve	<1.0	<1.0	<1.0	**24**	1.1	<1.0	—	—
GWMW-16D (DUP)	D	Hydrasleeve	<1.0	<1.0	<1.0	**24**	1.0	<1.0	—	—
MW-5	S	Not sampled								
MW-SF2	S	Hydrasleeve	<1.0	<1.0	<1.0	1.8	<1.0	<1.0	—	—
MW-SF5	S	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
MW-SF9	S	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
MW-SF10	S	Hydrasleeve	<1.0	<1.0	<1.0	**12**	<1.0	<1.0	—	—
NGMW-01	S	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
NGMW-02	S	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—
NGMW-03	S	Hydrasleeve	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—

Notes are provided on the next page.

Table 11. Groundwater Analytical Results for Detected Constituents, November 2022
Page 3 of 3

Bold indicates that value exceeds the 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] Standards from 20.6.2.3103 NMAC, effective December 2018.

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

µg/L = Micrograms per liter
S = Shallow Zone
I = Intermediate Zone
D = Deep Zone
— = Not analyzed
A1 = Sample not collected according to SOP

Table 12. PCE Results for Annual Groundwater Sampling, 2012–2022
Page 1 of 6

Well	PCE Concentration (µg/L)									
	2012	2013	2014	2015	2016	2018	2019	2020 [a]	2021	2022
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	3.8
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**	**15**
CLC 57	—	<1.0	<1.0	<1.0	<1.0	—	<1.0	—	—	—
CLC 61	—	—	—	—	—	—	<1.0	—	—	—
GWMW-01S	—	—	—	—	—	—	—	1.8	1.5	1.2
GWMW-01I	—	—	—	—	—	—	—	**20** [d]	**10**	**7.8**
GWMW-01D	—	—	—	—	—	—	—	1.6	<1.0	<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]	—	—	—

Notes are provided at the end of the table.

Table 12. PCE Results for Annual Groundwater Sampling, 2012–2022
Page 2 of 6

Well	PCE Concentration (µg/L)									
	2012	2013	2014	2015	2016	2018	2019	2020 [a]	2021	2022
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	<1.0
GWMW-08D	—	—	—	—	—	—	—	<1.0	<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]	—	—	—
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	<1.0
GWMW-09D1	—	—	—	—	—	—	—	**5.7**	4.3	**5.4**
GWMW-09D2	—	—	—	—	—	—	—	**12**	**6.9**	4.9
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]	—	—	—

Notes are provided at the end of the table.

Table 12. PCE Results for Annual Groundwater Sampling, 2012–2022
Page 3 of 6

Well	PCE Concentration (µg/L)									
	2012	2013	2014	2015	2016	2018	2019	2020 [a]	2021	2022
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	3.1
GWMW-10I	—	—	—	—	—	—	—	**26**	**13**	**33 A1**
GWMW-10D	—	—	—	—	—	—	—	1.6	1.2	1.3 A1
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	<1.0
GWMW-11I	<1.0	<1.0	<1.0	2	1.8	4.3	3.3	2.8	3.6	1.9
GWMW-11D	<1.0	<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	<1.0
GWMW-15I	2.3	<1.0	1.1	**6.1**	**5.6**	**19**	**17**	**9.2**	**22**	**21**
GWMW-15D	<1.0	<1.0	<1.0	<1.0	<1.0	1.1	<1.0	<1.0	<1.0	1.4
GWMW-16S	—	—	—	1.6	4.9	**5.1**	**8.7**	2.5	4.6	**6.5**
GWMW-16D	—	—	—	3.1	**5.0**	**16**	**15**	**21**	**23**	**24**

Notes are provided at the end of the table.

Table 12. PCE Results for Annual Groundwater Sampling, 2012–2022
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Well	PCE Concentration (µg/L)									
	2012	2013	2014	2015	2016	2018	2019	2020 [a]	2021	2022
MW-1	<1.00	<5	<1.0	2.1	2.9	—	— [f]	—	—	—
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	Dry
MW-6	2.3	—	—	—	—	—	— [b]	—	—	—
MW-SF1	**9.6**	—	—	—	—	—	— [b]	—	—	—
MW-SF2	**11**	**7.5**	—	—	—	—	3.3 (dry)	3.8	3.1	1.8
MW-SF4	—	—	<1.0	—	—	—	— [b]	—	—	—
MW-SF5	<1.0	<1.0	<1.0	1.1	1.1	—	<1.0	<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	<1.0
MW-SF10	**9.5**	**12**	—	**23**	**21**	**16**	**11**	**12**	**9.5**	**12**
NGMW-01	—	—	—	—	—	—	—	<1.0	<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	<1.0

Notes are provided at the end of the table.

Table 12. PCE Results for Annual Groundwater Sampling, 2012–2022
Page 5 of 6

Well	PCE Concentration (µg/L)									
	2012	2013	2014	2015	2016	2018	2019	2020 [a]	2021	2022
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	<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]	—	—	—
NGMW-03-05	—	—	—	—	—	<1.0	— [b]	—	—	—
NGMW-03-06	—	—	—	—	—	<1.0	— [b]	—	—	—
NGMW-03-07	—	—	—	—	—	<1.0	— [b]	—	—	—
NGMW-03-08	—	—	—	—	—	<1.0	— [b]	—	—	—

Notes are provided on the next page.

Table 12. PCE Results for Annual Groundwater Sampling, 2012–2022
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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.
A1 = Sample not collected according to SOP

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
a Geo-Logic Company

JUNE 2023

REVISED MARCH 2024

CALENDAR YEAR 2022
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

DBS&A
a Geo-Logic Company

JSAI

JOHN SHOMAKER & ASSOCIATES, INC.

WATER-RESOURCE AND ENVIRONMENTAL CONSULTANTS

ALBUQUERQUE, NM * www.shomaker.com * 505-345-3407

CALENDAR YEAR 2022
GROUNDWATER PROGRAM EVALUATION REPORT
GRIGGS AND WALNUT GROUNDWATER PLUME SUPERFUND SITE, LAS CRUCES, NEW MEXICO

prepared by

Steven T. Finch, Jr., CPG, PG
Frances Grishkina-Santangelo
JOHN SHOMAKER & ASSOCIATES, INC.
Water-Resource and Environmental Consultants
2611 Broadbent Parkway NE
Albuquerque, New Mexico 87107
505-345-3407
www.shomaker.com

prepared for

Daniel B. Stephens & Associates, Inc.
Albuquerque, New Mexico

City of Las Cruces
New Mexico

and

Doña Ana County
New Mexico

June 28, 2023
Revised March 6, 2024

CALENDAR YEAR 2022 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 2022 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. November 2022 was the third sampling event from the monitoring network that replaced the FLUTe wells. DBS&A collected the November 2022 data presented in this report, and the remaining Site data were obtained from Las Cruces Utilities (LCU).

The three hydrogeologic zones used at the Site include: "Shallow" which is generally the water table to an elevation of 3,800 ft, "Intermediate" which is the elevation range 3,685 to 3,800 ft, and "Deep" which is the elevation range 3,475 to 3,685 ft. The Shallow and Intermediate Zones are not hydraulically connected across the Site where the clay layer is present, but the Shallow Zone and the Intermediate and Deep Zones are hydraulically connected across the Site where the clay layer 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).

When considering the Site monitoring network and 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, and confined between the 3,840- and 3,830-ft regional water-level elevation contours (Fig. 8). The hydraulic gradient steepens within the cone of depression caused by pumping extraction well CLC 27.

Three PCE plume maps were constructed for the Shallow, Intermediate, and Deep Zones respectively (Figs. 9, 10, and 11). The Shallow Zone plume at CLC 18 is completely removed, and the Intermediate and Deep Zone PCE plume 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. As indicated by results from GWMW-09D1, GWMW-10D, and CLC 19, the PCE plume observed at GWMW-15I (Deep Zone) appears to be separated from the primary PCE plume captured by CLC 27.

The Site telescope mesh refinement (TMR) groundwater flow model (JSAI, 2017) was updated with data collected from 2017 through 2022 and satisfactorily calibrated. Findings indicate when CLC 61 stopped high rates of 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.

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 2022 Optimization Assessment Report Griggs and Walnut Groundwater Plume Superfund Site, Las Cruces, New Mexico*).

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Figure 5. Hydrogeologic cross-section B-B' with November 2022 PCE concentrations, Griggs and Walnut Site, Las Cruces, New Mexico.

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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 November 2022 water-level elevation contours, City of Las Cruces, New Mexico.

Figure 9. Aerial photograph showing November 2022 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 November 2022 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 November 2022 water-level elevation contours and PCE concentrations for the Deep Hydrogeologic Zone, Griggs and Walnut Site, Las Cruces, New Mexico.

Figure 12. Topographic map showing telescope mesh refinement (TMR) groundwater-flow model grid, Griggs and Walnut Site, Las Cruces, New Mexico.

Figure 13. Map showing telescope mesh refinement (TMR) groundwater-flow model with Griggs and Walnut Site monitoring network, Las Cruces, New Mexico.

Figure 14. 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
amsl	above mean sea level
CLC	City of Las Cruces
CSM	Conceptual Site Model
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
MCL	maximum contaminant level
ME	mean error
NMED	New Mexico Environment Department
NMOSE	New Mexico Office of the State Engineer
PCE	tetrachloroethene
Q/s	specific capacity
RAO	Remedial Action Objective(s)
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
µS/cm	microsiemens per centimeter

CALENDAR YEAR 2022 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 10 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 (SCM) included an Upper Hydrogeologic Zone (UHZ) and a Lower Hydrologic Zone (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, therefore resulting in enhanced lateral movement of groundwater at the water table in the UHZ.

Top and bottom elevations of the clay layer observed from well logs were used to develop a three-dimensional geologic model of the Site. A map showing the confining clay layer extent and top-of-clay elevation contours is presented as Figure 2. A map showing the thickness of the clay unit is presented as Figure 3.

The groundwater program evaluation analysis uses the current definitions of the SCM hydrogeologic zones and corresponding elevations (DBS&A, 2022), 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 UHZ
- Intermediate Zone wells: screened interval elevation rage 3,685 to 3,800 ft amsl, formerly referred to as the Upper portion of the 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 Shallow and Intermediate Zones have limited vertical groundwater flow (hydraulically disconnected) across the Site where the clay layer is present; however, the Shallow, Intermediate, and Deep Zones are hydraulically connected where the clay layer is thin or absent. The areas of hydraulic disconnection are noted by a difference in geochemical signatures between the Shallow, Intermediate and Deep Zones, and markedly larger vertical gradients between zones.

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 Shallow, Intermediate, and Deep Zones (see Figs. 2 through 6). Results from the FLUTe well replacement program confirmed the current SCM.

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 an impediment 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 has a topographic low in the vicinity of CLC 18, with topographic highs to the west, north, and southeast of CLC 18 (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). The measuring-point elevations for the Site monitoring network are based on surveyed measuring points. Survey data are summarized in Table 2, and presented in Appendix A.

Water levels from the conventional monitoring wells are measured by DBS&A during the annual sampling event. Water levels from CLC water-supply wells are measured by Las Cruces Utilities staff on a monthly basis. Continuous monitoring with transducers in GWMW-16(S,D) and CLC water-supply wells is performed by Las Cruces Utilities staff.

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	***	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 *** below Deep Zone
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

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 2022 monitoring event, there were 18 monitoring wells used to monitor the Shallow Zone; however, several have gone dry (MW-1, MW-3, MW-4, and MW-5) as the Shallow Zone is dewatered. Two wells (CLC 18 and CLC 54) are cross-screened and monitor the Shallow, Intermediate, and Deep Zones (Table 2). There are four Intermediate Zone wells, 17 Deep Zone wells, and five cross-screened 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 for the purpose of managing their groundwater resources separate from the JSP. 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 in twelve inactive wells. LCU groundwater-level data help define the regional groundwater-level elevation contours surrounding the Site. A summary of the winter 2022 groundwater-level data is provided in Table 3, and selected hydrographs are presented in Appendix B.

Table 3. Summary of Winter 2021 and Winter 2022 water-level data from the monitoring network

well	type well	hydrogeologic zone	Winter 2021 measurement date	Winter 2021 depth to water (ft bmp)	Winter 2021 water-level elevation (ft amsl)	Winter 2022 measurement date	Winter 2022 depth to water (ft bmp)	Winter 2022 water-level elevation (ft amsl)	water-level change Dec 2021– Nov 2022 (ft) positive = decline; negative = rise
CLC 10	inactive	D	12/7/2021	96.10	3,843.32	11/14/2022	96.00	3,843.42	-0.1
CLC 18	extraction	S/I/D	12/27/2021	210.10	3,838.49	11/15/2022	210.07	3,829.52	-0.03
CLC 19	inactive	D	12/14/2021	226.30	3,838.47	11/4/2022	226.9	3,838.07	0.6
CLC 20	inactive	I/D	12/14/2021	237.73	3,836.78	11/4/2022	237.0	3,837.51	-0.73
CLC 21	inactive	I/D	12/14/2021	237.20	3,838.05	11/4/2022	237.80	3,837.45	0.60
CLC 24	inactive	D	12/8/2021	204.60	3,836.41	11/14/2022	199.40	3,841.61	-5.2
CLC 26	standby	D	12/6/2021	177.63	3,836.52	11/15/2022	178.35	3,835.80	0.72
CLC 27	extraction	D	12/27/2021	271.56	3,765.56	11/15/2022	255.72	3,801.40	-15.84
CLC 28	active	D	12/29/2021	272.20	3,790.45	11/4/2022	229.5	3,833.15	-42.7
CLC 38	inactive	I/D	12/20/2021	265.30	3,838.01	11/14//2022	266.60	3,836.71	1.3
CLC 54	inactive	S/I/D	12/21/2021	269.10	3,842.13	11/8/2022	271.6	3,839.63	2.5
CLC 57	inactive	I/D	12/21/2021	292.40	3,839.74	11/14//2022	293.60	3,838.54	1.2
CLC 60	inactive	D	12/7/2021	106.40	3,835.95	11/14/2022	108.60	3,833.75	2.2
CLC 61	inactive	*	12/6/2021	205.80	3,835.57	11/3/2022	205.40	3,772.27	-0.4
GWMW-01S	MW	S	12/13/2021	194.84	3,843.85	11/14/2022	195.42	3,843.27	0.58
GWMW-01I	MW	I	12/13/2021	201.65	3,837.31	11/14/2022	201.82	3,837.14	0.17
GWMW-01D	MW	D	12/13/2021	201.48	3,836.81	11/14/2022	201.47	3,836.82	-0.01
GWMW-06S	MW	S	12/15/2021	96.68	3,850.10	11/14/2022	97.29	3,849.49	0.61
GWMW-08S	MW	S	12/13/2021	175.17	3,844.92	11/14/2022	175.74	3,844.35	0.57
GWMW-08D	MW	D	12/13/2021	181.67	3,838.18	11/14/2022	181.76	3,838.09	0.09
GWMW-09S	MW	S	12/15/2021	209.55	3,841.55	11/15/2022	210.13	3,840.97	0.58
GWMW-09D1	MW	D	12/15/2021	211.91	3,838.88	11/15/2022	212.44	3,838.35	0.53
GWMW-09D2	MW	D	12/15/2021	212.56	3,838.55	11/15/2022	212.76	3,838.35	0.20
GWMW-10S	MW	S	12/15/2021	222.63	3,841.21	11/15/2022	223.10	3,840.74	0.47
GWMW-10I	MW	I	12/15/2021	226.85	3,837.10	11/15/2022	227.22	3,836.73	0.37
GWMW-10D	MW	D	12/15/2021	228.03	3,836.57	11/15/2022	228.20	3,836.40	0.17
GWMW-11S	MW	S	12/13/2021	179.11	3,843.61	11/14/2022	179.46	3,843.26	0.35
GWMW-11I	MW	I	12/13/2021	185.53	3,837.21	11/14/2022	185.81	3,836.93	0.28
GWMW-11D	MW	D	12/13/2021	185.74	3,836.93	11/14/2022	186.09	3,836.58	0.35
GWMW-15S	MW	I	12/13/2021	241.36	3,839.67	11/14/2022	241.70	3,839.33	0.34
GWMW-15I	MW	D	12/13/2021	241.85	3,839.21	11/14/2022	242.18	3,838.88	0.33
GWMW-15D	MW	D	12/13/2021	241.82	3,839.21	11/14/2022	242.15	3,838.88	0.33
GWMW-16S	MW	S	12/14/2021	189.87	3,843.20	11/15/2022	190.44	3,842.63	0.57
GWMW-16D	MW	D	12/14/2021	194.55	3,838.18	11/15/2022	195.36	3,837.37	0.81
MW-1	MW	S	12/14/2021	193.85	3,543.29	11/14/2022	194.31	3,842.83	0.46
MW-3	MW	S	12/14/2021	dry	dry	11/14/2022	dry	dry	dry
MW-4	MW	S	12/14/2021	dry	dry	11/14/2022	dry	dry	dry
MW-5	MW	S	12/14/2021	dry	dry	11/14/2022	dry	dry	dry
MW-SF2	MW	S	12/14/2021	192.18	3,843.53	11/14/2022	192.64	3,843.07	0.46
MW-SF5	MW	S	12/13/2021	149.43	3,846.20	11/14/2022	150.10	3,845.53	0.67
MW-SF9	MW	S	12/14/2021	191.33	3,841.02	11/14/2022	191.71	3,840.64	0.38
MW-SF10	MW	S	12/13/2021	195.71	3,842.95	11/14/2022	196.06	3,842.60	0.35
Paz Park	irrigation	I/D	12/29/2021	175.90	3,836.70	10/26/2022	174.20	3,838.4	-1.7
NGMW-01	MW	S	12/13/2021	128.10	3,847.38	11/14/2022	128.71	3,846.77	0.61
NGMW-02	MW	S	12/13/2021	133.43	3,847.36	11/14/2022	134.07	3,846.72	0.64
NGMW-03	MW	S	12/13/2021	138.21	3,846.90	11/14/2022	138.86	3,846.25	0.65

S, I, D - Shallow, Intermediate, and Deep Zones MW - monitoring well ft amsl - feet above mean sea level
nm - not measured * below Deep Zone 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 (+/- 2%), and metered volumes reported to the NMOSE. For the Site area shown on Figure 1, extraction wells CLC 18 and CLC 27, and municipal well CLC 28, located to the north of the Site, were actively pumping during 2022. Average monthly and annual pumping rates for 2020, 2021, and 2022 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 during March 2018 and the pumping rate increased from about 150 gpm to 220 gpm. The 2022 pumping rate decreased from August to December as a result of declining pump performance. Around September LCU started planning for pump replacement, and the pump was scheduled to be removed and replaced at the beginning of 2023. 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.

Paz Park irrigation well was not pumped during 2022; however, municipal wells CLC 28 and CLC 61 were pumped in 2022 (Table 4).

2.4 Monitoring Network Water-Quality Data

All 2022 Site monitoring network groundwater-quality data were collected by DBS&A (2023). The primary constituent of concern for the Site is PCE. 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 2020, 2021, and 2022 pumping for the Griggs and Walnut Site area

month	CLC 18 average [1] (gpm)			CLC 27 average [1,2] (gpm)			CLC 28 average [1] (gpm)			CLC 61 average [1] (gpm)		
	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
Jan	29.4	28.3	3.58	235	238	215	0	251	136	0	0	0
Feb	30.4	27.2	4.22	248	229	212	0.1	262	0	0	0	0
Mar	29.7	28.2	5.04	237	239	213	0	0	242	0	0	0
Apr	29.5	29.7	1.30	234	236	218	0	0	268	0	0	0
May	29.3	27.5	2.08	238	236	223	0	0	163	0	0	37
Jun	29.2	27.6	2.04	237	226	220	6.5	40	309	0	0	1
Jul	28.2	27.3	1.57	235	222	220	189	225	275	0	0	1
Aug	28.3	16.6	1.93	235	222	203	279	265	279	0	0	0
Sep	28.9	4.2	2.29	237	222	197	564	287	0	0	0	0
Oct	28.9	3.6	1.90	235	225	171	433	299	0	0	0	0
Nov	29.2	4.4	2.04	233	222	161	290	251	0	0	0	0
Dec	29.3	4.3	2.08	238	221	135	160	173	0	0	0	0
annual	29.2	19.1	2.5	237	228	199	160	171	139	0	0	3.25

[1] Pumping data are 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.
gpm - gallons per minute

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)	Nov 2022 PCE (µg/L)
CLC 18	380 – 516.5	extraction	S/I/D	**35**	**48**	**42**	**13**	**15**	**7.6**	**6.6**	**5**	4.5	3.8
CLC 19	402 – 675	supply	D	**2**	---	---	---	---	---	---	---	<1.0	---
CLC 20*	380 – 673	supply	I/D	---	---	2.3	<1.0	< 1.0	---	< 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**	**1**	**16**	**15**
CLC 57*	408 – 516	supply	I/D	---	---	<1.0	<1.0	< 1.0	---	<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	1.2
GWMW-01I (P3)	330 – 340	monitoring	I	1	---	2.7	1.6	**7.0**	4.3Rf	---	**17.5 ****	**10**	**7.9**
GWMW-01D (P7)	550 – 560	monitoring	D	2.1	---	3.2	<1.0	< 1.0	<1.0Rf	---	1.6	<1.0	<1.0
GWMW-06S (P1)	100 – 110	monitoring	S	**10**	---	---	---	---	<1.0Rf	---	2	---	---
GWMW-08S (P1)	190 – 210	monitoring	S	---	---	---	---	---	---	---	< 1.0	<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	<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	<1.0
GWMW-09D1 (P4)	410 – 420	monitoring	D	**16**	**29**	1.2	**11**	**9.2**	<1.0Rf	---	**5.7**	4.3	**5.4**
GWMW-09D2 (P6)	550 – 560	monitoring	D	0.2	<1.0	<1.0	<1.0	<1.0	2.0Rf	---	**12**	**6.9**	4.9
GWMW-10S (P1)	236 – 256	monitoring	S	3.2	**31**	**47**	1.2	**5.1**	**8.3Rf**	---	3.9	2.9	3.1
GWMW-10I (P3)	370 – 380	monitoring	I	**16**	**46**	**45**	1.8	**16**	**11.0Rf**	---	**26**	**13**	**33**
GWMW-10D (P6)	550 – 560	monitoring	D	0.4	<1.0	<1.0	<1.0	**7.3**	**9.6Rf**	---	1.6	1.2	1.3
GWMW-11S	190 – 205	monitoring	S	<0.5	<1.0	<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	1.9
GWMW-11D	525 – 540	monitoring	D	<0.5	<1.0	<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	<1.0
GWMW-15I	460 – 475	monitoring	D	<0.5	<1.0	2.6	**6.1**	**5.6**	**19**	**17**	**9.2**	**22**	**21**
GWMW-15D	581 – 596	monitoring	D	<0.5	<1.0	<1.0	<1.0	<1.0	1.1	<1.0	<1.0	1	1.4
GWMW-16S	185 – 205	monitoring	S	---	---	---	1.6	4.9	**5.1**	**8.7**	2.5	4.6	**6.5**
GWMW-16D	350 – 370	monitoring	D	---	---	---	3.1	**5**	**16**	**15**	**21**	**23**	**24**
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	---	dry
MW-4*	175 – 185	monitoring	S	1	---	4.2	---	---	---	---	dry	---	dry
MW-5	182 – 192	monitoring	S	0.5	---	<1.0	---	---	---	---	dry	---	dry
MW-SF2	184 – 199	monitoring	S	**8.3**	---	**7.4**	---	---	---	3.3	3.8	3.1	1.8
MW-SF5	138 – 153	monitoring	S	1.7	---	<1.0	1.1	<1.0	---	<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	<1.0
MW-SF10	194 – 204	monitoring	S	**17**	---	**10**	**23**	**21**	**16**	**11**	**12**	**9.5**	**12**
NGMW-01	115 – 165	monitoring	S	---	---	---	---	---	<1.0	---	<1.0	<1.0	<1.0
NGMW-02	115 – 165	monitoring	S	---	---	---	---	---	<1.0	---	<1.0	<1.0	<1.0
NGMW-03	115 – 165	monitoring	S	---	---	---	---	---	<1.0	<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
Rf - 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
--- indicates no available results or sample not required (see Table 2)

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 at extraction well CLC 18 (JSAI, 2019). Almost all wells with elevated specific conductance represent the Shallow Zone which has been influenced by irrigation returns to the water table. Wells with specific conductance values less than 800 microsiemens per centimeter (µS/cm) have not been influenced by the Shallow Zone and 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 the Deep Zone not impacted by the PCE plume. This basis distribution of specific conductance values helps understand the Conceptual Site Model (CSM) and mixing of zones.

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. All CLC 18 and CLC 27 operational data presented herein were collected by LCU.

3.0 HYDROGEOLOGIC ANALYSIS

Some modifications to the original 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 Shallow Zone is primarily differentiated from the Intermediate Zone by a clay layer. The Intermediate and Deep Zones are similar in character but defined by elevation zones that allow mapping PCE impacts at various depths. The Shallow and Intermediate Zones have limited vertical groundwater flow (hydraulically disconnected) across the Site where the clay layer is present; however, the Shallow, Intermediate, and Deep Zones are hydraulically connected where the clay layer is thin or absent.

The SCM is illustrated by clay layer elevation and thickness contours (Figs. 2 and 3) and hydrogeologic cross-sections (Figs. 4, 5, and 6). The clay layer is thickest near monitoring well NGMW-01 and thins outward (Fig. 3). 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 toward MW-SF10 (Fig. 2). Areas in which the top of the clay layer has a relatively high elevation (>3,820 ft) limits horizontal groundwater flow in the Shallow Zone, particularly where the top of the clay is near the water table.

Head differences between Shallow and Deep Zone monitoring wells are summarized in Table 6. A prominent downward head gradient has been established across the Site from regional pumping. Most all of the supply wells in the area are screened deep and pump from the Intermediate and Deep Zones. Head differences greater than 5 ft are observed where the clay layer is present, indicating the Shallow Zone has a higher head perched on top the clay layer because vertical flow is impeded. Where the clay layer is absent, such as at GWMW-15, there is a minimal head difference between Shallow and Deep Zones indicating hydraulic communication and vertical flow between zones.

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

well	hydrogeologic zone	Nov 2022 water-level elevation (ft amsl)	head difference [1] (ft)
GWMW-01S	Shallow [2]	3,843.27	6.45
GWMW-01D	Deep	3,836.82	
GWMW-08S	Shallow [2]	3,844.35	6.26
GWMW-08D	Deep	3,838.09	
GWMW-09S	Shallow [2]	3,840.97	2.62
GWMW-09D2	Deep	3,838.35	
GWMW-10S	Shallow [2]	3,840.74	4.34
GWMW-10D	Deep	3,836.40	
GWMW-11S	Shallow [2]	3,843.26	6.68
GWMW-11D	Deep	3,836.58	
GWMW-15S	Intermediate [3]	3,839.33	0.45
GWMW-15D	Deep	3,838.88	
GWMW-16S	Shallow [2]	3,842.63	5.26
GWMW-16D	Deep	3,837.37	

[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

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 (Fig. 4). At CLC 18, the clay layer separating the Shallow and Intermediate creates a hydraulic impediment to vertical flow. East of GWMW-16(S,D), the clay layer transitions to silt and fine 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.

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 November 2022 are shown in Figure 8.

3.2.1 Horizontal Flow Direction

Regional groundwater-elevation contours, and arrows showing direction of flow, based on November 2022 data, are presented on Figure 8. The hydraulic gradient across the regional vicinity of the Site remains fairly gentle (0.002 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.

November 2022 groundwater-level elevation contours for the Shallow Zone at the Site are presented on Figure 9. Groundwater flow in the Shallow Zone at the Site is generally toward the east - southeast with a localized cone of depression induced by extraction at CLC 18. The hydraulic gradient for Shallow Zone is 0.0014 ft/ft.

November 2022 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. As indicated by the 1-ft groundwater elevation contours, the head difference across the Site is about 4 ft. Groundwater flow at GWMW-15 is to the southwest toward CLC 27 (Fig. 10). Regional groundwater-elevation contours (Fig. 8) also indicate southwest groundwater flow direction between CLC 54 and CLC 27.

3.2.2 Vertical Head Gradient

The head difference between the Shallow and Deep Zones is 4 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) and GWMW-11(S,I,D) have 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.

CLC 61 is screened much deeper (600 to 1,000 ft) than other wells in the area and when significantly pumped (1,500 acre-feet per year (ac-ft/yr)) 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 previously apparent from groundwater-level elevation contouring analysis (JSAI, 2019). The groundwater-level effects of CLC 61 pumping became more apparent through more-detailed analyses of water-level trends from CLC 19, CLC 20, CLC 24, and CLC 26 (see Appendix B and F), where drawdown (water-level decline) and recovery (water-level rise) cycles in Site wells were easily correlated with sustained elevated CLC 61 pumping rates. Since start-up in 2012, CLC 61 pumping significantly varied between 0 and 1,673 ac-ft/yr (Fig. 7). Based on trend analyses, CLC 61 pumping only affects head gradients when sustained pumping rates are greater than 400 ac-ft/yr. CLC 61 was pumped during May 2022 for operational and maintenance needs (Table 4).

CLC 28, located north of the Site, is actively pumped (Figs. 7 and 8), but water-level trends at Paz Park well, CLC 21, and CLC 54 (see Appendix B graphs) along with 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 a decline rate of 0.6 to 0.8 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, Intermediate, and Deep Zones (see Figs. B20 through B22).

During 2020, transducers were installed in GWMW-16(S,D). A hydrograph of GWMW-16(S,D) transducer data is presented as Figure B25. Water-level trends for GWMW-16(S,D) show seasonal variation due to regional pumping (Fig. B25).

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 2022 Optimization Assessment Report Griggs and Walnut Groundwater Plume Superfund Site, Las Cruces, New Mexico*).

At the Site monitoring wells, elevated specific conductance (>1,500 µS/cm) correlates with the Shallow Zone, and low specific conductance (<800 µS/cm) correlates with the Deep Zone. Specific conductance measurements between 800 and 1,500 µS/cm indicate mixing between the Shallow and Deep Zones. This simple correlation provides a line of evidence for the communication between zones in the SCM.

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 above 40 micrograms per liter (µg/L) at CLC 18 (Shallow Zone) and GWMW-10 (Intermediate Zone), where the 2022 results were below 5 µg/L at CLC 18 but still elevated at GWMW-10I. Notable decreases in PCE concentrations during the November 2022 sampling event were observed at GWMW-01I and GWMW-09D2, and increases were observed at GWMW-10I and GWMW-16S (Table 5, Appendix D). November 2022 PCE concentrations are shown with the groundwater-elevation contours on Figures 9, 10, and 11 for the Shallow, Intermediate, and Deep Zones.

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 GWMW-09 (Fig. 9), with the highest Shallow Zone PCE concentrations of 12 µg/L observed at MW-SF10 (Table 5, Fig. 9). Monitoring wells MW-SF2, GWMW-08S, GWMW-01S, GWMW-09S, and GWMW-10S define the Shallow Zone PCE extent. The extent of PCE in the Shallow Zone appears to be constrained by the preferential flow path defined by the top of the clay layer (Fig. 2). 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 Zone is currently defined by monitoring wells GWMW-11I, GWMW-15S, CLC 20, and CLC 21. The highest 2022 PCE concentration observed in the Intermediate Zone is at GWMW-10I (Table 5, Fig. 10). The horizontal extent of the plume in the Deep Zone is currently defined by monitoring wells GWMW-01D, GWMW-08D, GWMW-10D, GWMW-11D, CLC 20, and CLC 21 (Fig. 11). The highest 2022 PCE concentration observed in the Deep Zone is at GWMW-16D (Table 5, Fig. 11). GWMW-09(D1,D2) 2022 data indicate that the PCE observed at GWMW-15I at concentrations greater than 10 µg/L are isolated from the primary plume mass in the Intermediate and Deep Zones (Fig. 11). A data gap for the Intermediate and Deep Zones horizontal plume definition has been identified southeast of CLC 27 (see Appendix F).

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 ft at GWMW-01 to 0.46 ft at GWMW-15. The vertical extent in the Deep Zone is not fully defined where PCE is at or above the standard in the deepest Deep Zone monitoring point (i.e., GWMW-09D2).

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

Vertical groundwater velocity between GWMW-15S and GWMW-15I 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 0.3 ft/day based on a hydraulic conductivity of 10 ft/day, a vertical groundwater gradient of 0.003 ft/ft (0.45-ft head difference in November 2022 divided by 156 ft) and an effective porosity of 0.10 (estimated). The vertical hydraulic conductivity may be less due to anisotropy in hydraulic conductivity. Assuming a vertical hydraulic conductivity of 0.1 ft/day (anisotropy of 0.01), the calculated velocity would be reduced to 0.003 ft/day. Therefore, the average linear groundwater velocity calculated from Darcy's Law ranges from 0.003 to 0.3 ft/day. Although the Darcy's Law calculation does not account for PCE transport mechanisms such as dispersion, sorption, and degradation, the calculated range of vertical velocity values bracket the value estimated from the PCE time-series data at GWMW-15 and provides a range of potential migration rates based on the November 2022 vertical gradient.

PCE concentration of 1.4 µg/L was detected at GWMW-15D from the November 2022 sampling event (Table 5), possibly indicating continued vertical migration of the GWMW-15 PCE plume from GWMW-15I to GWMW-15D.

Contrary to observed vertical plume movement at GWMW-15, the results at GWMW-09 and GWMW-10 do not indicate vertical plume movement in the Intermediate and Deep Zones, but rather horizontal plume movement towards extraction well CLC 27 (Table 5, Figs. 10 and 11). For example, PCE concentrations at GWMW-09D2 have decreased over the last three sampling events from 12 µg/L to below 5 µg/L, where overlying GWMW-09D1 PCE concentrations have remained near 5 µg/L. PCE concentrations at GWMW-10I have remained elevated (13 to 33 µg/L) for the last three sampling events, where GWMW-10D has been consistently about 1 µg/L.

GWMW-01(S,I,D) records indicate the plume is present only in the Intermediate Zone; however, the PCE concentration at GWMW-01I has significantly decreased since the Spring 2021 sampling event (Table 5).

3.6 Site Conceptual Model Summary

The geologic model by JSAI (2019) 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 removed around CLC 18, and, based on groundwater flow direction, the remaining plume is migrating to or within the capture zone of CLC 27. PCE concentrations below 5 µg/L at MW-SF10 and GWMW-16S would indicate the Shallow Zone plume above the clay layer has achieved cleanup goals, and the remaining plume has migrated to the CLC 27 Intermediate Zone capture area.

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, Site data are indicating the observed PCE concentrations at GWMW-15(S,I) are related to a separate source. Given the distribution of higher PCE concentrations at GWMW-16D and GWMW-15I, with lower PCE concentration in between at GWMW-09, it is possible the observed PCE concentrations at 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.

Previous analysis of Site data indicated that pumping from CLC 61 between 2013 and 2018 may have accelerated the vertical plume movement between GWMW-09 and GWMW-15 where the clay layer is absent. There is no indication that pumping CLC 61 significantly affected horizontal movement or hydraulic capture (JSAI, 2019) of the PCE plume by extraction well CLC 27 (see additional discussion and analysis in Appendix F).

From 2022 data, the primary PCE plume mass is located in the Intermediate Zone and within the cone of depression created by pumping extraction well CLC 27 (Fig. 10).

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 2022 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 12. 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 13. 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 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 2022. 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 2022 includes CLC 18 from Layer 1, CLC 27 from Layer 3. CLC 61 pumped 5.3 acre-feet from May 2022 to July 2022 but this relatively small amount of pumping did not impact model results. 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 14. 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 74 available data points was used to compare measured water levels for the 11 active calibration target locations. The histogram on Figure 14 shows that 92% (68 out of 74) of the absolute residual values are less than 2 ft and that 100% (74 out of 74) 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 ft below and has calibration points throughout. The model shows an acceptable correlation between observed and simulated water levels ($r^2 = 0.93$) with a normalized RMSE of 8.3%. 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 2022

statistics of calibration targets	result
number of targets	74
range in observed head	14.37
mean observed head	3,841.0
maximum residual (ft)	2.6
minimum residual (ft)	-2.3
RMSE (ft)	1.19
standard deviation of residual error (ft)	1.2
bias (mean error in ft)	-0.05
normalized RMSE	0.083
R-squared	0.933

RMSE - root-mean-squared error

Vertical-head gradients in the observed water levels were compared to the model simulated head differences for 2022 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.

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 events from the new monitoring well network. Additional time-series data from the new monitoring network will be used to improve model calibration.

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

well	hydrogeologic zone	Nov 2022 water-level elevation (ft amsl)	Nov 2022 simulated water-level (ft amsl)	head difference (ft)	model-simulated head difference (ft)
GWMW-01S	Shallow	3,843.27	3,842.90	6.45	4.90
GWMW-01D	Deep	3,836.82	3,838.00		
GWMW-08S	Shallow	3,844.35	3,842.80	6.26	3.50
GWMW-08D	Deep	3,838.09	3,839.30		
GWMW-09S	Shallow	3,840.97	3,841.90	2.62	1.90
GWMW-09D2	Deep	3,838.35	3,840.00		
GWMW-10S	Shallow	3,840.74	3,841.60	4.34	5.80
GWMW-10D	Deep	3,836.40	3,835.80		
GWMW-11S	Shallow	3,843.26	3,842.90	6.68	4.00
GWMW-11D	Deep	3,836.58	3,838.90		
GWMW-15S	Intermediate	3,839.33	3,842.90	0.45	2.20
GWMW-15D	Deep	3,838.88	3,840.70		
GWMW-16S	Shallow	3,842.63	3,842.30	5.26	6.50
GWMW-16D	Intermediate/Deep	3,837.37	3,835.80		

ft amsl - feet above mean sea level

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 by DBS&A.

The effectiveness of the monitoring system is based on the ability to characterize and monitor the 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, Intermediate, and Deep Zones on a regional and local scale. Water-level interpretation has significantly improved with replacement of the FLUTe wells in 2021. 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.

The groundwater elevation contours are well defined up gradient, cross gradient, and down gradient of the Shallow Zone PCE plume (Fig. 9). The groundwater elevation contours are reasonably defined up gradient, cross gradient, and down gradient of the Intermediate Zone PCE plume (Fig. 10). The groundwater elevation contours are well defined up gradient, cross gradient, and down gradient of the Deep Zone PCE plume (Fig. 11). No additional water level monitoring points are required for the monitoring network to be effective.

5.2 Defining Extent of PCE Plume

The PCE plume in the Shallow Zone is adequately defined by the present monitoring network, with monitoring data less than the PCE standard at locations shown on Figure 9 other than where the plume outline is dashed. The extent of the plume north of MW-SF10 is inferred, but bracketed to the east by GWMW-09S and to the west by GWMW-08S. Monitoring Wells MW-SF9 and GWMW-10S are downgradient of the Shallow Zone plume, and provide evidence that the Shallow Zone plume is remaining in place. The Shallow Zone PCE plume is adequately defined given the west-to-east groundwater flow direction (Fig. 9).

The extent of elevated PCE concentrations in the Intermediate Zone at GWMW-01I, GWMW-10I and GWMW-16D is reasonably well defined (Fig. 10). The extent of the plume north of GWMW-16D and south of CLC 27 is inferred. The inferred plume area north of GWMW-16 is hydraulically up-gradient of the known plume extent and somewhat confined by results from GWMW-08(S,D). The area south of CLC 27 and GWMW-10I are within the cone of depression caused by pumping CLC 27 and confined by the results from CLC 20. Furthermore, the known extent of the Intermediate Zone PCE plume is centered on extraction well CLC 27. Data from CLC 21 and CLC 57 also help constrain the Intermediate Zone plume extent to the northeast and east.

The extent of elevated PCE concentrations in the Deep Zone appears to have two separate areas of concentrations greater than 10 µg/L, with one area around GWMW-16D and the other area around GWMW-15I (Fig. 11). The Deep Zone plume extent is inferred to the north of GWMW-09 and to the north, east and south of GWMW-15I (see dashed plume contours, Fig. 11). The known Deep Zone PCE plume extent is somewhat confined by results from CLC 19 and CLC 21. The Deep Zone plume extent is within the cone of depression caused by pumping CLC 27. The Deep Zone PCE plume around GWMW-15I is defined by GWMW-15, GWMW-09(D1,D2), CLC 19, and CLC 21 (Fig. 11). The eastern-half of this plume is inferred, but the groundwater-flow direction is southwest towards CLC 27.

6.0 SUMMARY OF FINDINGS

The three hydrogeologic zones, Shallow, Intermediate, and Deep, are primarily differentiated by the presence or absence of the clay layer, 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 Zone where the clay layer is present, but the Shallow, Intermediate, and Deep Zones are hydraulically connected across the Site where the clay layer is absent. The 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 2022 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. Additional analysis of CLC 61 pumping effects on the PCE plume can be referenced from Appendix F.

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 in 2021. The Intermediate Zone PCE plume is defined and centered on extraction well CLC 27 cone of depression (see Fig. 10). The Deep Zone PCE plume appears to be bifurcated or two

relatively high concentration areas (Fig. 11) with one area around CLC 27 and the other area between GWM-09 and GWMW-15I. A data gap for horizontal plume definition in the Intermediate and Deep Zones has been identified southeast of CLC 27 (see Appendix F).

The fate of the PCE plume around GWMW-15I is not well defined by the available data. Continued monitoring from GWMW-09(D1,D2), GWMW-15(I,D), CLC 19 and CLC 21 will help better understand the GWMW-15 PCE plume migration characteristics and remedial progress; that is considering the PCE contamination around GWMW-15 is associated with the Griggs and Walnut Site.

Monitoring data from CLC 18 and CLC 27 allow for performance evaluation and adequate calculation of PCE plume mass removal (see JSAI companion report titled *Optimization Assessment Report 2022 Griggs and Walnut Groundwater Plume Superfund Site, Las Cruces, New Mexico*).

A detailed analysis of Site and regional water-level data was performed to better understand hydraulic controls in the Deep Zone when area production wells (CLC 28 and CLC 61) are pumping for seasonal demand (see Appendix F). The potentiometric surface contours for the Deep Zone vary seasonally due to the effect of regional pumping. Defining the groundwater flow direction, cone of depression from individual pumping wells, and hydraulic gradients during the peak demand season and low demand season helps define the containment and capture of the PCE plume from pumping CLC 27.

7.0 RECOMMENDATIONS

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

1. Maintain CLC 27 average monthly pumping rates between 230 and 240 gpm.

2. Discontinue pumping from CLC 18. It was previously recommended to 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. These criteria have been met (see Fig. D1). Monitoring will continue to assess PCE concentrations when CLC 18 pumping is discontinued.

3. Perform monthly reviews of LCU water-level and metered-pumping data in an effort to improve the quality assurance and quality control (QAQC) process. The JSP should make sure the transducer data are compared to hand measured water level on a monthly basis. The monthly metered pumping from CLC 18 and CLC 27 should be reviewed and compared to operational factors.

4. Data from the revised monitoring network are adequate for evaluating remedial progress, except for the apparent separate Deep Zone PCE plume around GWMW-15. Continued sampling from GWMW-09(D1,D2), GWMW-15(I,D), CLC 19, and CLC 21 are needed to better define the Deep Zone PCE plume trends and extent between GWMW-15 and GWMW-09.

5. The Intermediate and Deep Zone PCE plumes are not well-defined southeast of CLC 27. To address this data gap, we recommend installation of an Intermediate and Deep Zone monitoring well pair approximately 850 ft southeast of CLC 27 (see Appendix F).

6. JSAI recommends using the LCU monitoring network to develop potentiometric surface contours for the Deep Zone representative of September and December to better evaluate hydraulic controls for the Intermediate and Deep Zone PCE plumes. September water levels should represent the end of regional peak demand pumping conditions, and December water levels should represent winter low demand regional pumping conditions.

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ILLUSTRATIONS



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

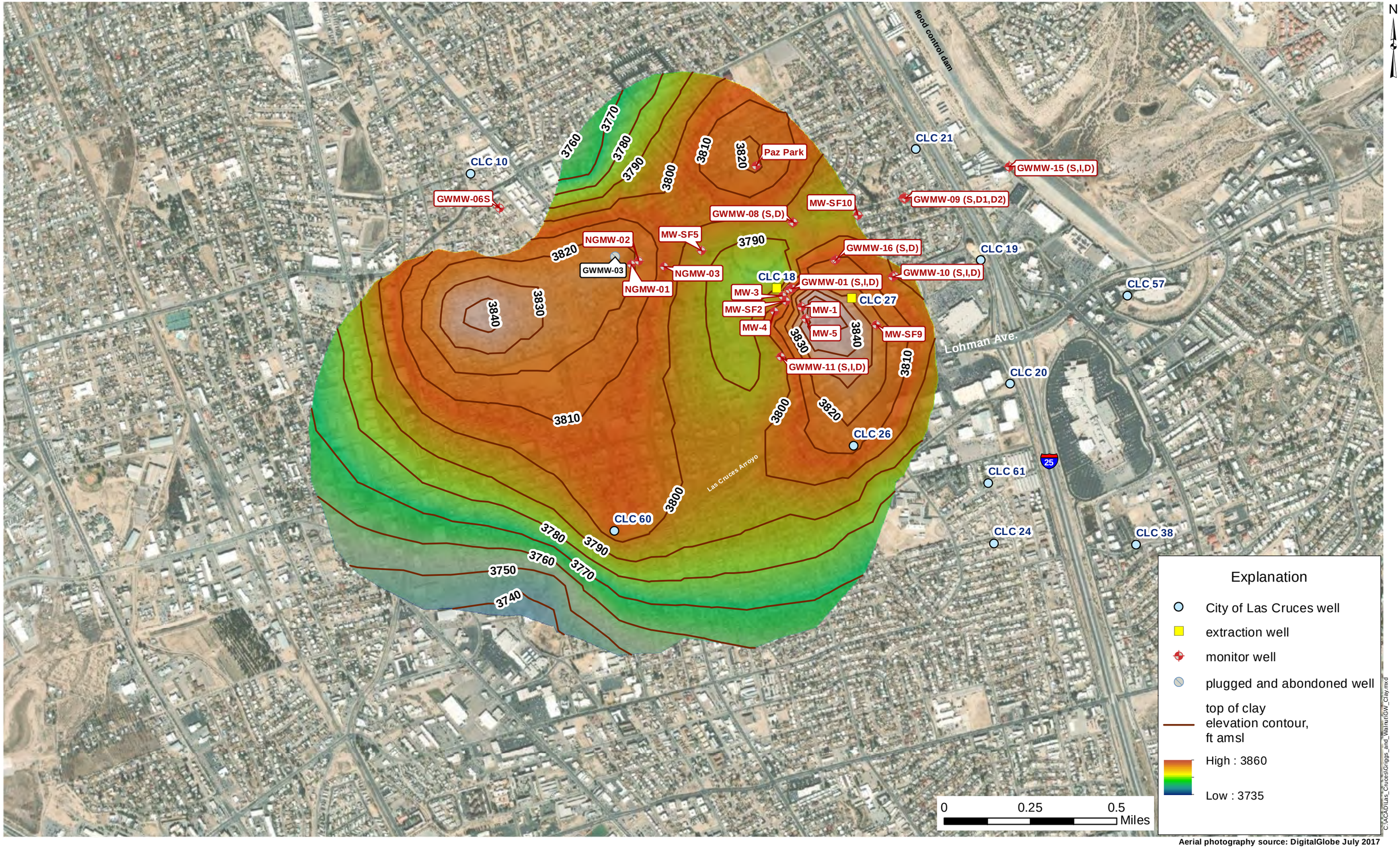


Figure 2. Aerial photograph of the Griggs and Walnut Site showing top of clay layer elevation contours and clay layer extent, Las Cruces, New Mexico.

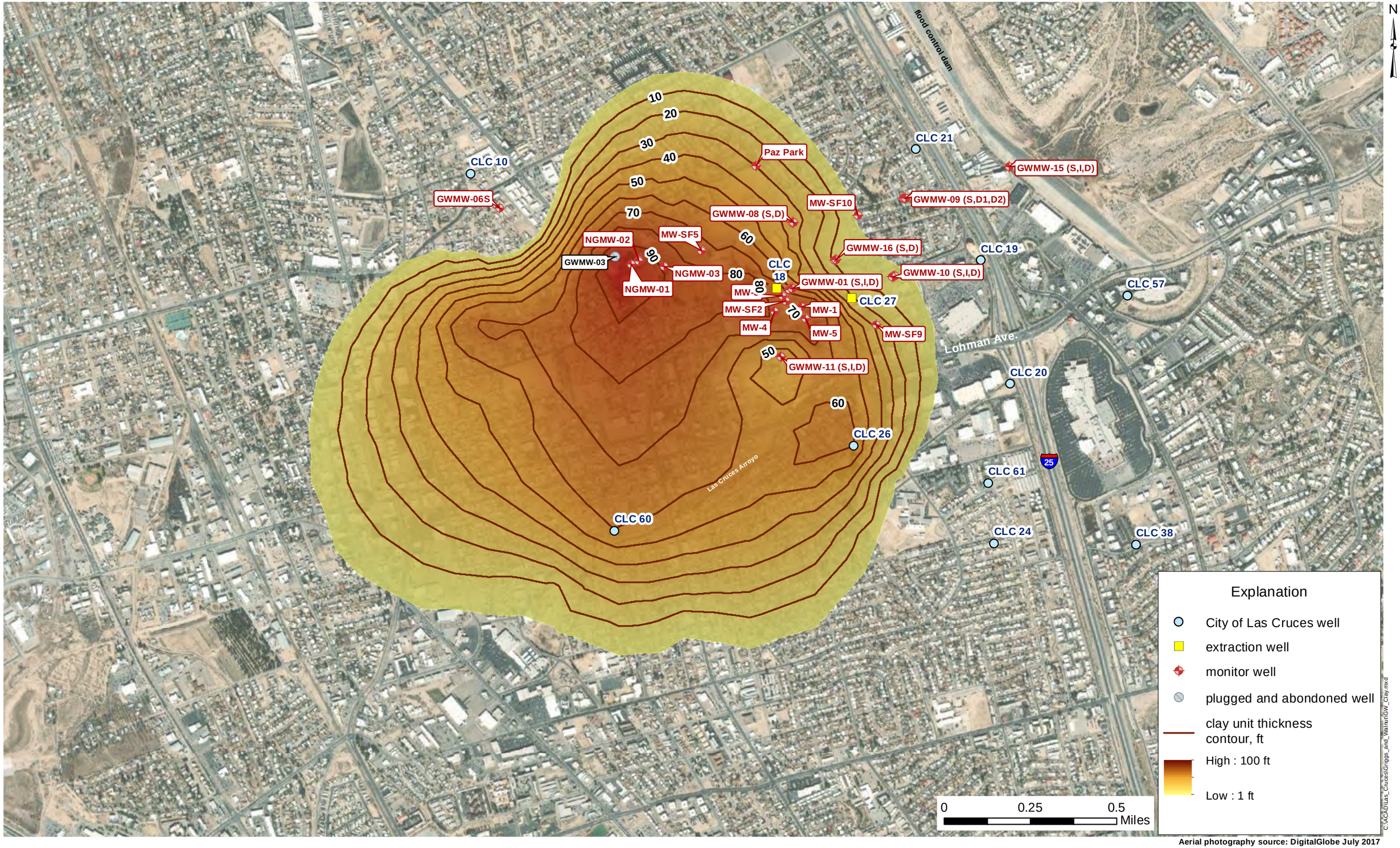


Figure 3. Aerial photograph of the Griggs and Walnut Site showing clay layer extent and thickness contours, Las Cruces, New Mexico.

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)

(bend in section)

GWMW-16(S,D)

(bend in section)

MW-SF10

GWMW-09(S,DI,D2)

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

3.8

1.2

6.5

9.5

<1.0

<1.0

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

?

?

?

380'

7.9

24

5.4

21

4.9

1.4

<1.0

plugged back screen section

TD 516.5'

TD 580'

TD 564'

TD 632'

TD 570'

TD 620'

approximate extent of PCE plume in 2005

modified from JSAI, 2006 and 2016

EXPLANATION

predominantly sand, silt, and clay

predominantly sand and gravel**

PCE concentrations >5 µg/L (Nov. 2022)

approximate water table

dashed where inferred

screen section

direction of flow

4.5 PCE concentration, µg/L (Nov. 2022)

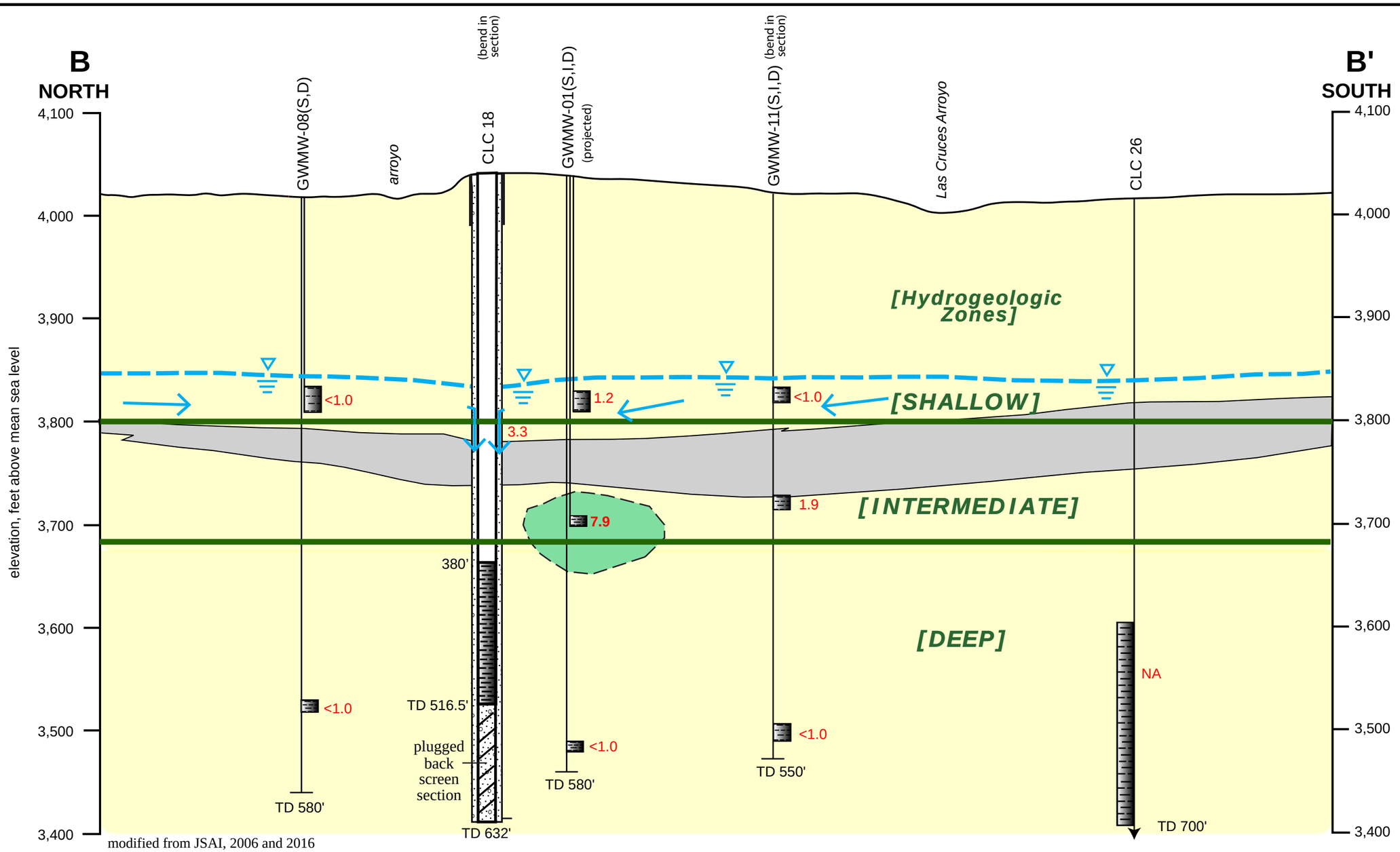
(S,I,D) Shallow, Intermediate, and Deep Zone

(wells not to horizontal scale)

0 500 1,000 ft

horizontal scale

Figure 4. Hydrogeologic cross-section A-A' with November 2022 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 (Nov. 2022)
- approximate water table
- dashed where inferred
- screen section
- direction of flow
- well casing
- annular space
- 3.6 PCE concentration, µg/L (Nov. 2022)
- (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 November 2022 PCE concentrations, Griggs and Walnut Site, Las Cruces, New Mexico.

3/31/2023:\Las Cruces, City of\GRIGGS & WALNUT\2023 GWP reports\GW Monitoring Eval rpt

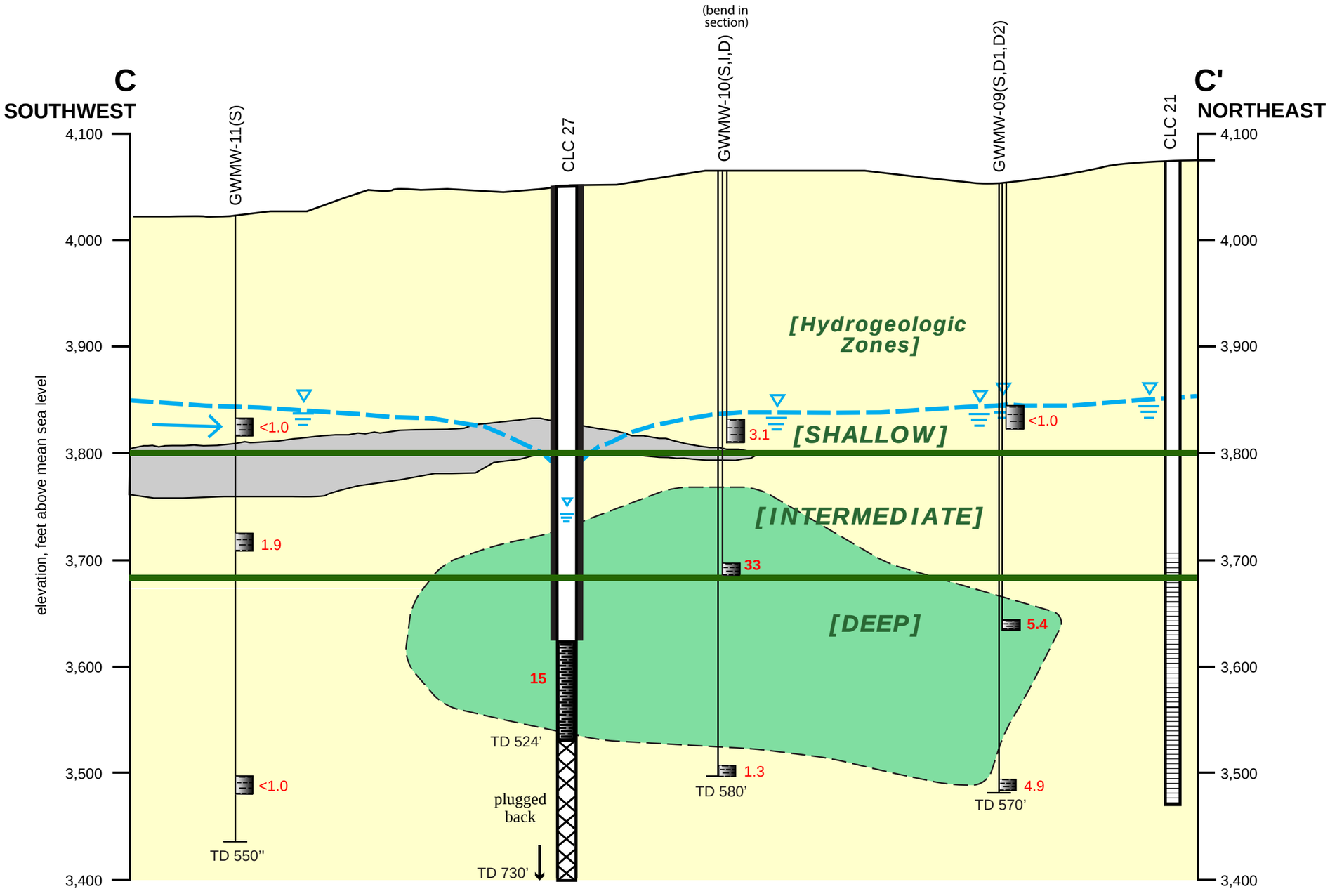


Figure 6. Hydrogeologic cross-section C-C' with November 2022 PCE concentrations, Griggs and Walnut Site, Las Cruces, New Mexico.

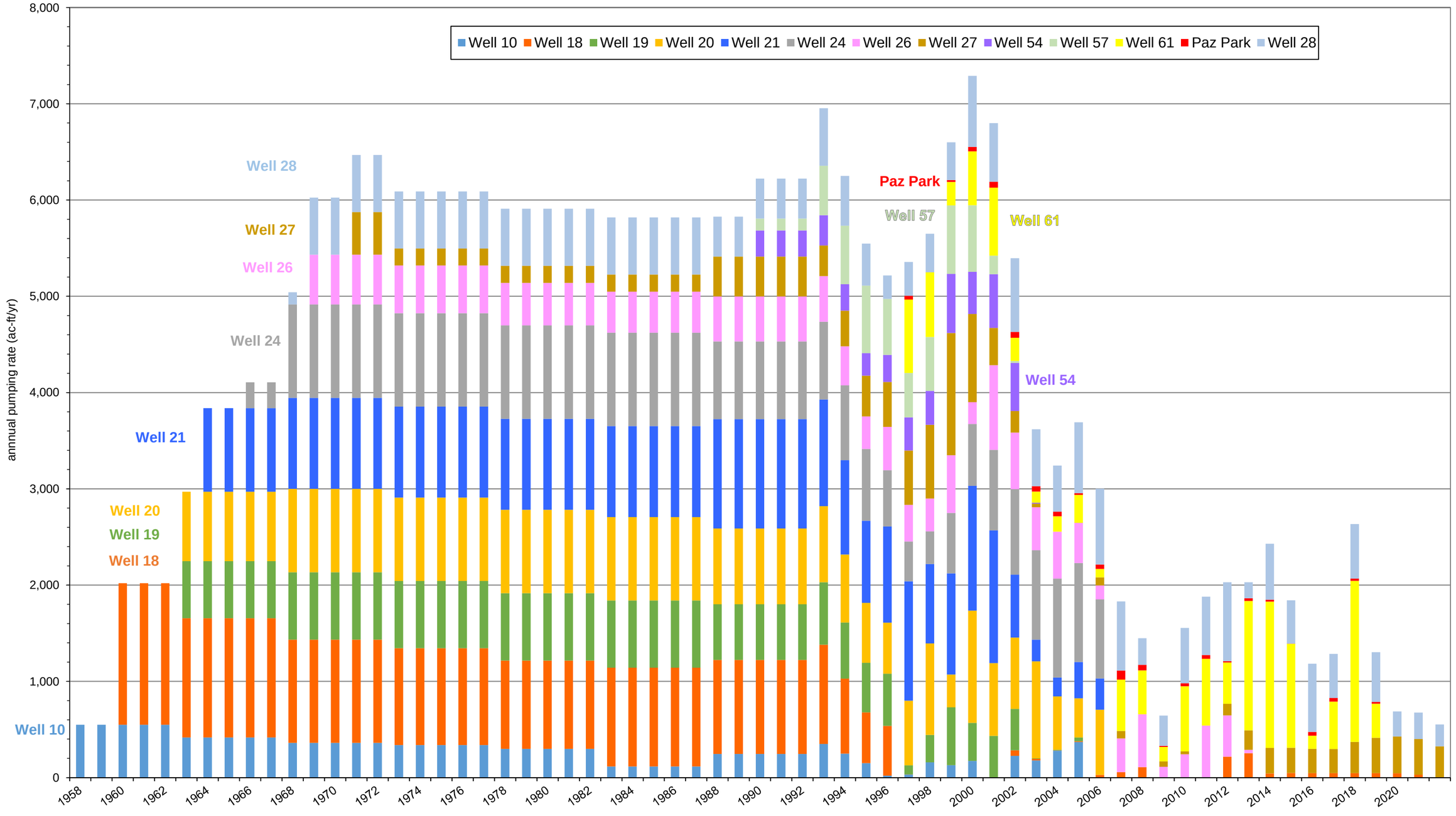


Figure 7. Bar graph of annual pumping from wells in the Griggs and Walnut site area, Las Cruces, New Mexico.

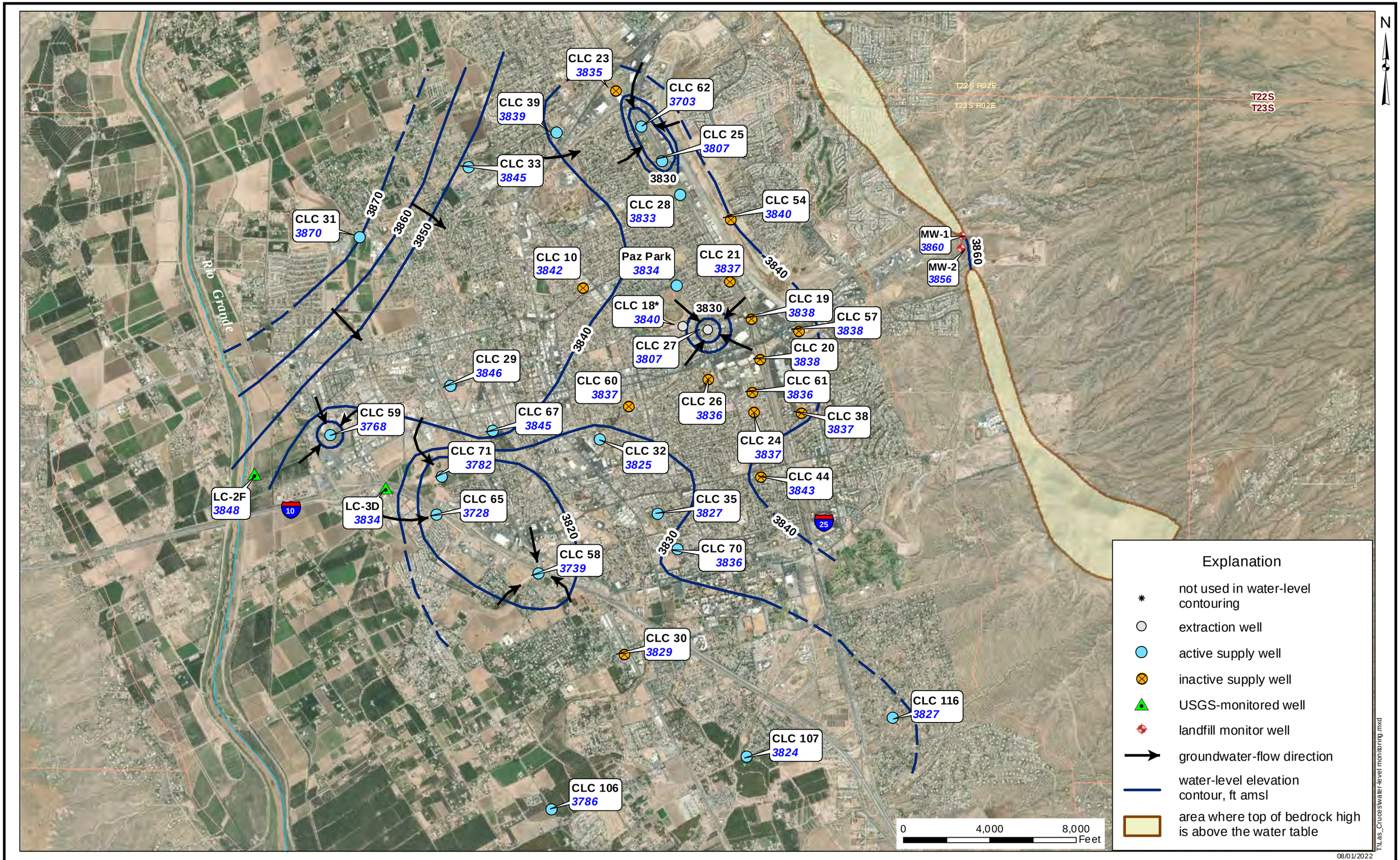


Figure 8. Aerial photograph showing November 2022 water-level elevation contours, City of Las Cruces, New Mexico.



Figure 9. Aerial photograph showing November 2022 water-level elevation contours and PCE concentrations for the Shallow Hydrogeologic Zone, Griggs and Walnut Site, Las Cruces, New Mexico.

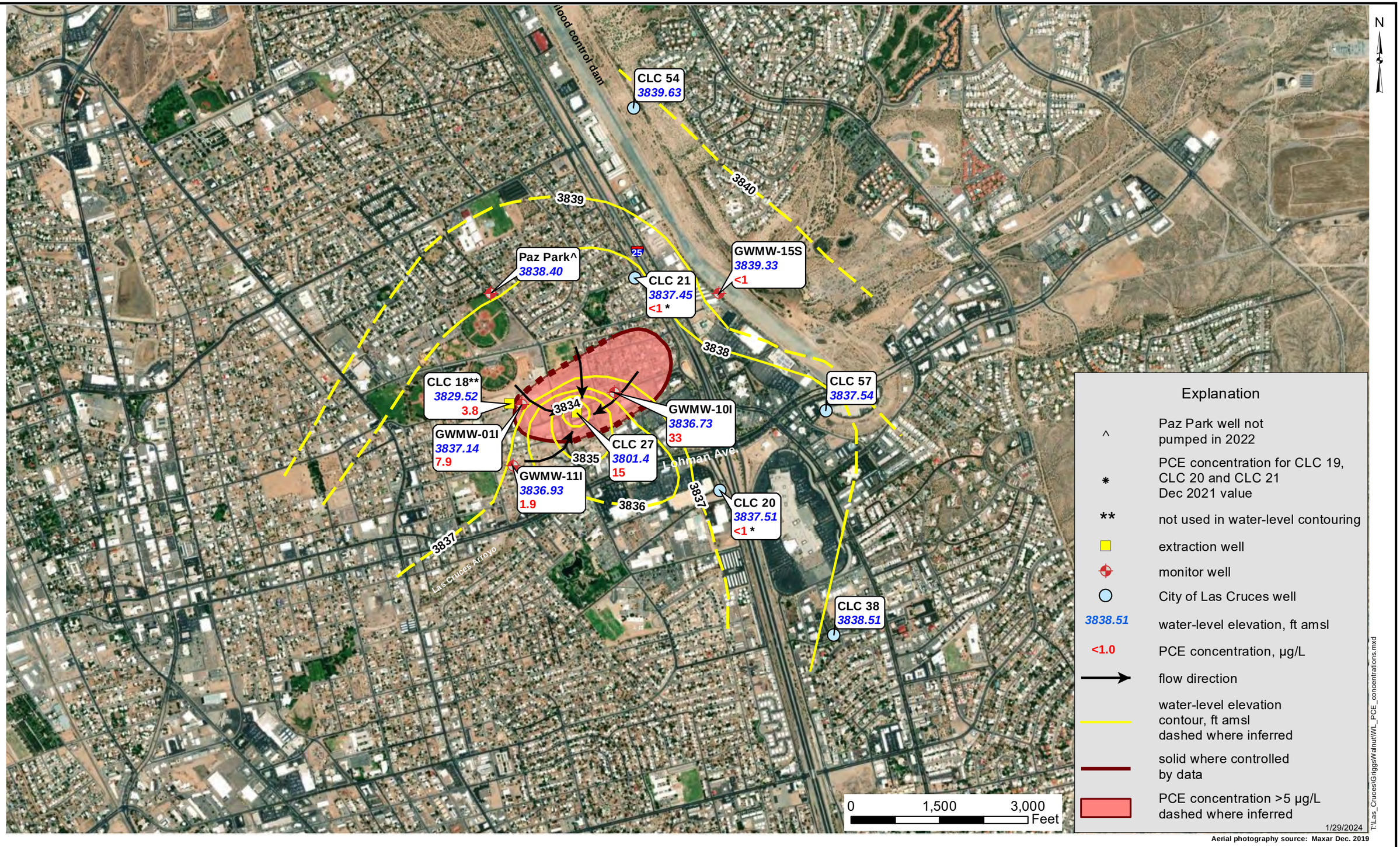


Figure 10. Aerial photograph showing November 2022 water-level elevation contours and PCE concentrations for the Intermediate Hydrogeologic Zone, Griggs and Walnut Site, Las Cruces, New Mexico.

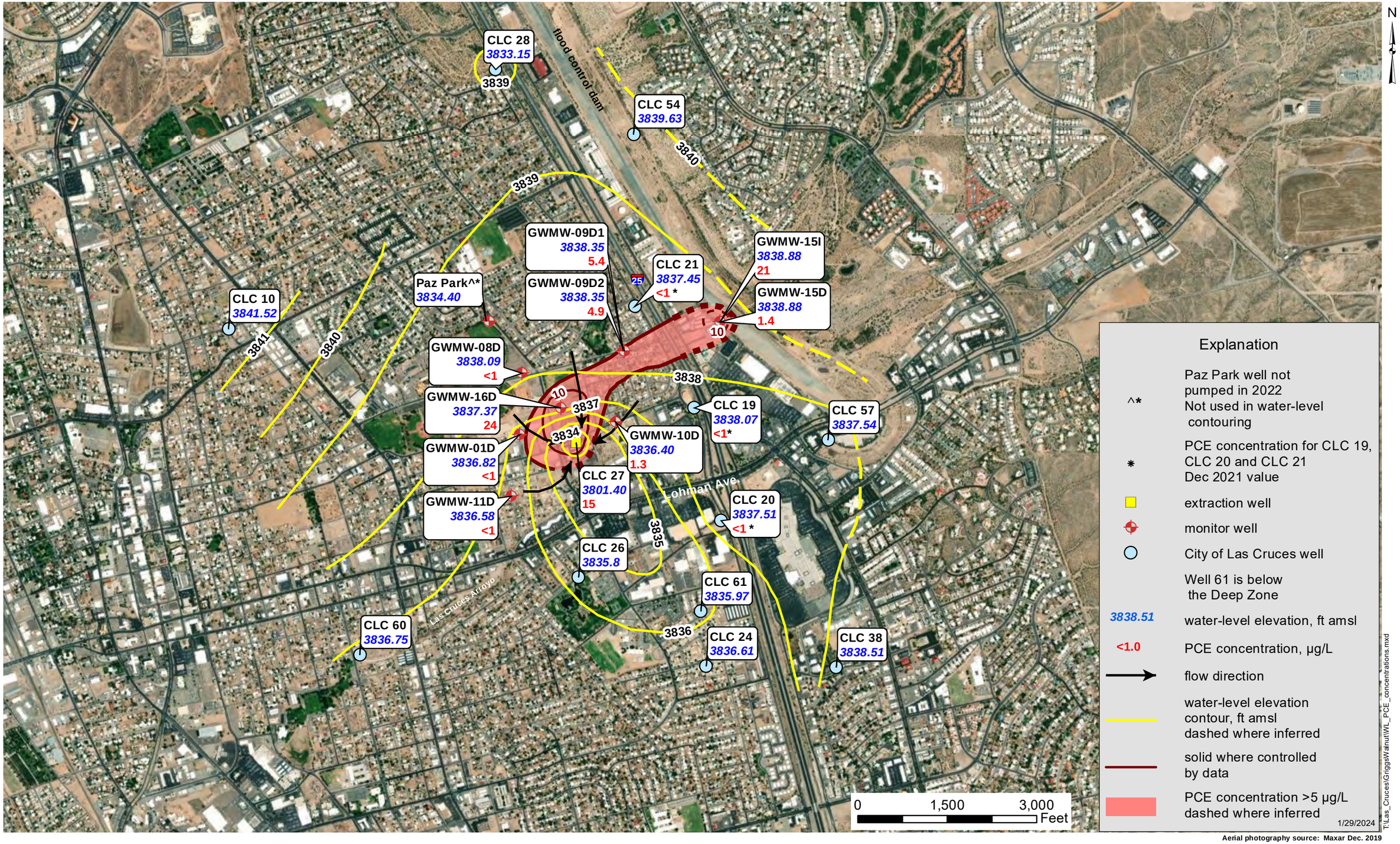


Figure 11. Aerial photograph showing November 2022 water-level elevation contours and PCE concentrations for the Deep Hydrogeologic Zone, Griggs and Walnut Site, Las Cruces, New Mexico.

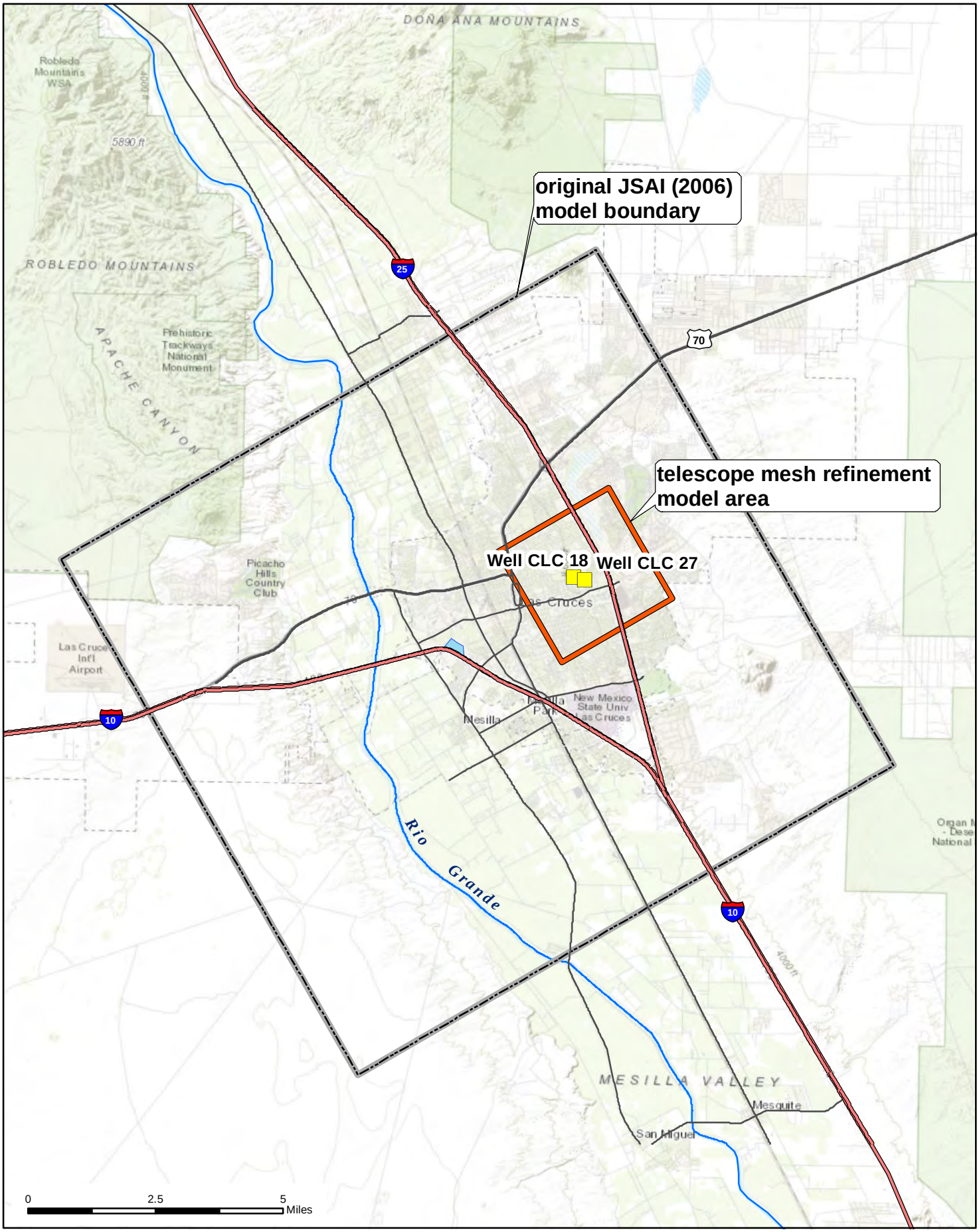


Figure 12. Topographic map showing telescope mesh refinement (TMR) groundwater-flow model grid, Griggs and Walnut Site, Las Cruces, New Mexico.

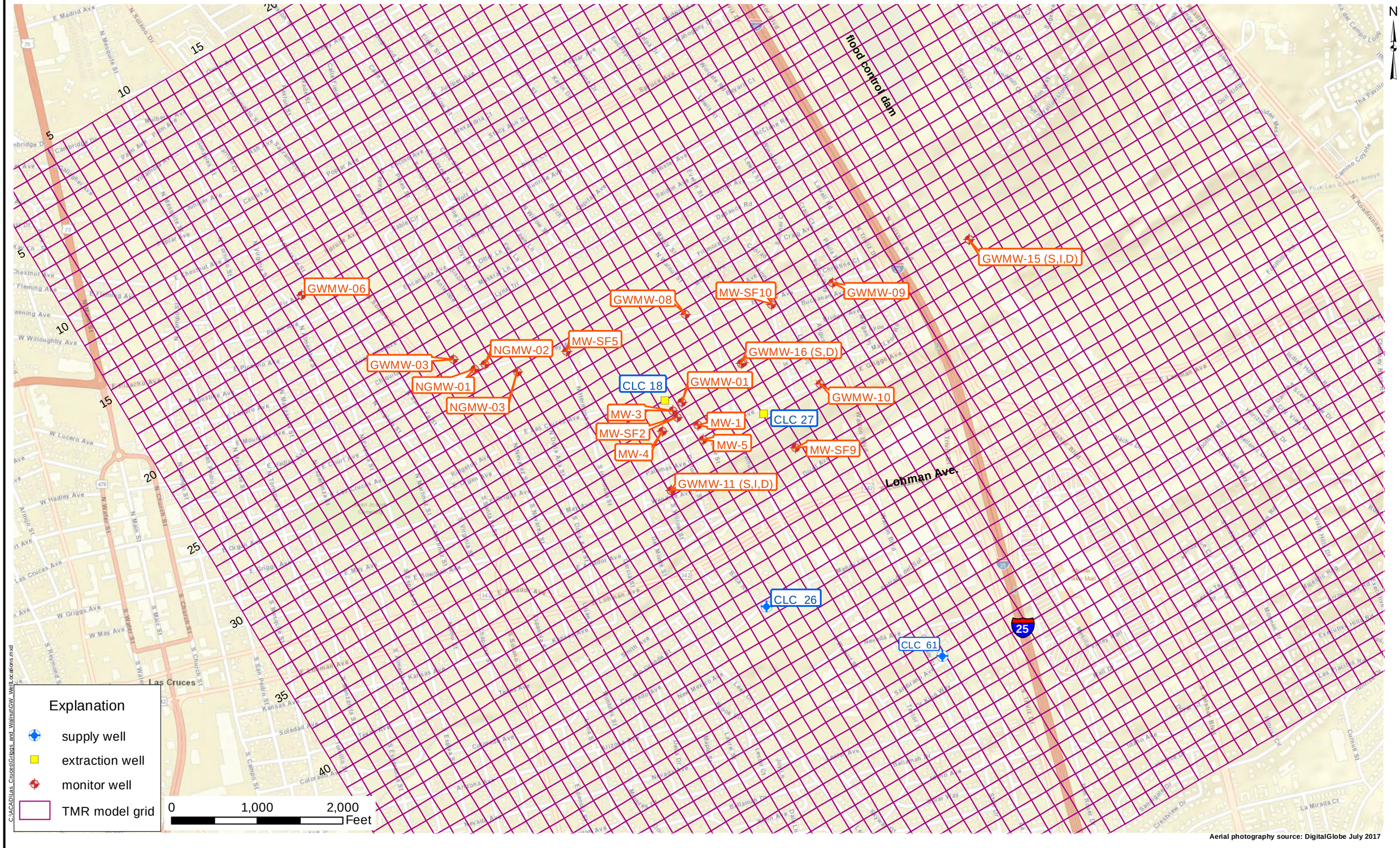
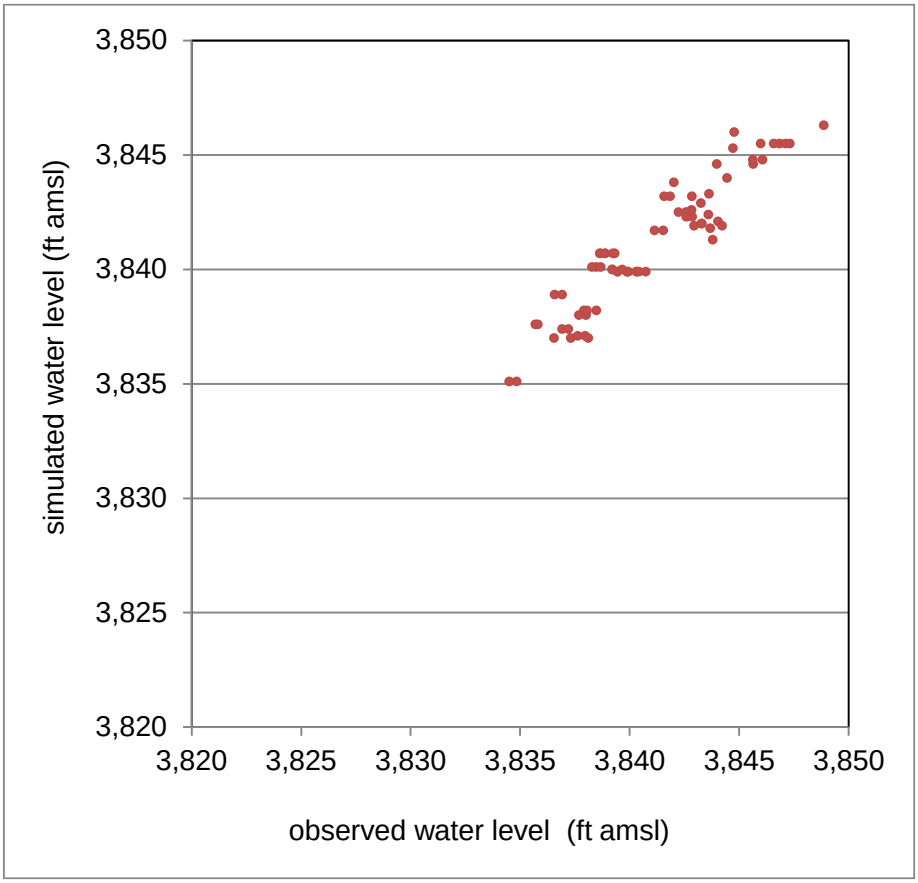


Figure 13. Map showing telescope mesh refinement (TMR) groundwater-flow model with Griggs and Walnut Site monitoring network, Las Cruces, New Mexico.



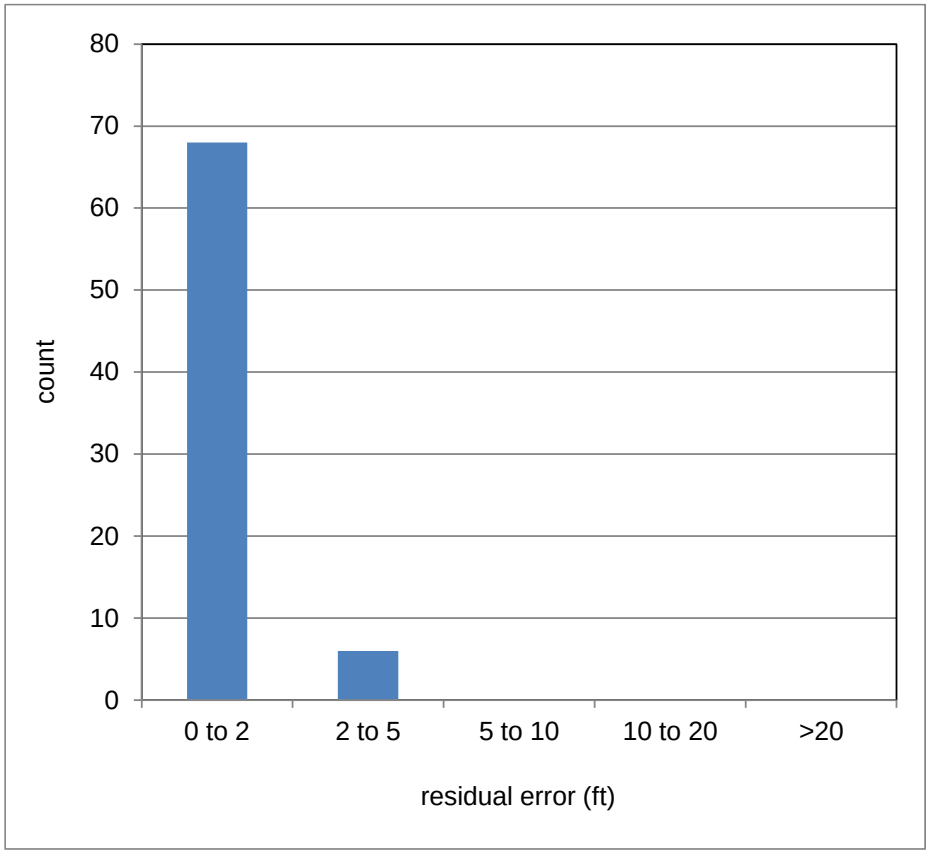


Figure 14. Bar graph showing distribution of model-calibrated residual error in heads.

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

Atkins
ENGINEERING ASSOCIATES INC.

2904 W 2nd St.
Roswell, NM 88201
voice: 575.624.2420
fax: 575.624.2421
www.atkinseng.com

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 Griggs and Walnut site GWMW-16(S,D) transducer-measured water-level elevations, City of Las Cruces, New Mexico.

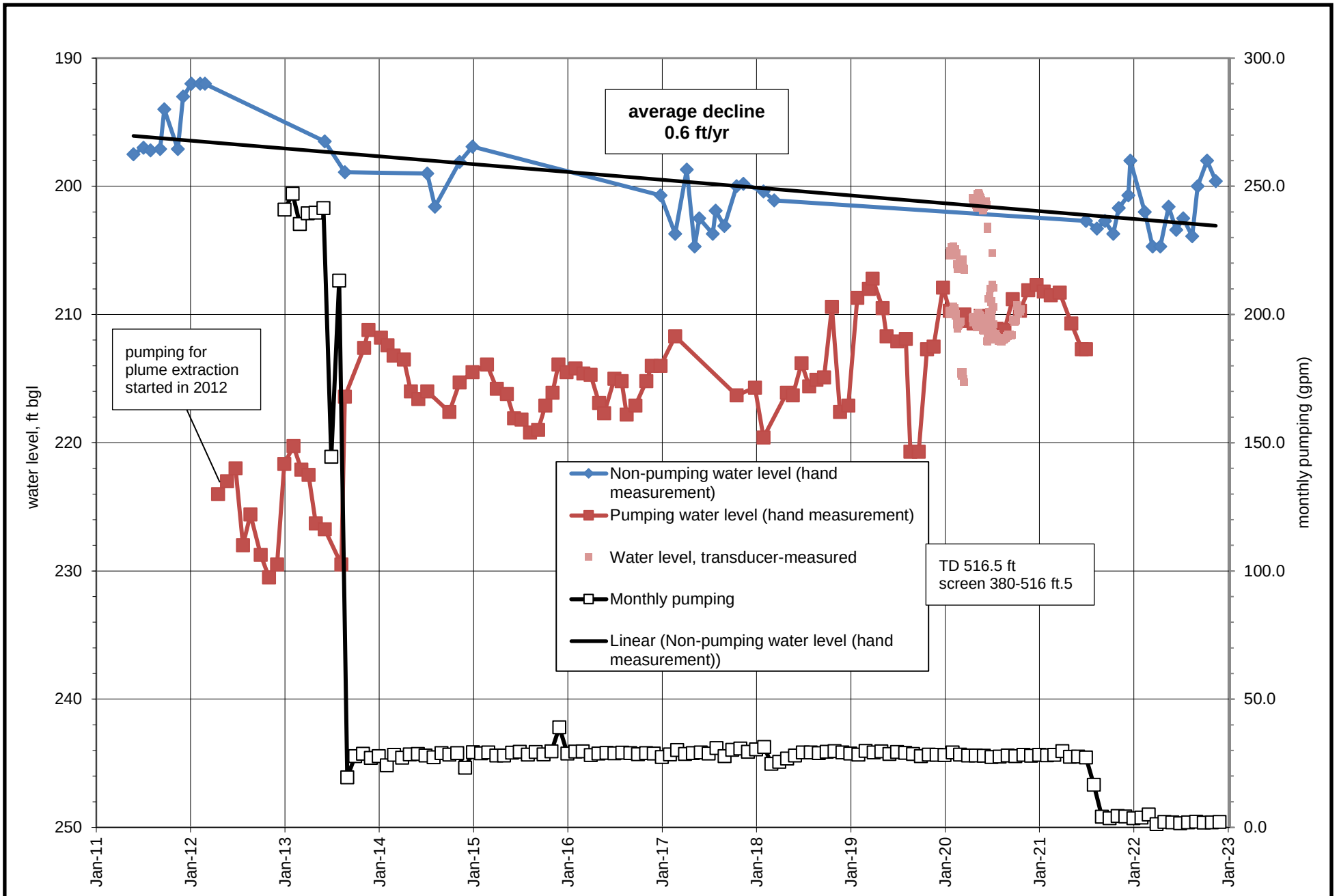


Figure B1. Graph of water-level data and monthly pumping data collected by the City of Las Cruces for Well 18.

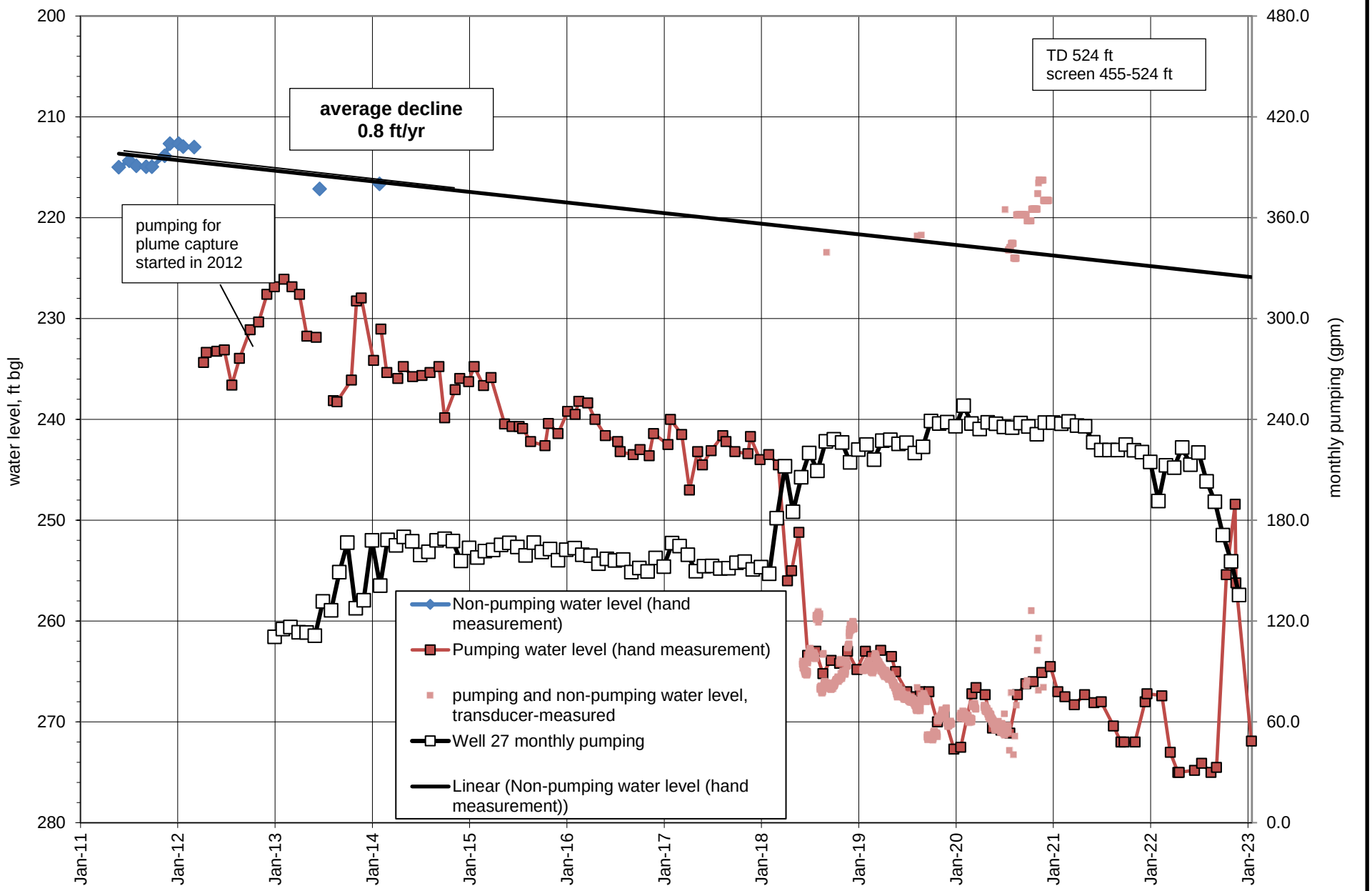


Figure B2. Graph of water-level data and monthly pumping data collected by the City of Las Cruces for Well 27.

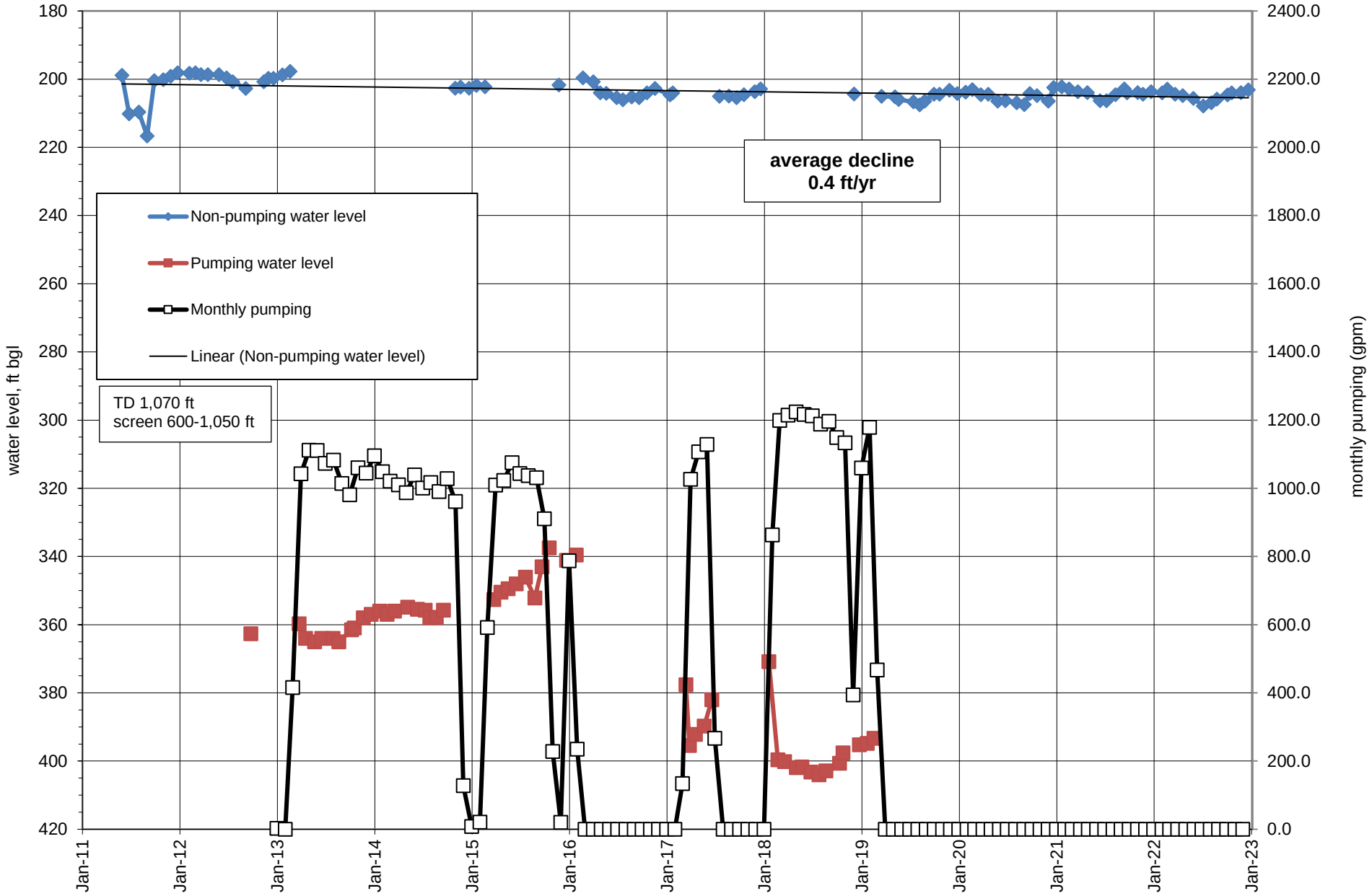


Figure B3. Graph of water-level data and monthly pumping data collected by the City of Las Cruces for Well 61.

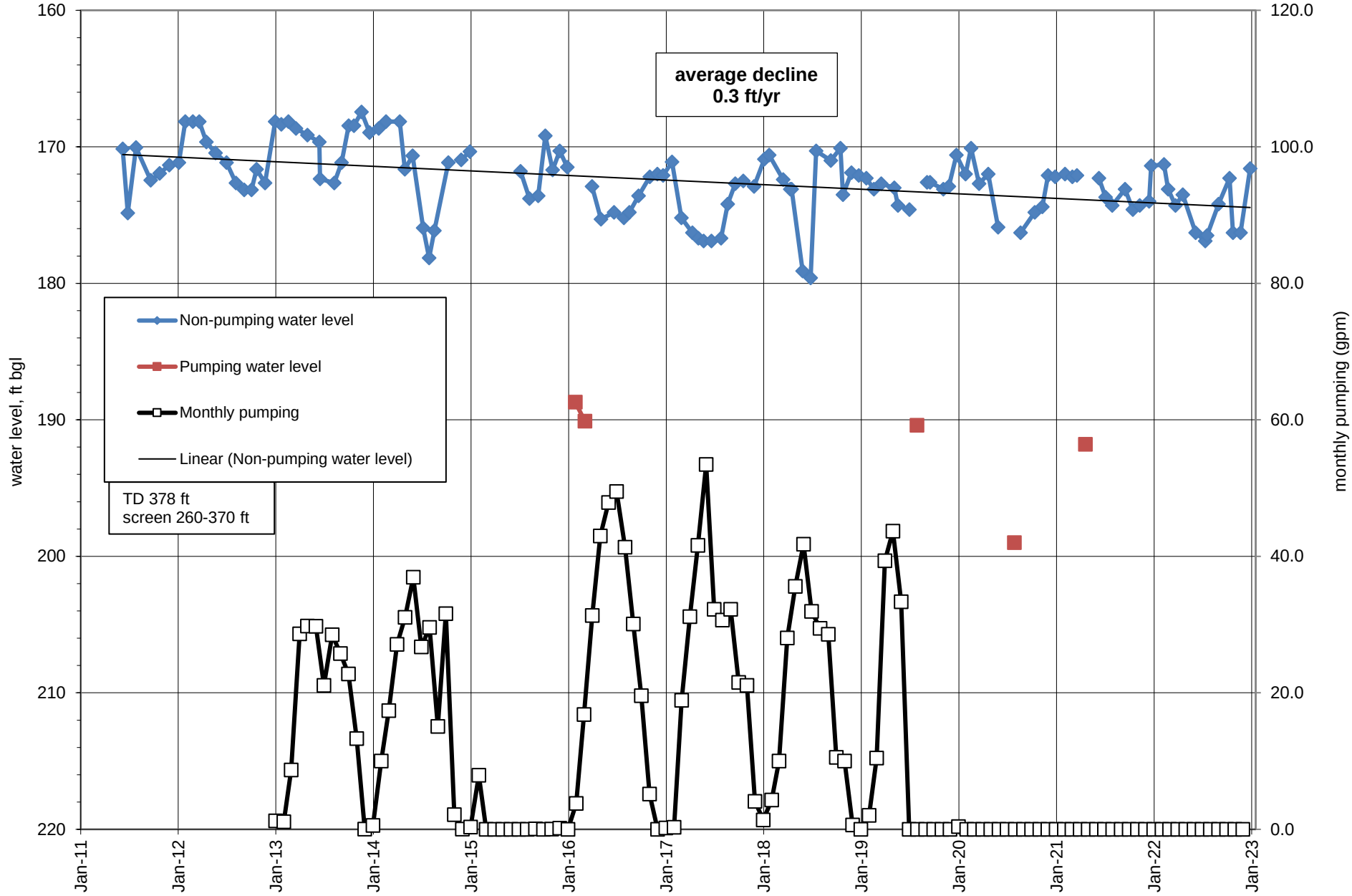


Figure B4. Graph of water-level data and monthly pumping data collected by the City of Las Cruces for Paz Park Well.

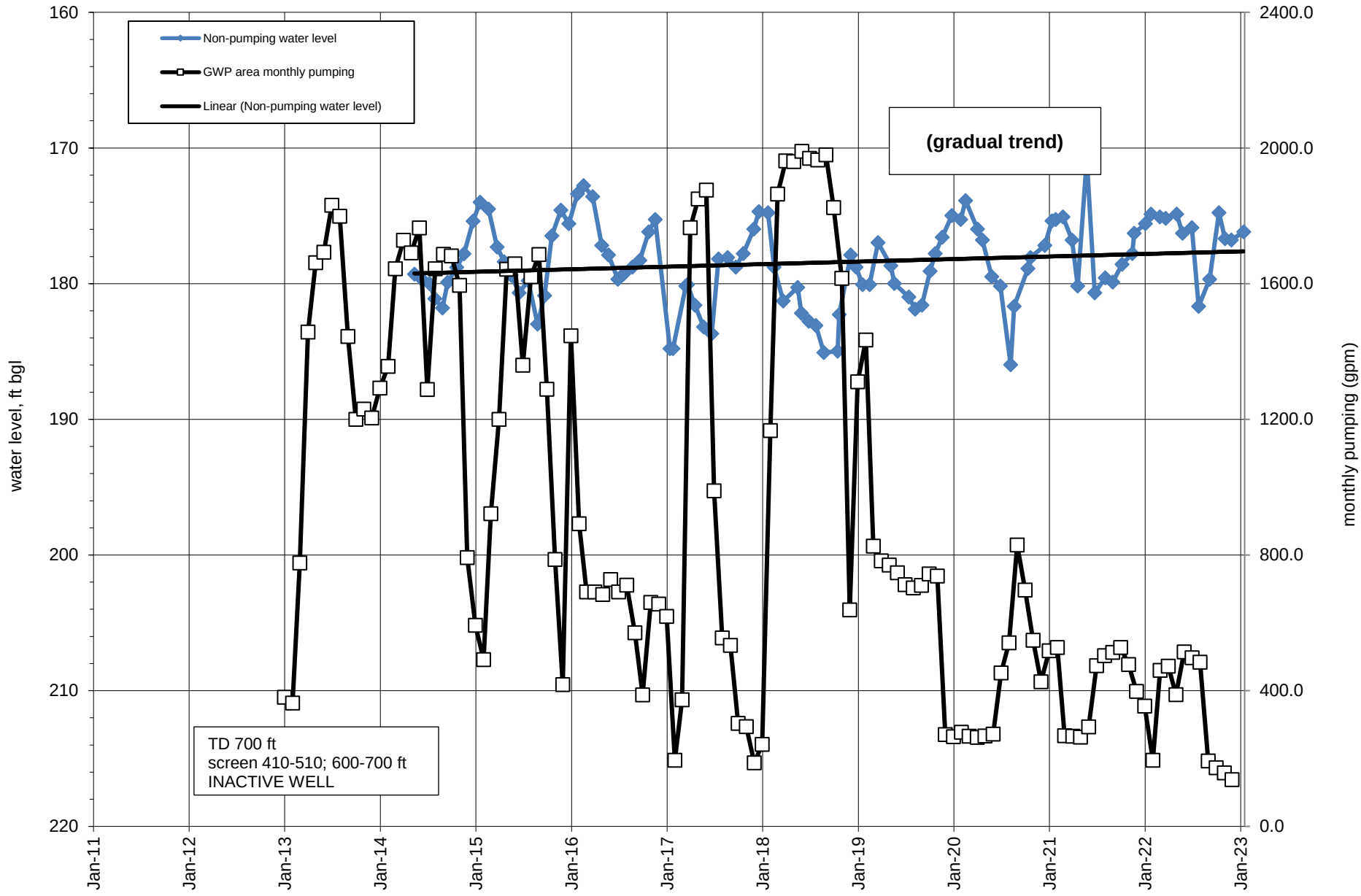


Figure B5. Graph of water-level data and monthly pumping data collected by the City of Las Cruces for Well 26.

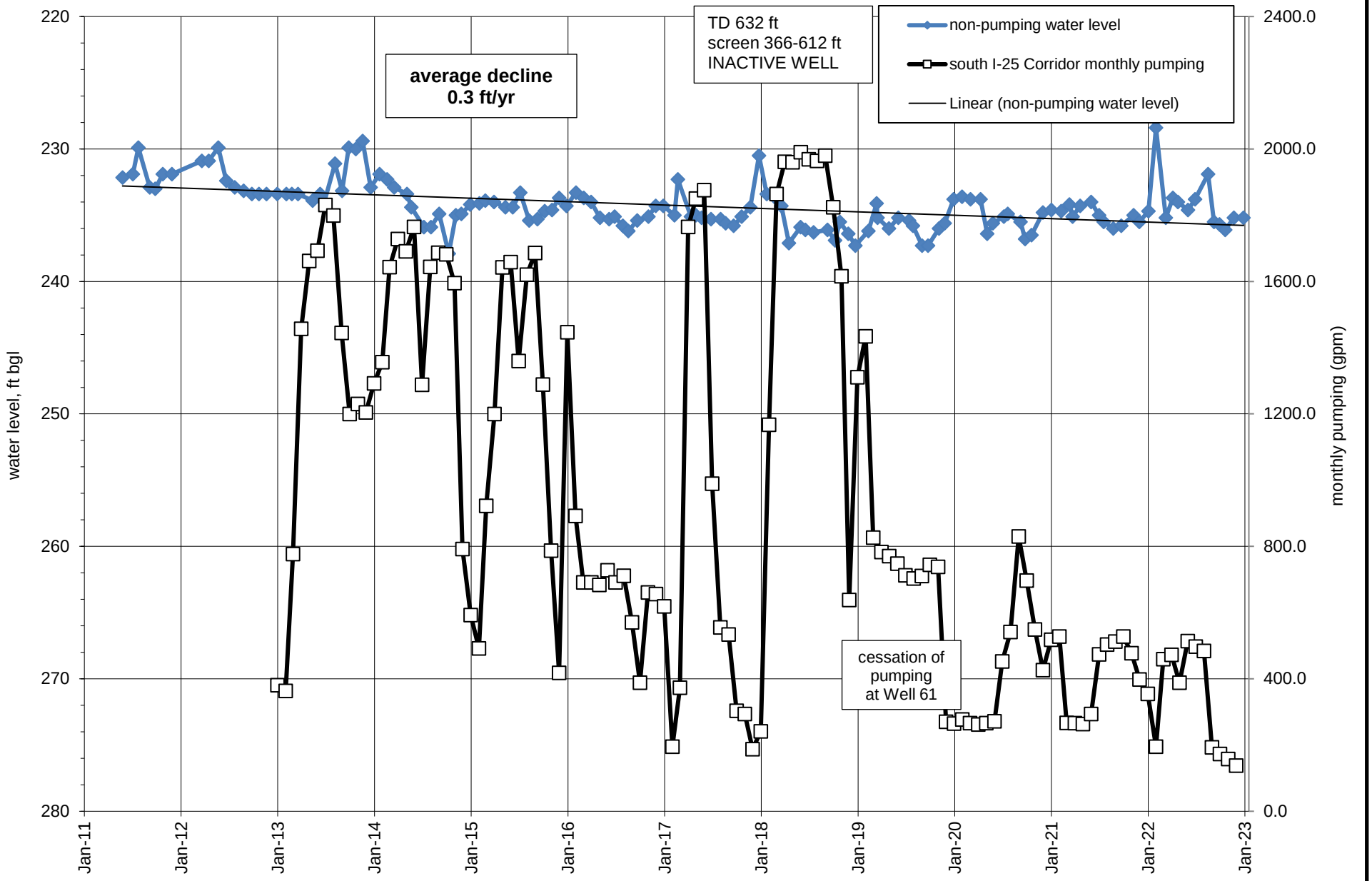


Figure B6. Graph of water-level data collected by the City of Las Cruces for Well 21, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 28, 61, and Paz Park).

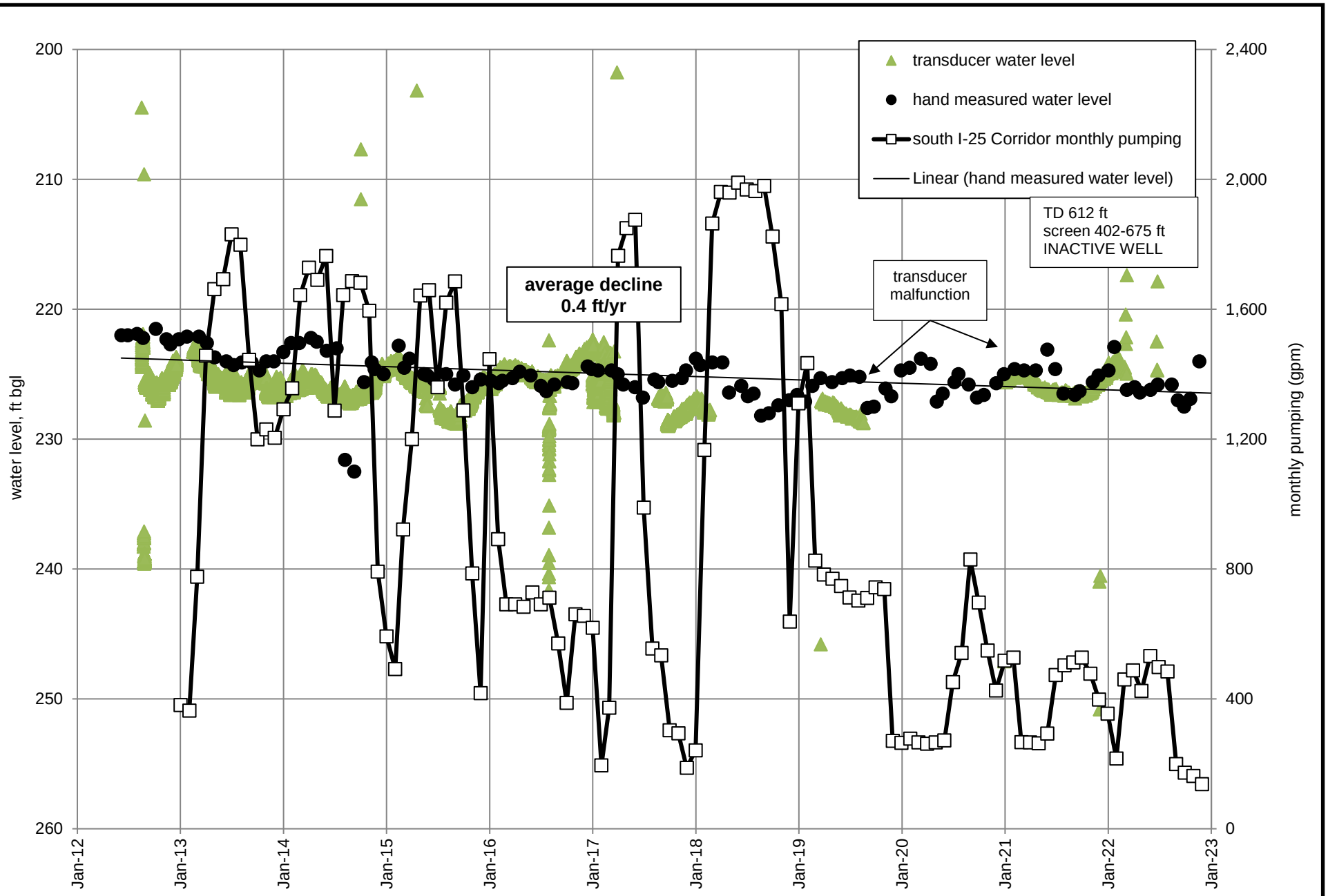


Figure B7. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for Well 19, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 28, 61, and Paz Park).

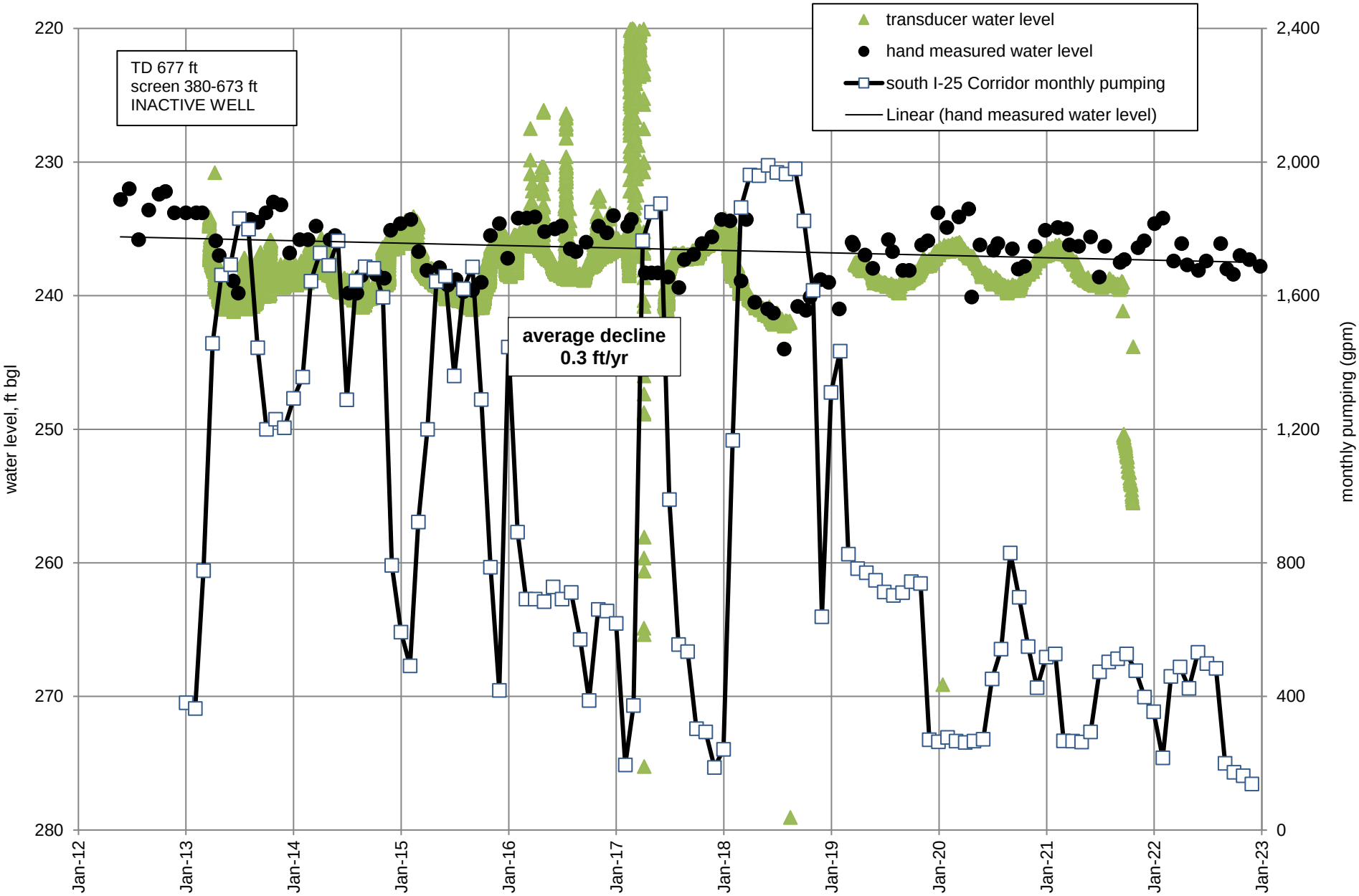


Figure B8. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for Well 20, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 26, 61, and Paz Park).

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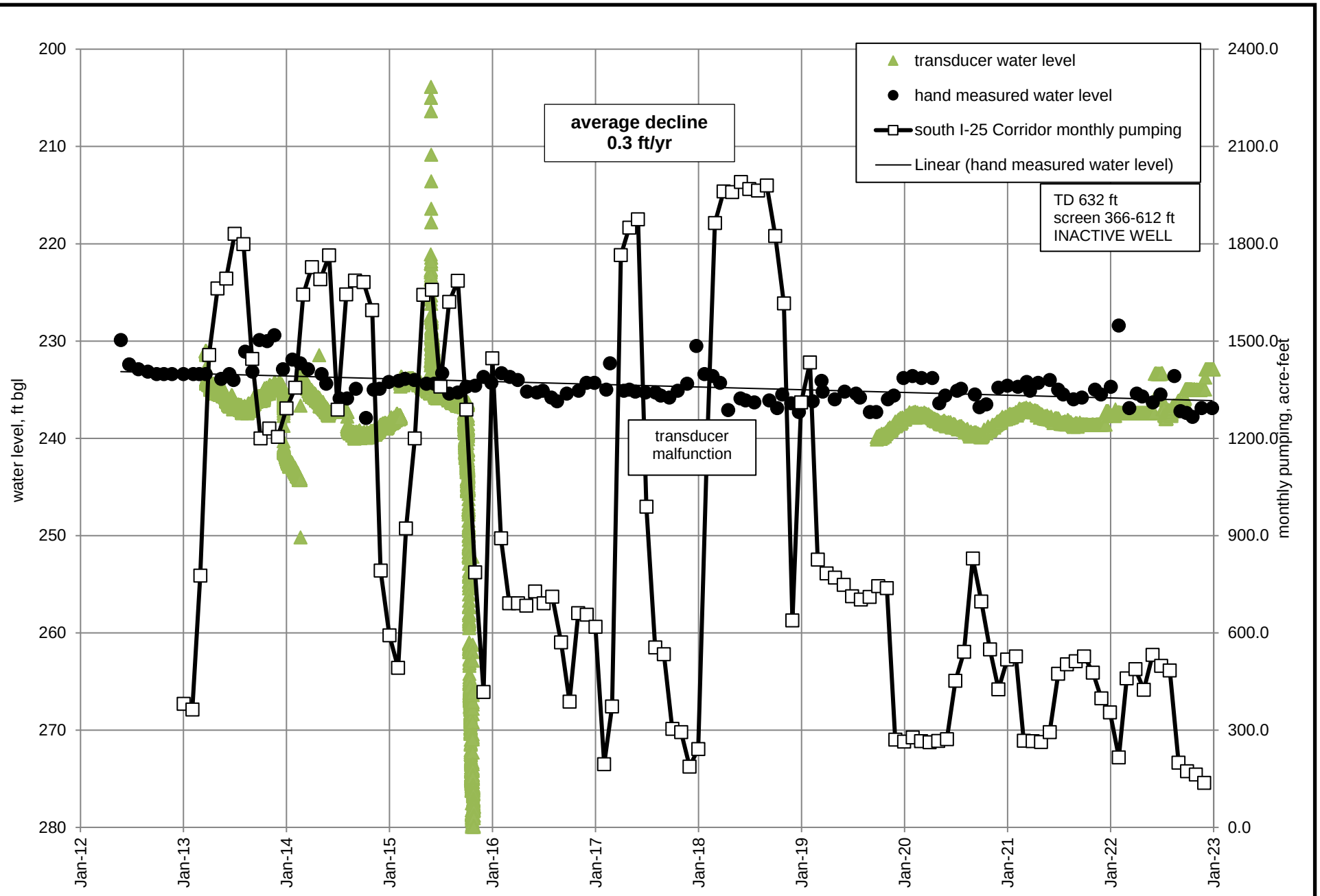


Figure B9. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for Well 21, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 28, 61, and Paz Park).

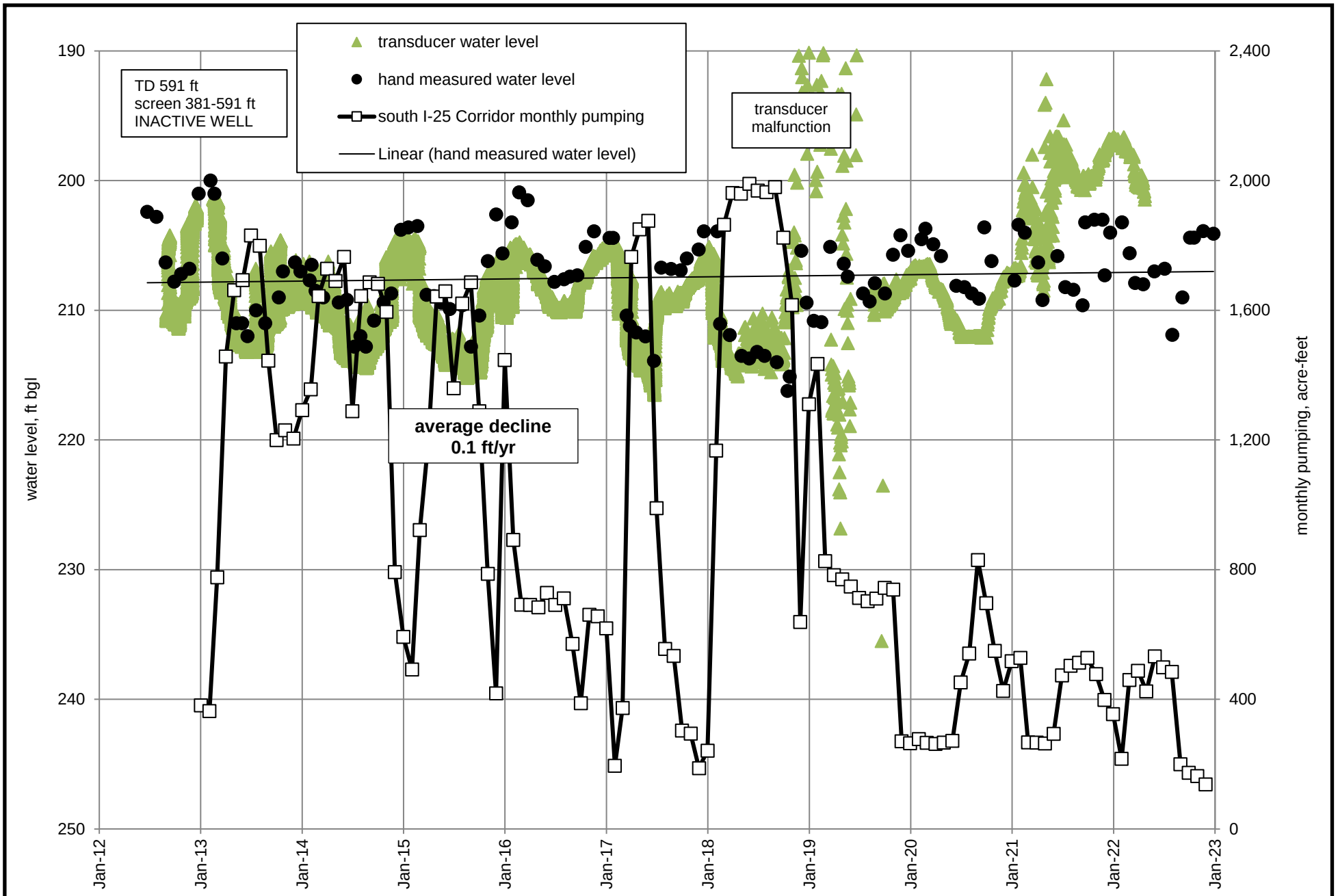


Figure B10. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for Well 24, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 28, 61, and Paz Park).

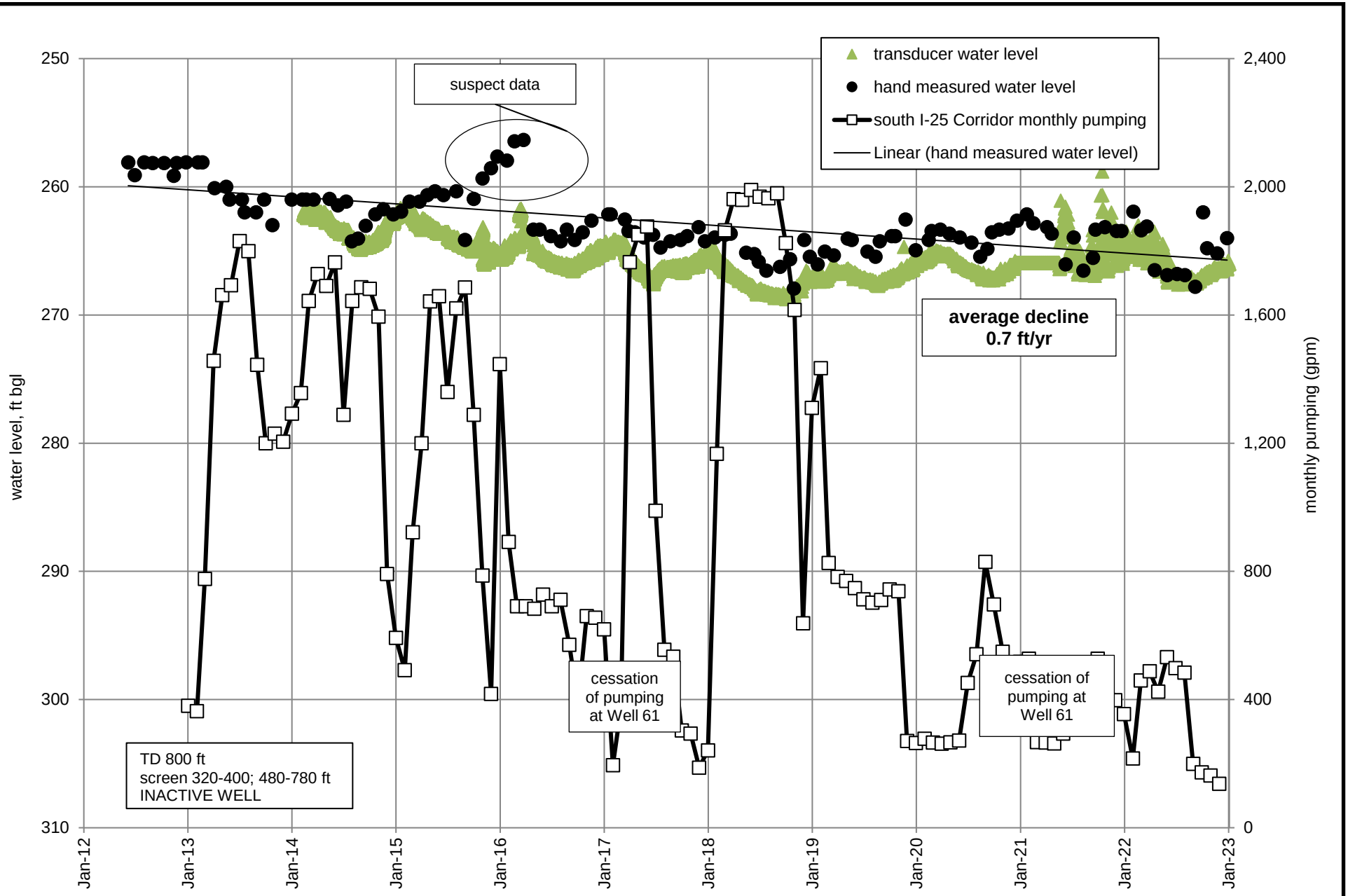


Figure B11. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for Well 38, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 28, 61, and Paz Park).

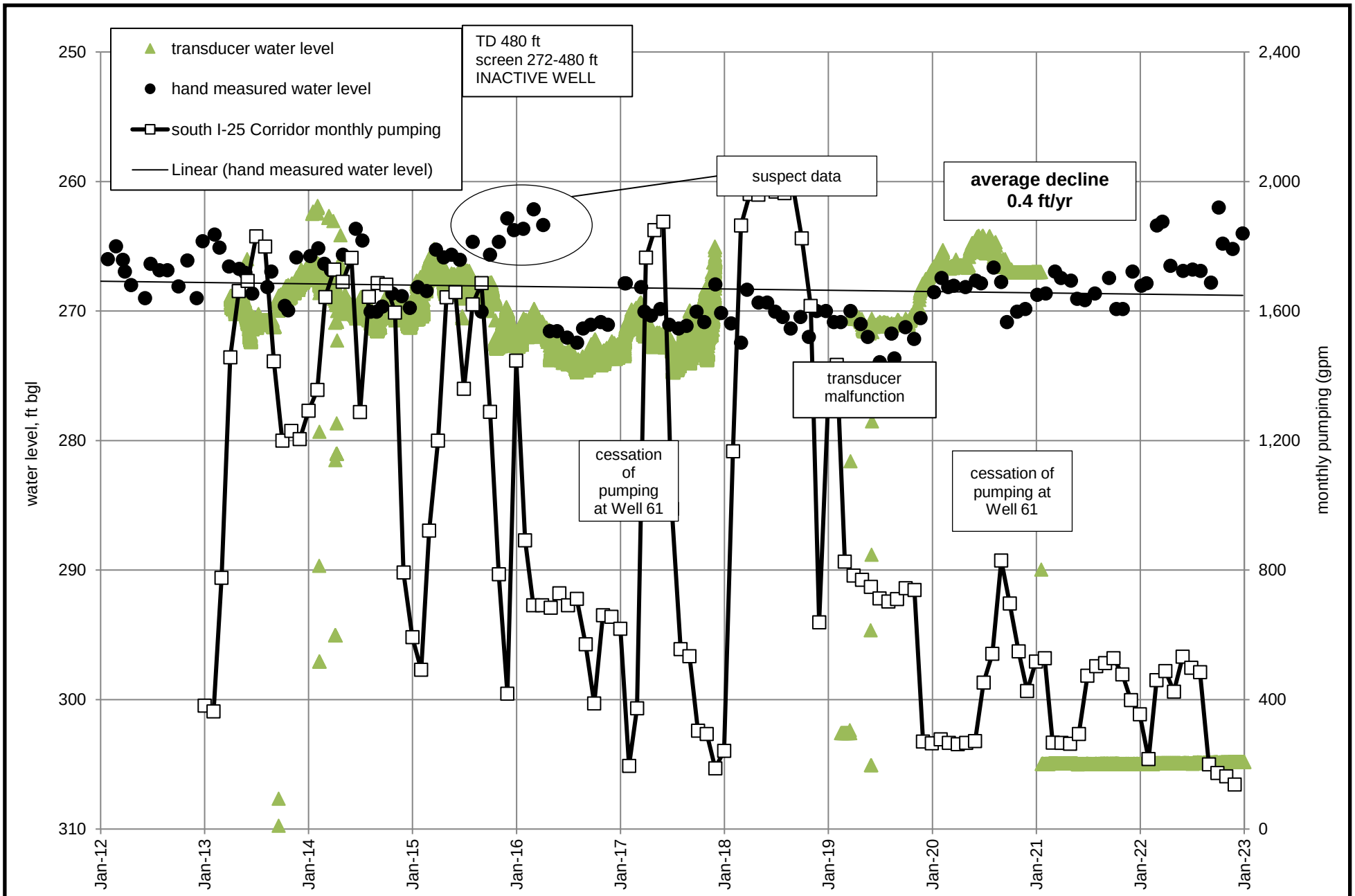


Figure B12. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for Well 54, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 28, 61, and Paz Park).

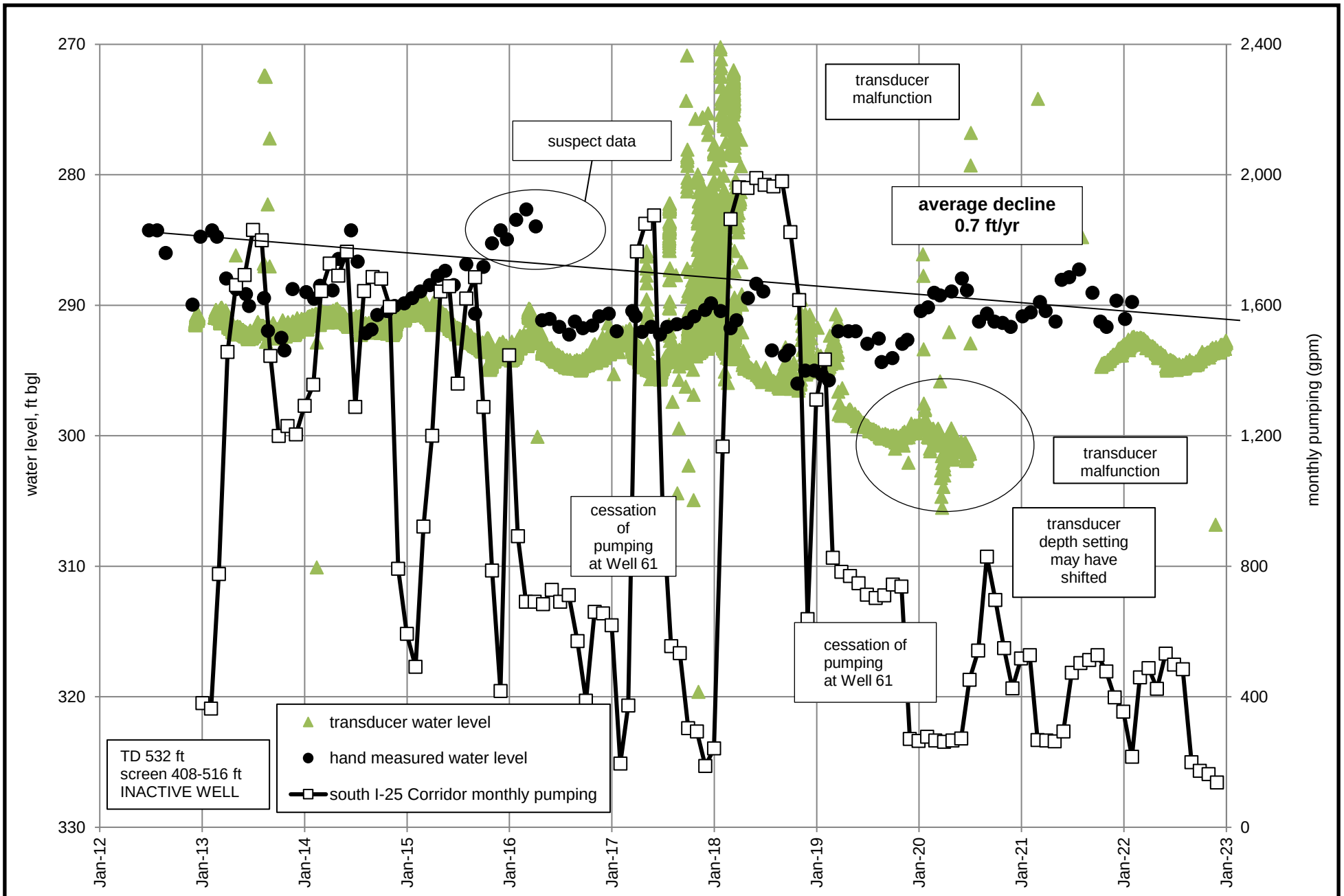


Figure B13. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for Well 57, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 28, 61, and Paz Park).

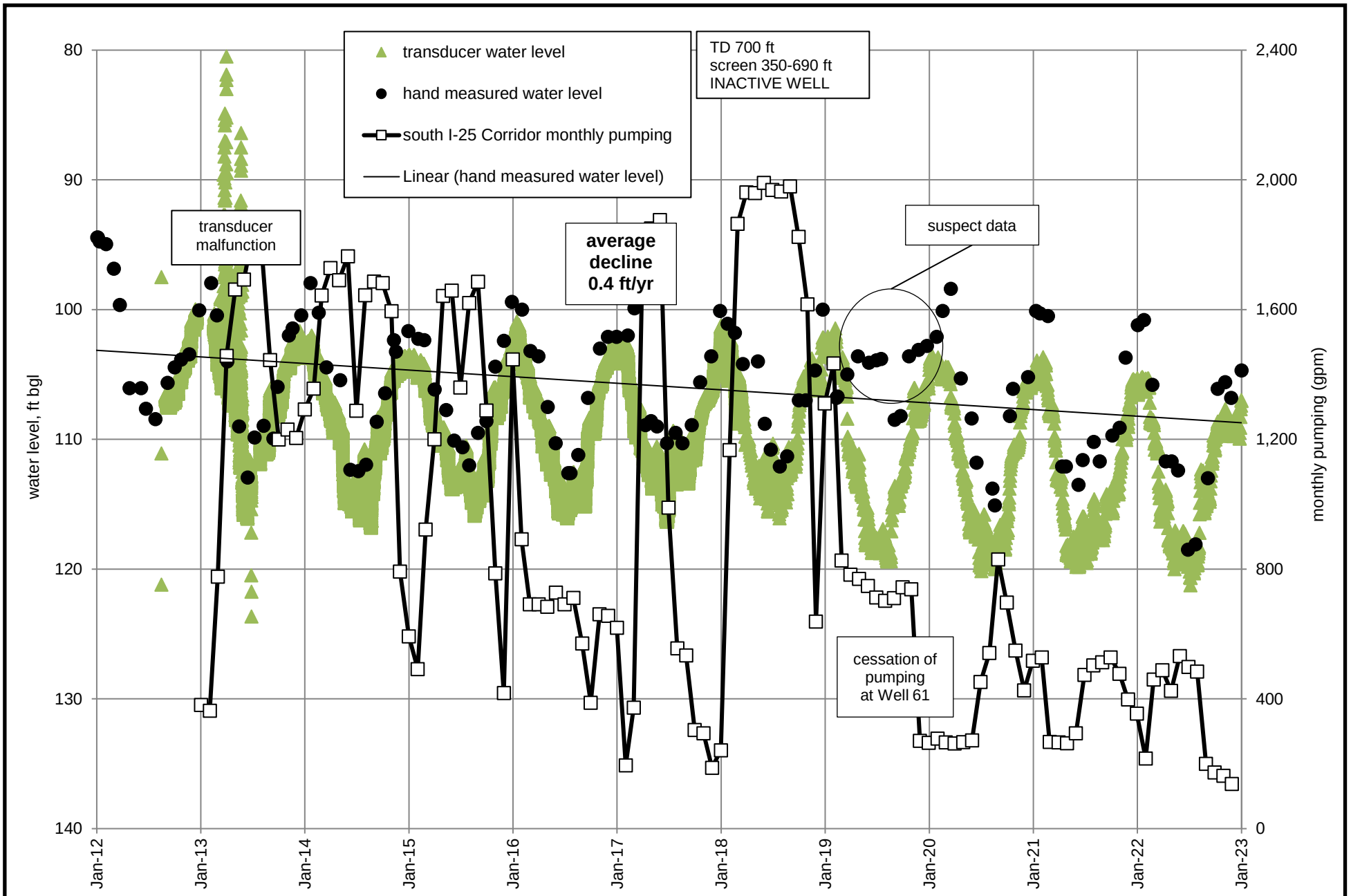


Figure B14. Graph of hand-measured and transducer water-level data collected by the City of Las Cruces for Well 60, and monthly pumping in the southern part of the I-25 Corridor (Wells 18, 27, 28, 61, and Paz Park).

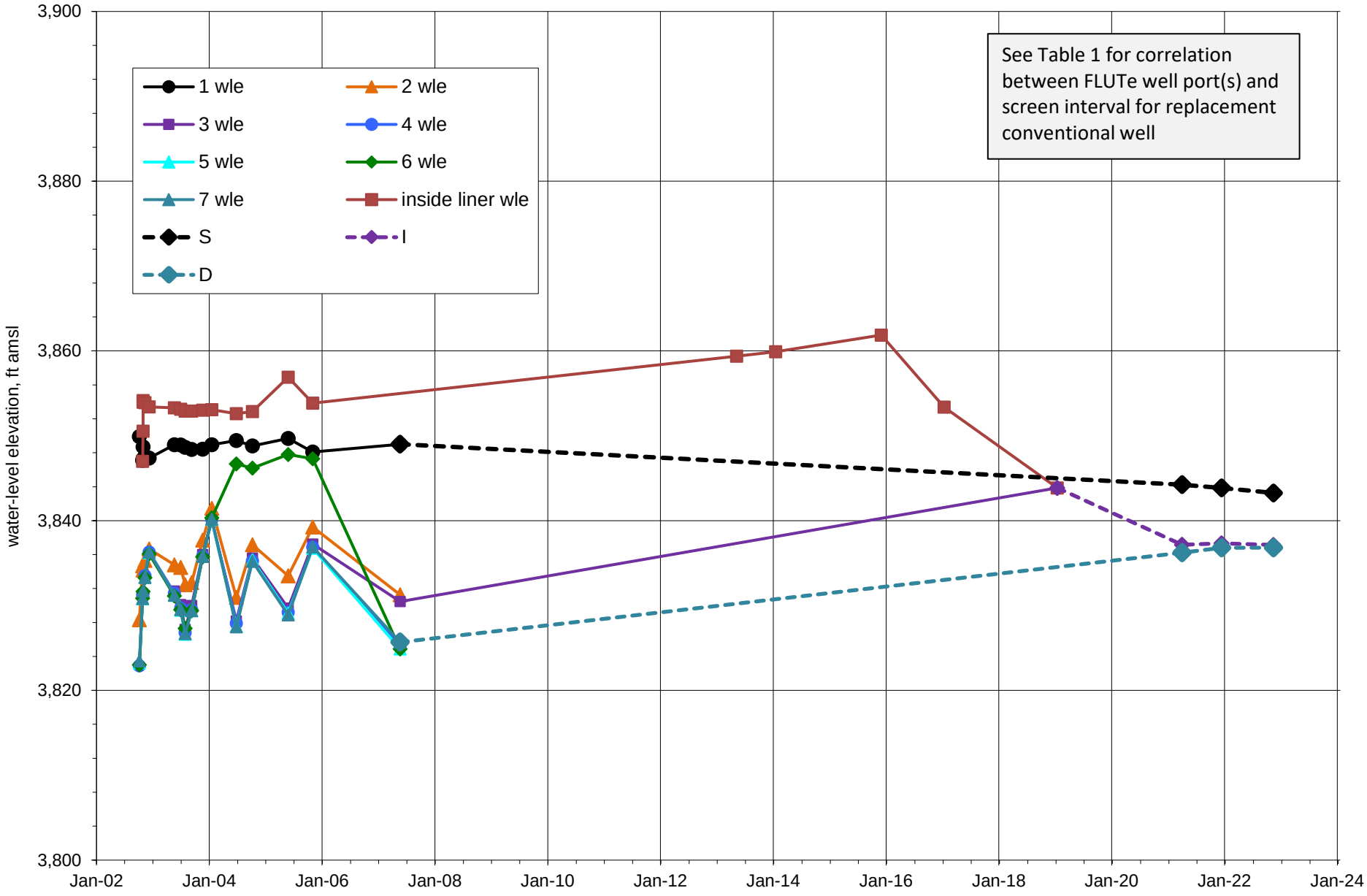


Figure B15. Graph of GWMW-01 (Ports 1 through 7 and inside liner) observed water levels, Griggs and Walnut site.

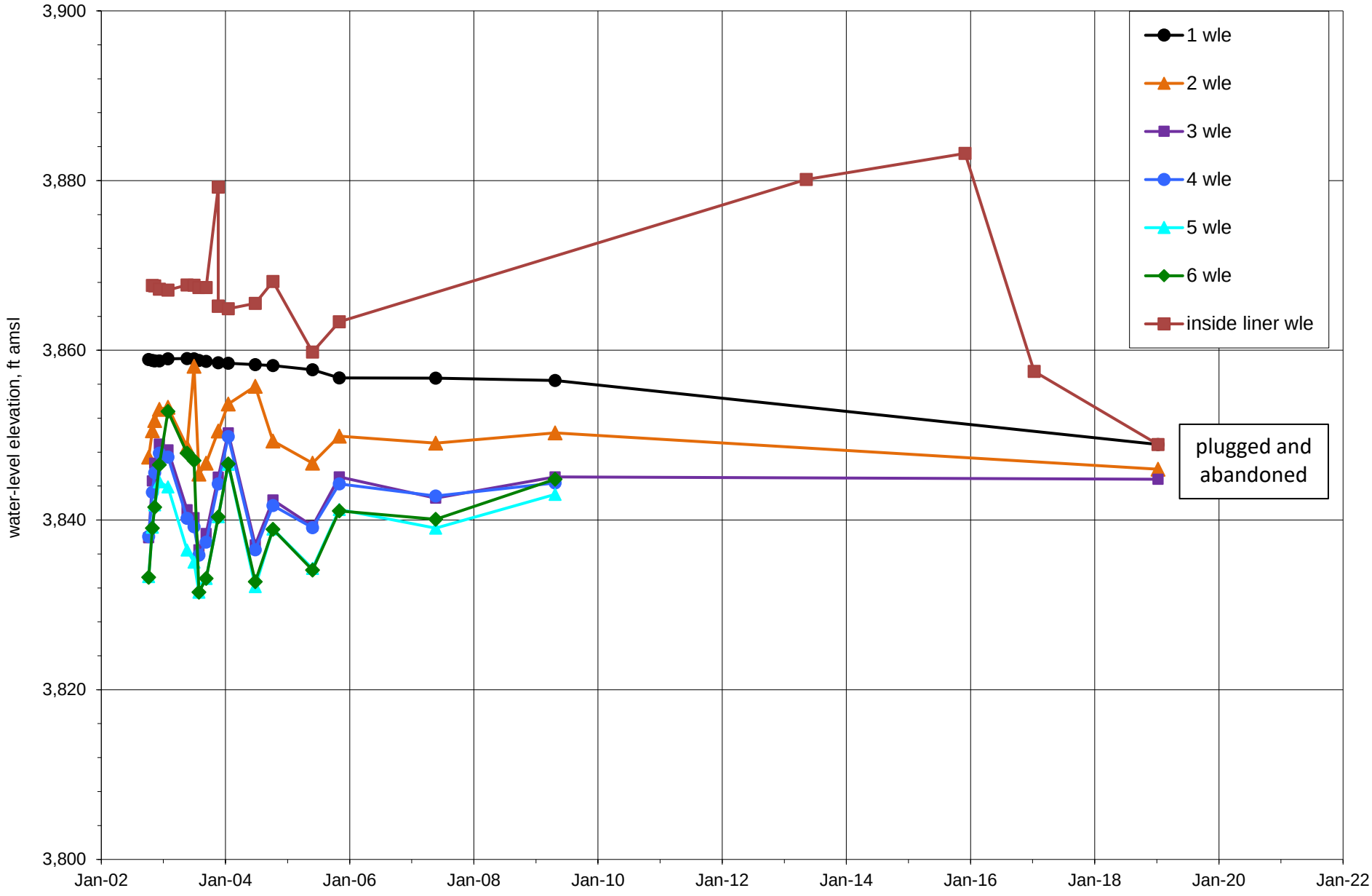


Figure B16. Graph of GWMW-03 (Ports 1 through 6 and inside liner) observed water levels, Griggs and Walnut site.

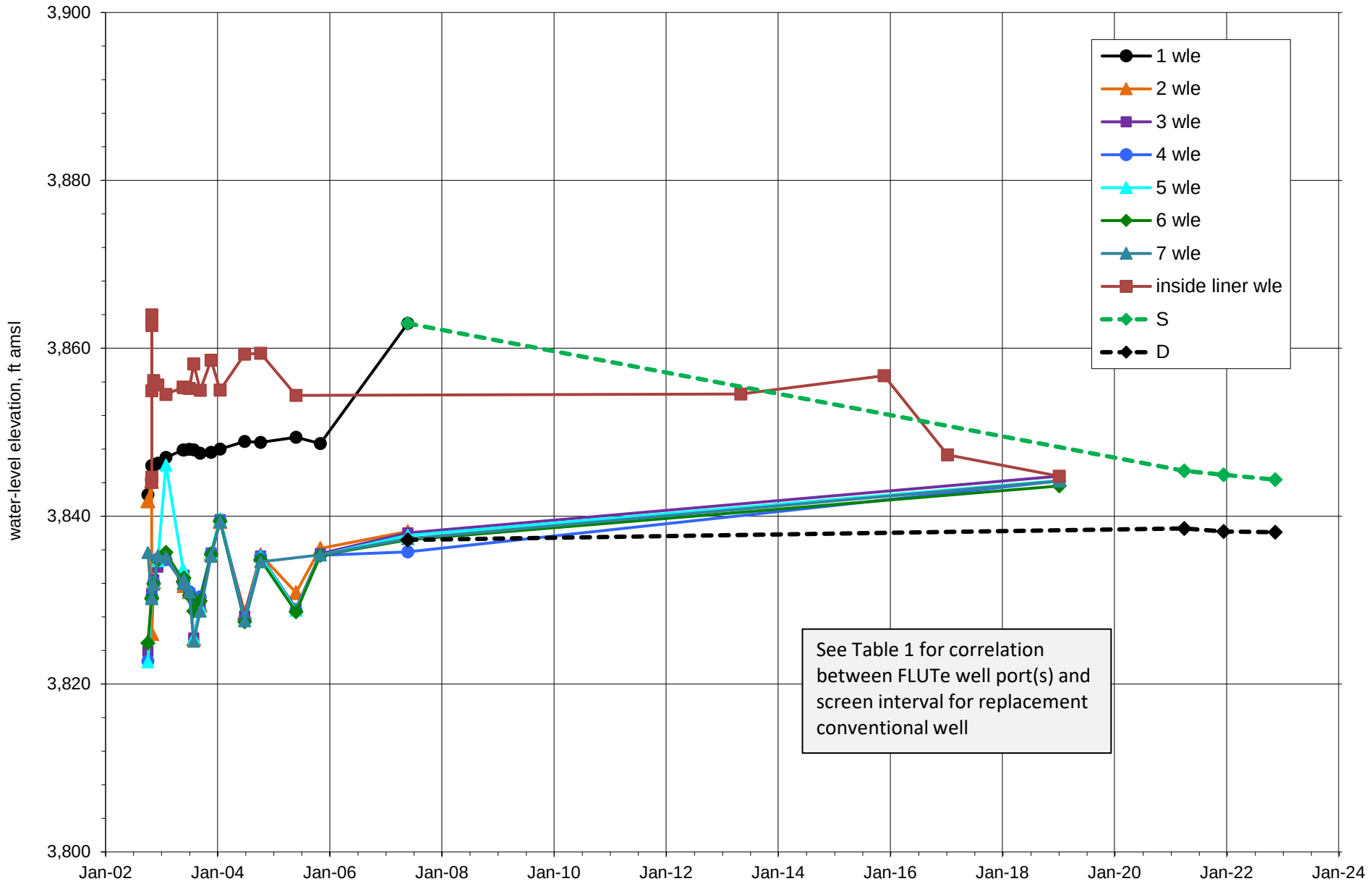


Figure B17. Graph of GWMW-08 (Ports 1 through 7 and inside liner) observed water levels, Griggs and Walnut site.

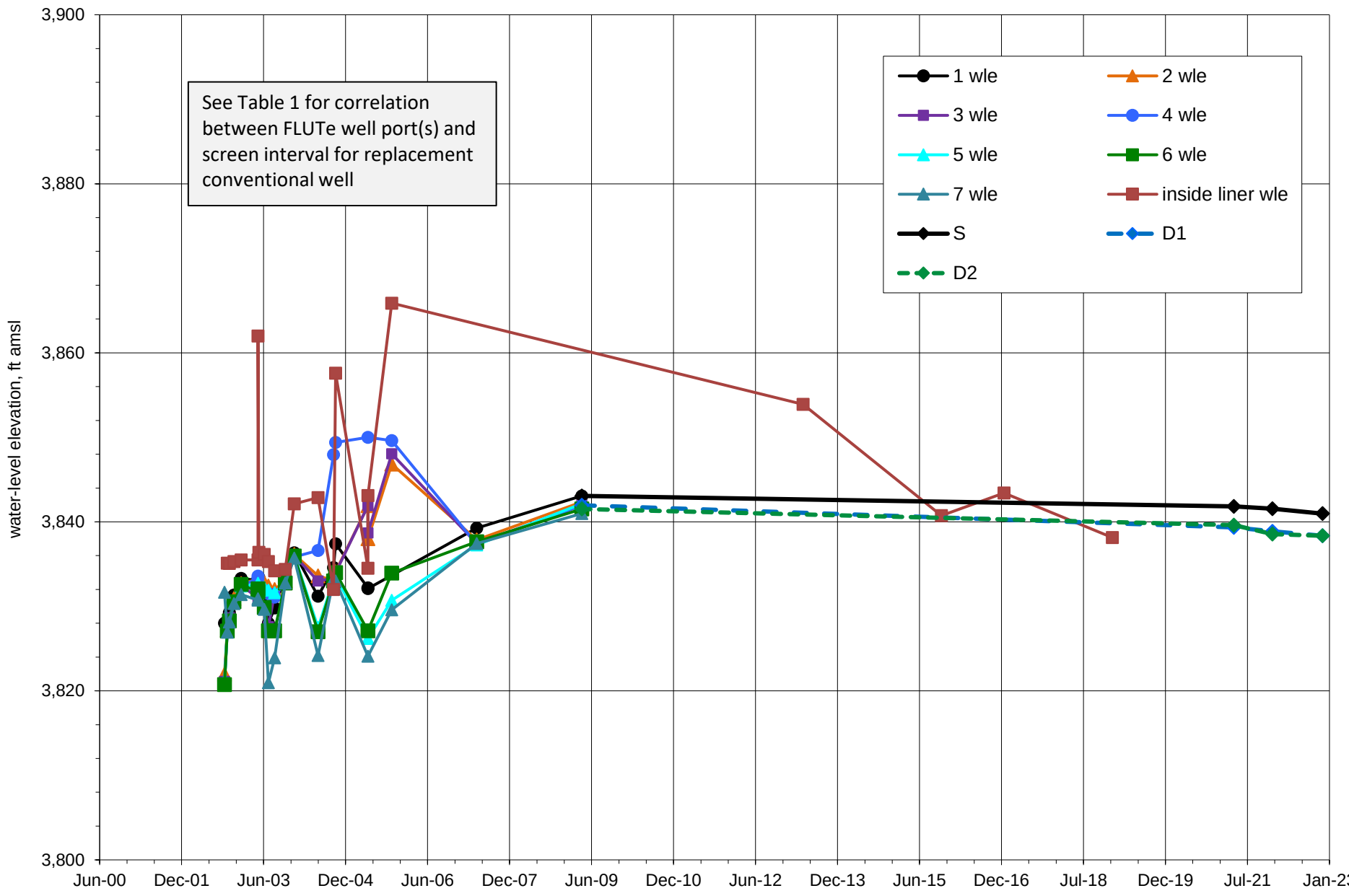


Figure B18. Graph of GWMW-09 (Ports 1 through 7 and inside liner) observed water levels, Griggs and Walnut site.

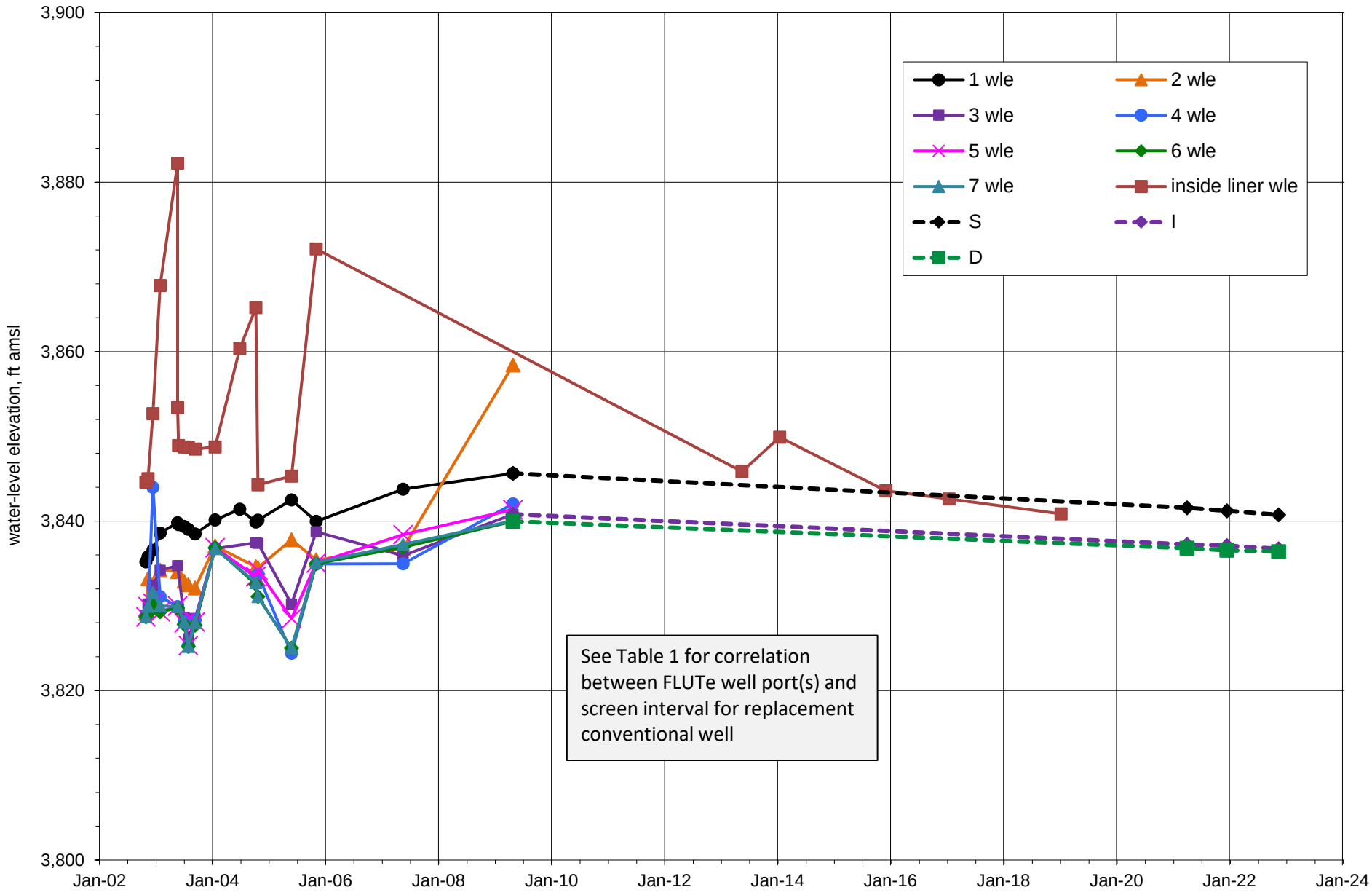


Figure B19. Graph of GWMW-10 (Ports 1 through 7 and inside liner) observed water levels, Griggs and Walnut site.

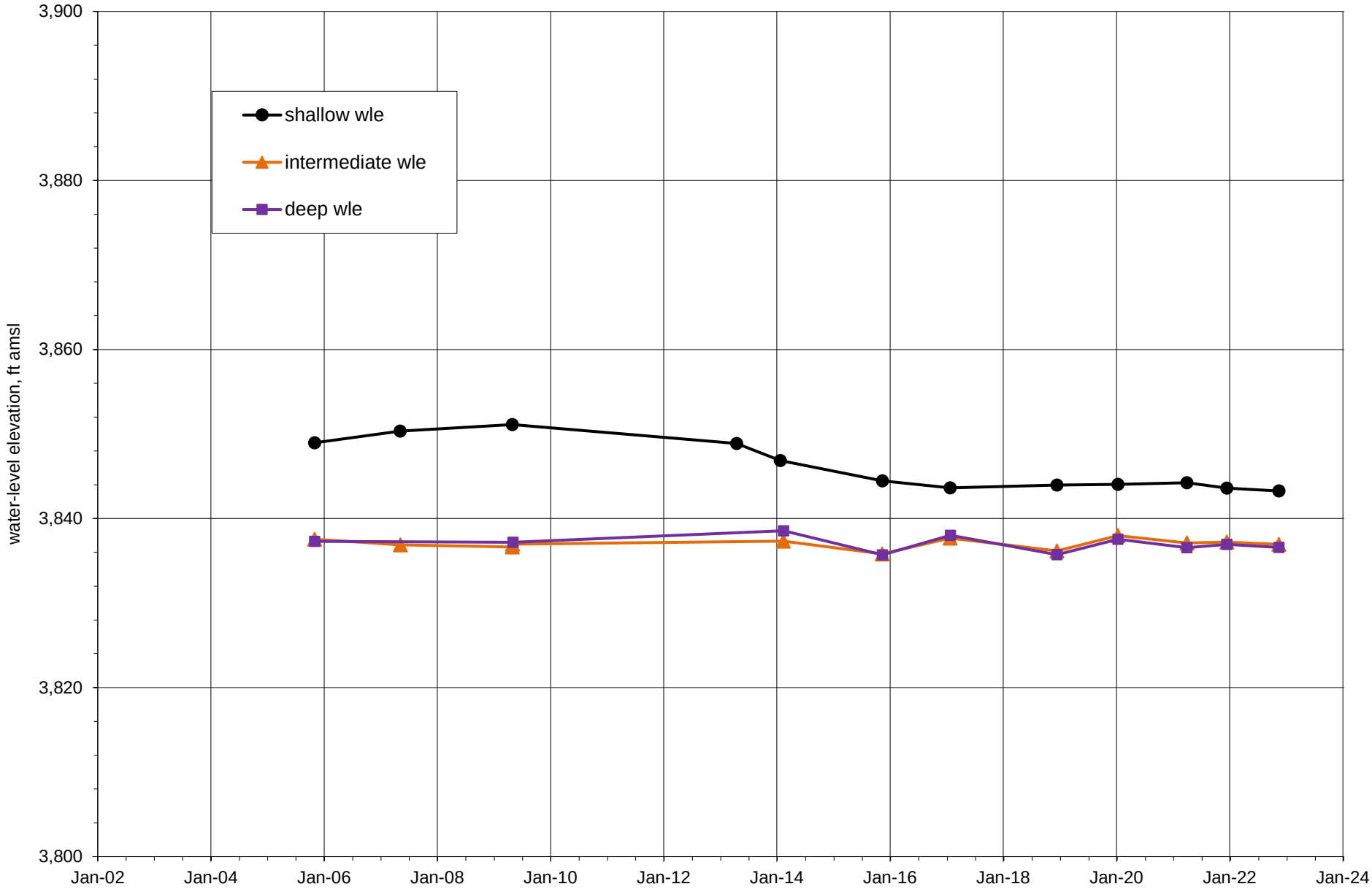


Figure B20. Graph of GWMW-11 (S, I, D) (shallow, intermediate, and deep) observed water levels, Griggs and Walnut site.

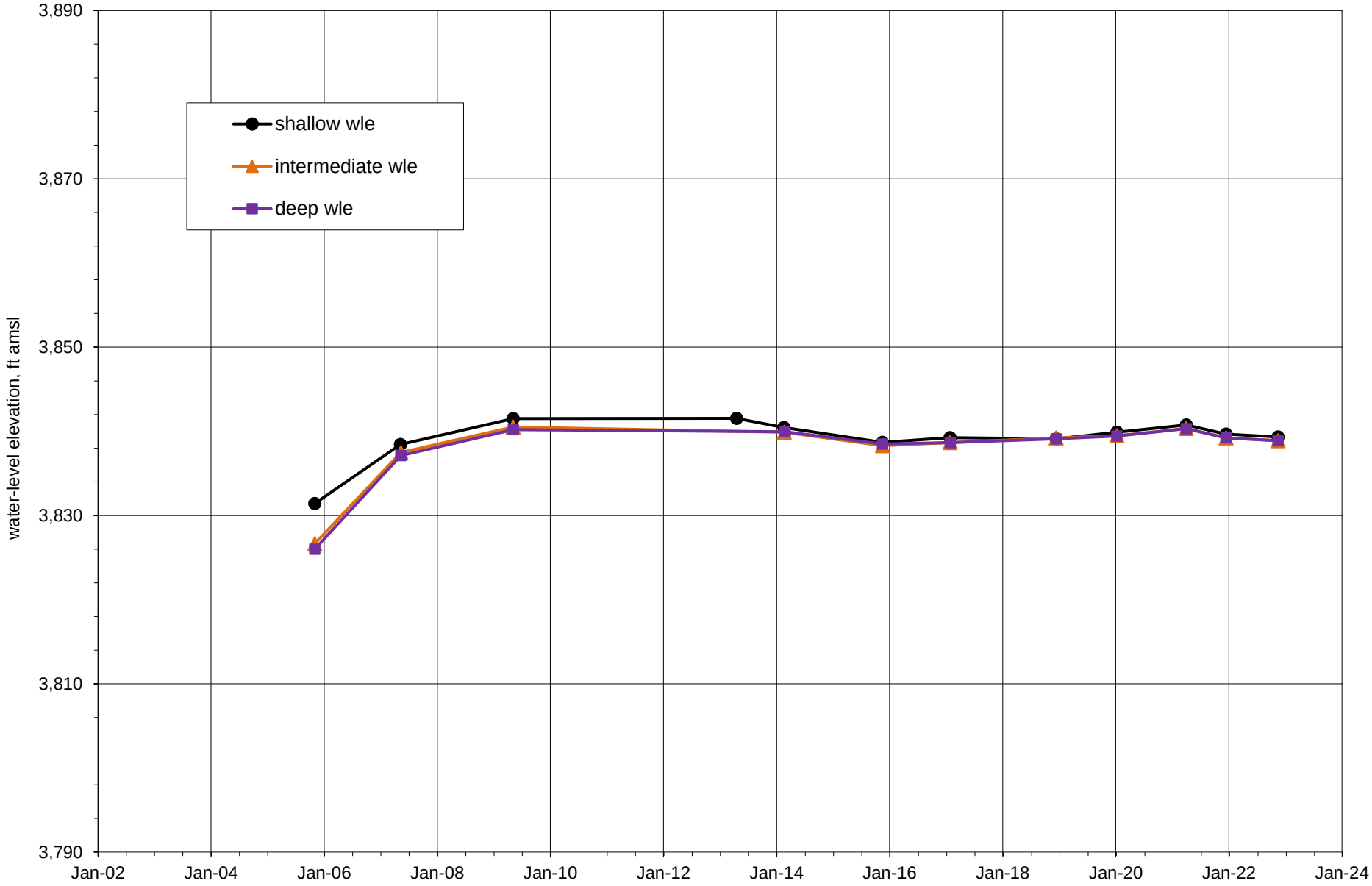


Figure B21. Graph of GWMW-15 (S, I, D) (shallow, intermediate, and deep) observed water levels, Griggs and Walnut site.

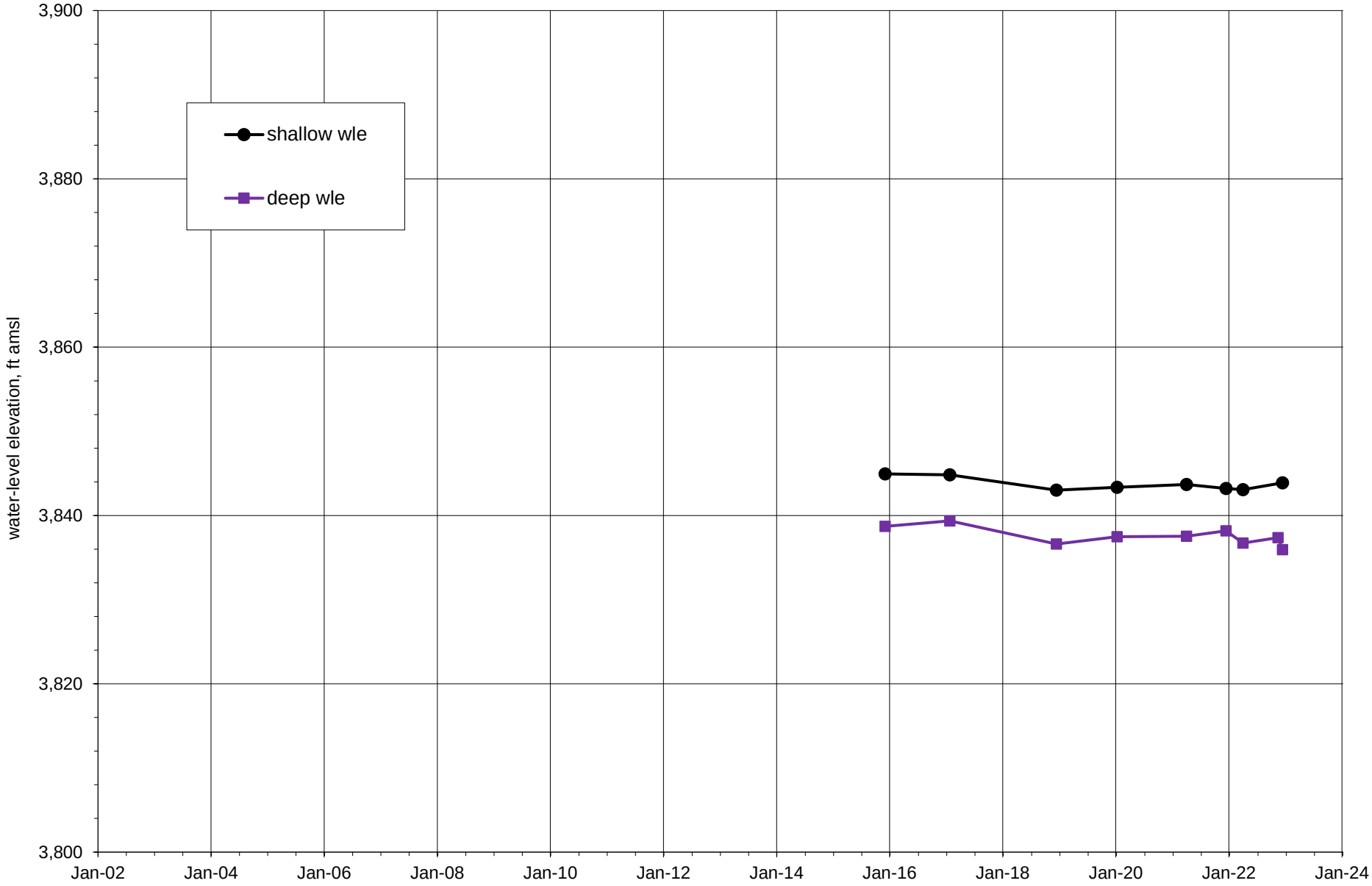


Figure B22. Graph of GWMW-16 (S, D) (shallow and deep) observed water levels, Griggs and Walnut site.

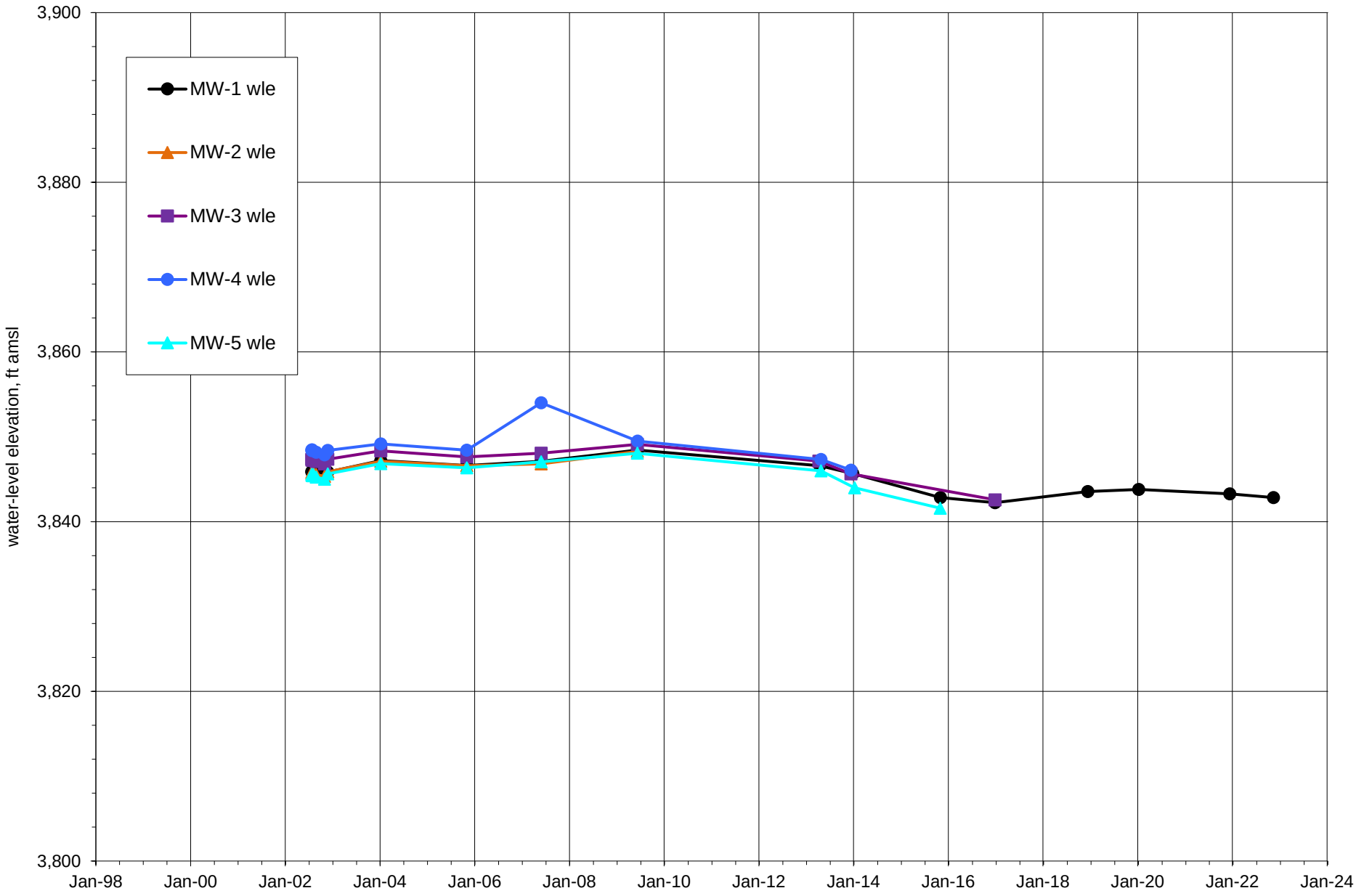


Figure B23. Graph of MW-1 through MW-5 observed water levels, Griggs and Walnut site.

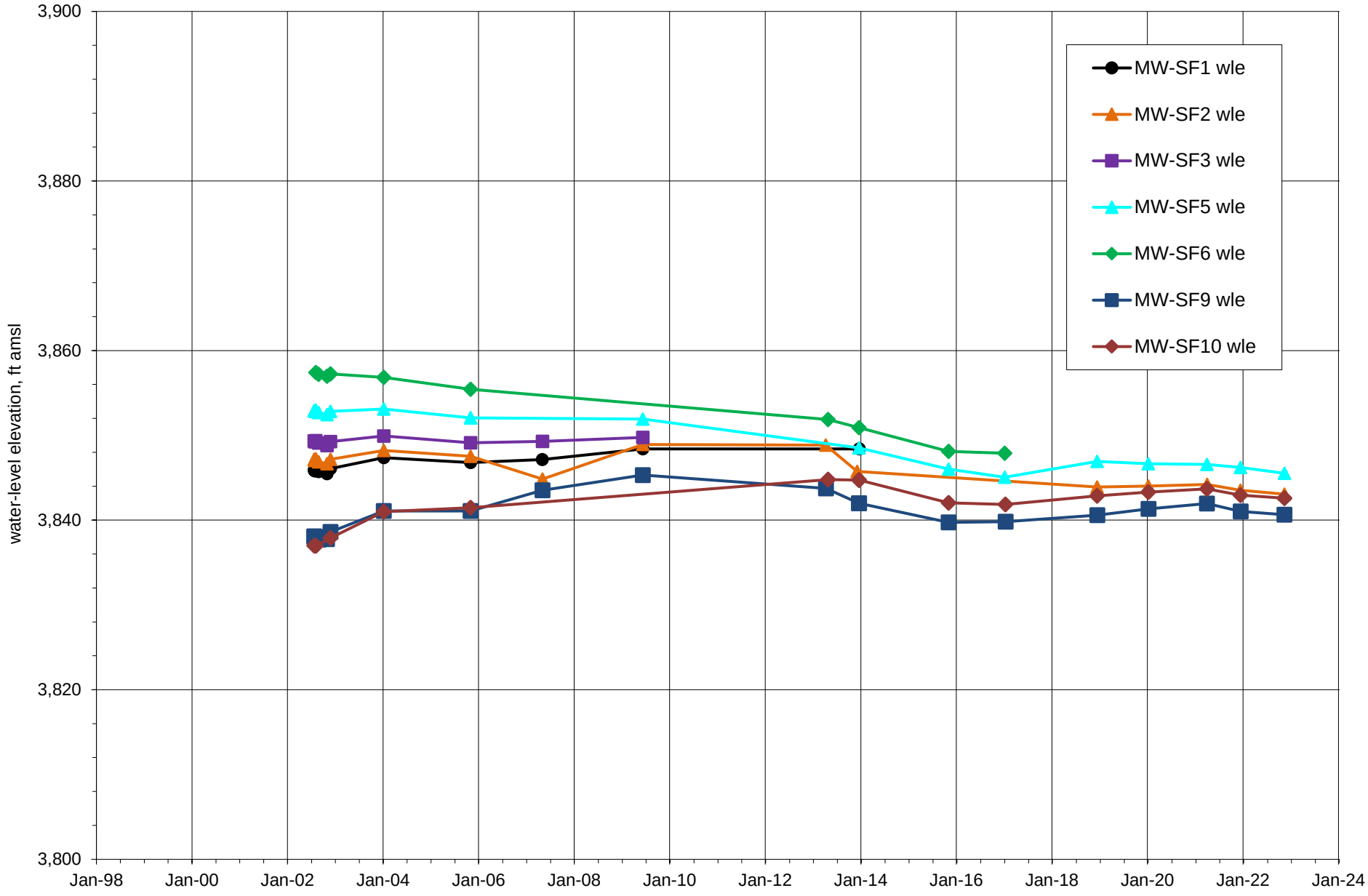


Figure B24. Graph of observed water levels for selected MW-SF series monitor wells, Griggs and Walnut site.

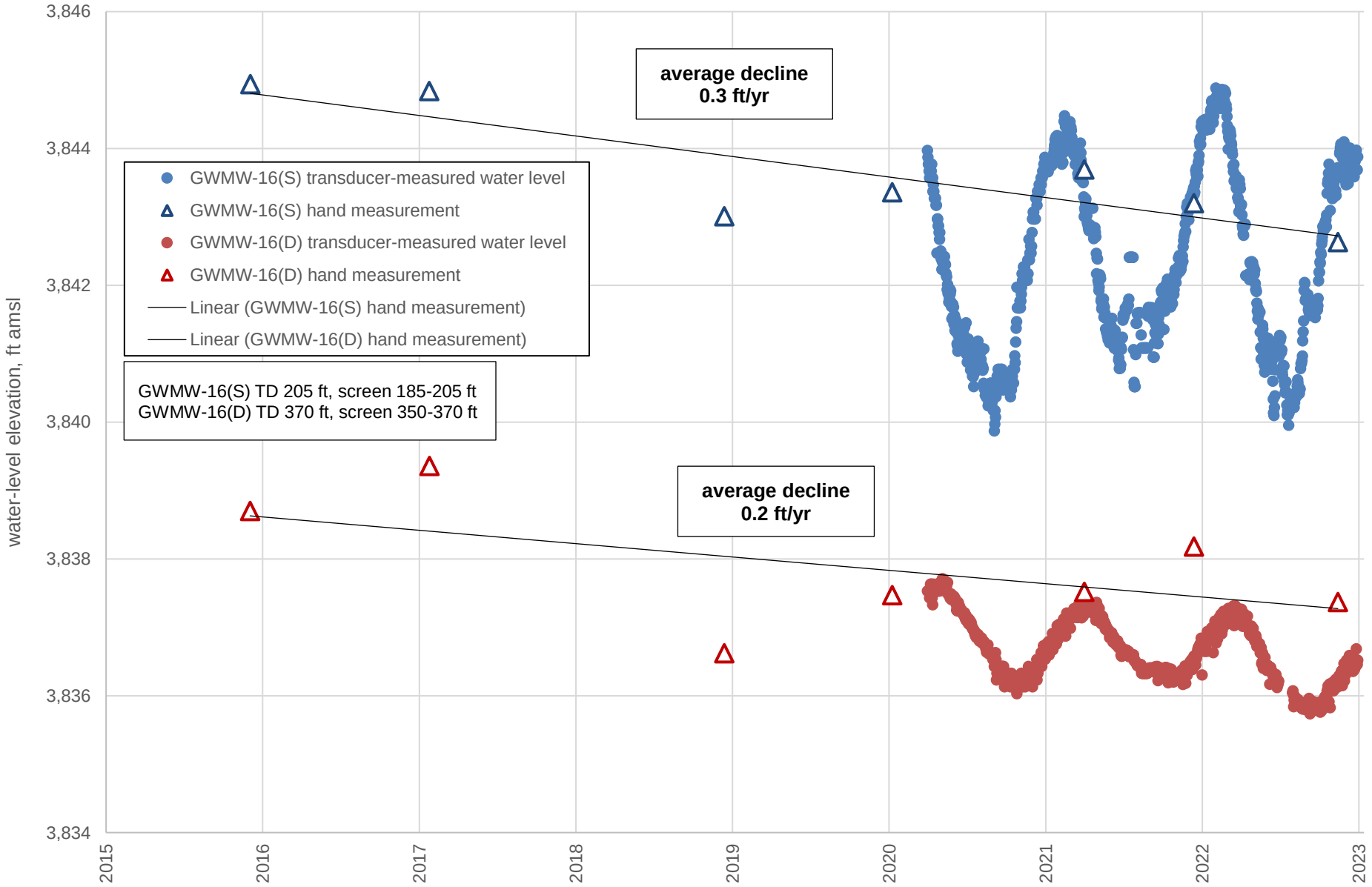


Figure B25. Graph of Griggs and Walnut site GWMW-16(S,D) transducer-measured water-level elevations, City of Las Cruces, New Mexico.

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
2022	0	4	0	0	0	0	0	321	227	0	0	5	0	557	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.

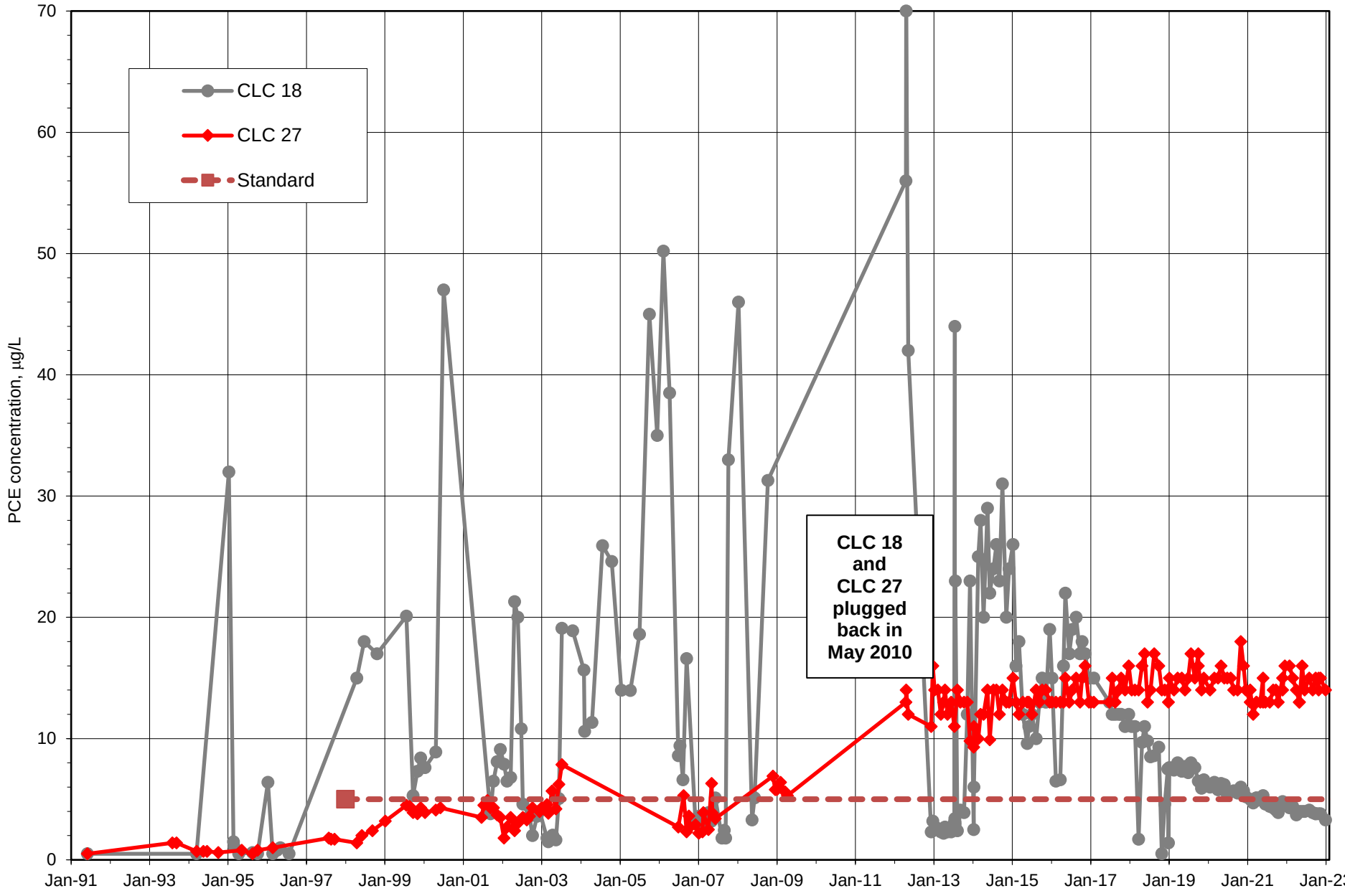


Figure D1. Graph showing PCE concentrations versus time for CLC 18 and CLC 27, Griggs and Walnut site.

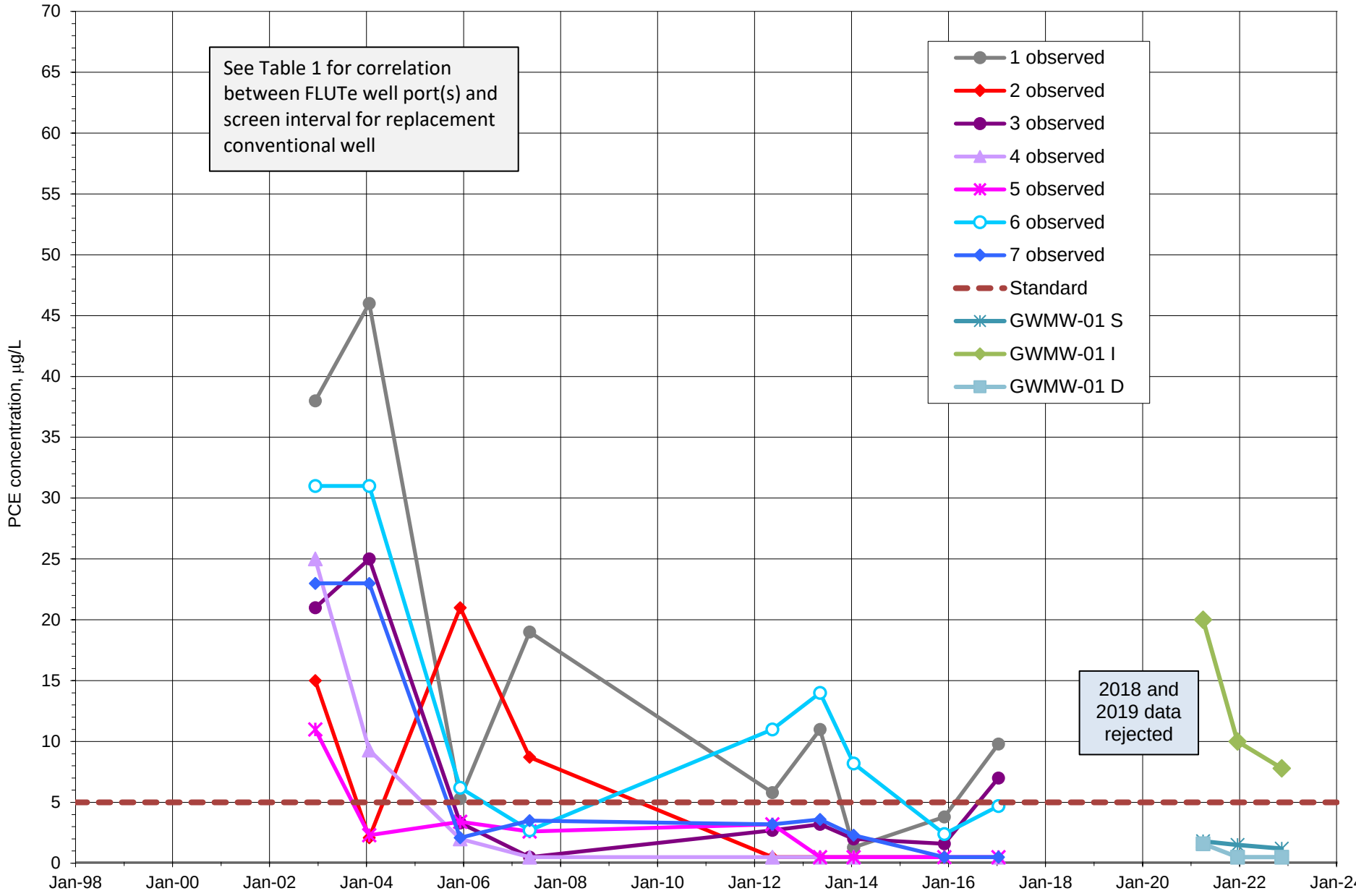


Figure D2. Graph of GWMW-01 (Ports 1 through 7) observed PCE concentrations, Griggs and Walnut site.

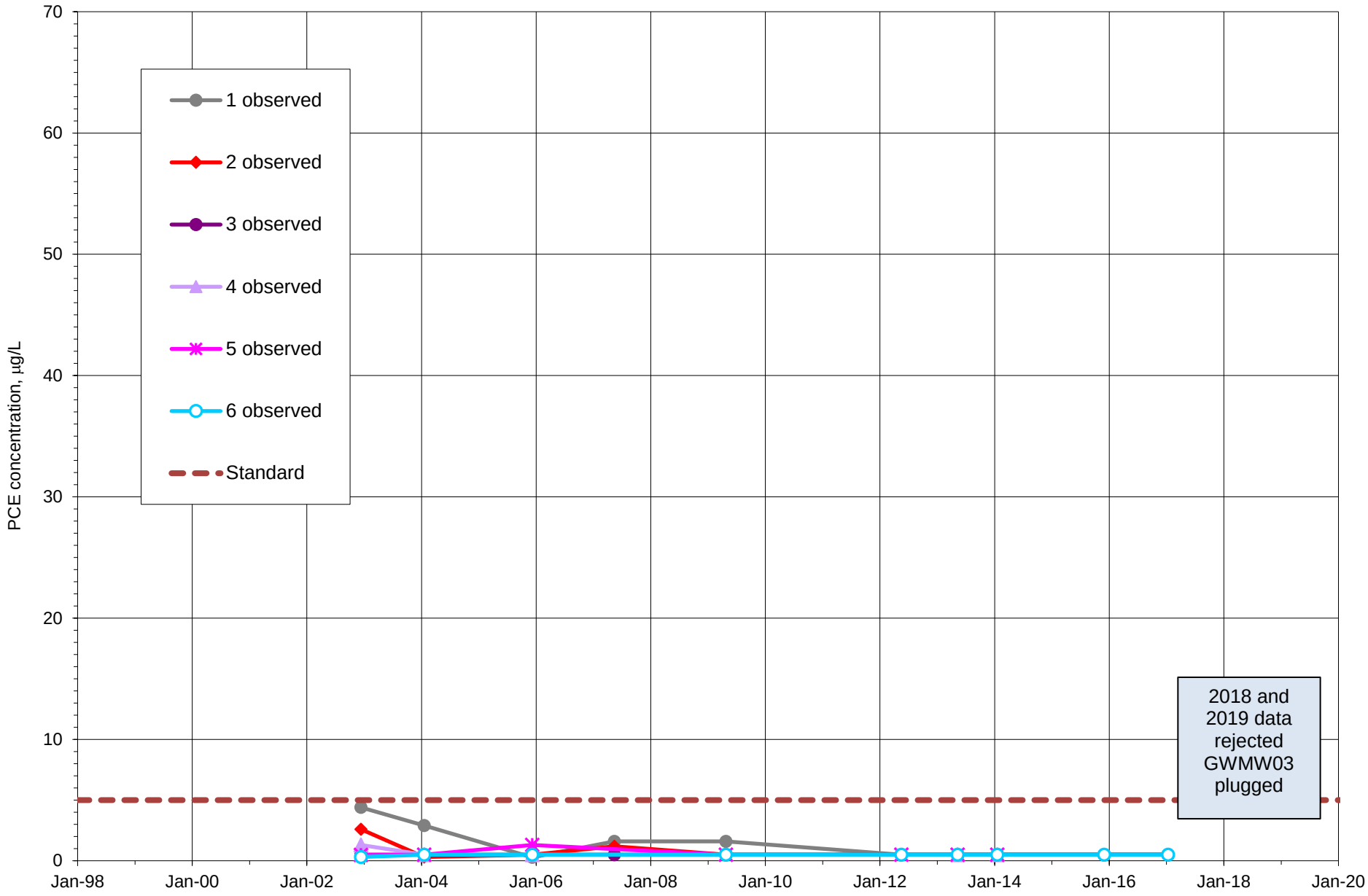


Figure D3. Graph of GWMW-03 (Ports 1 through 6) observed PCE concentrations, Griggs and Walnut site.

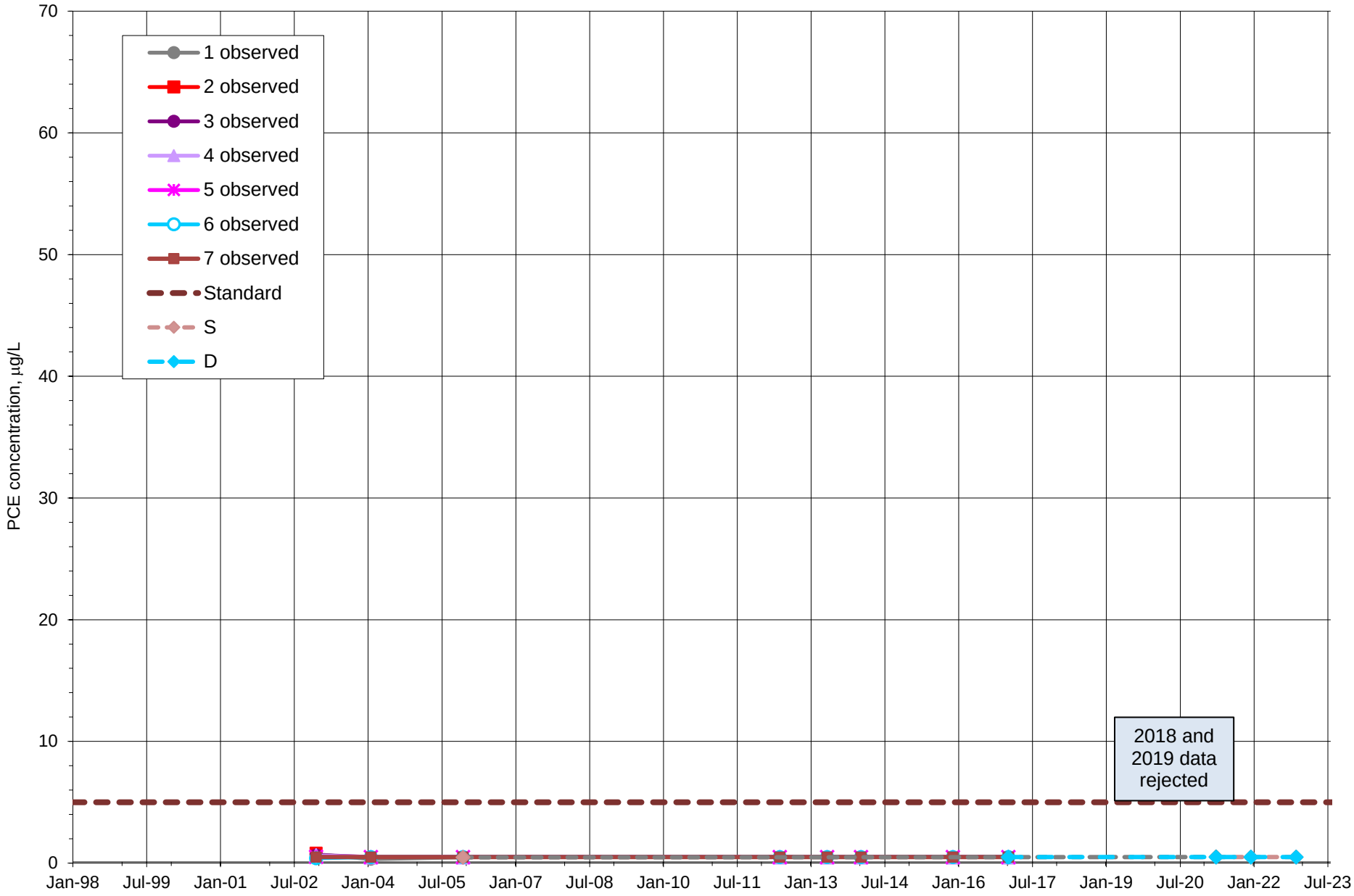


Figure D4. Graph of GWMW-08 (Ports 1 through 7) observed PCE concentrations, Griggs and Walnut site.

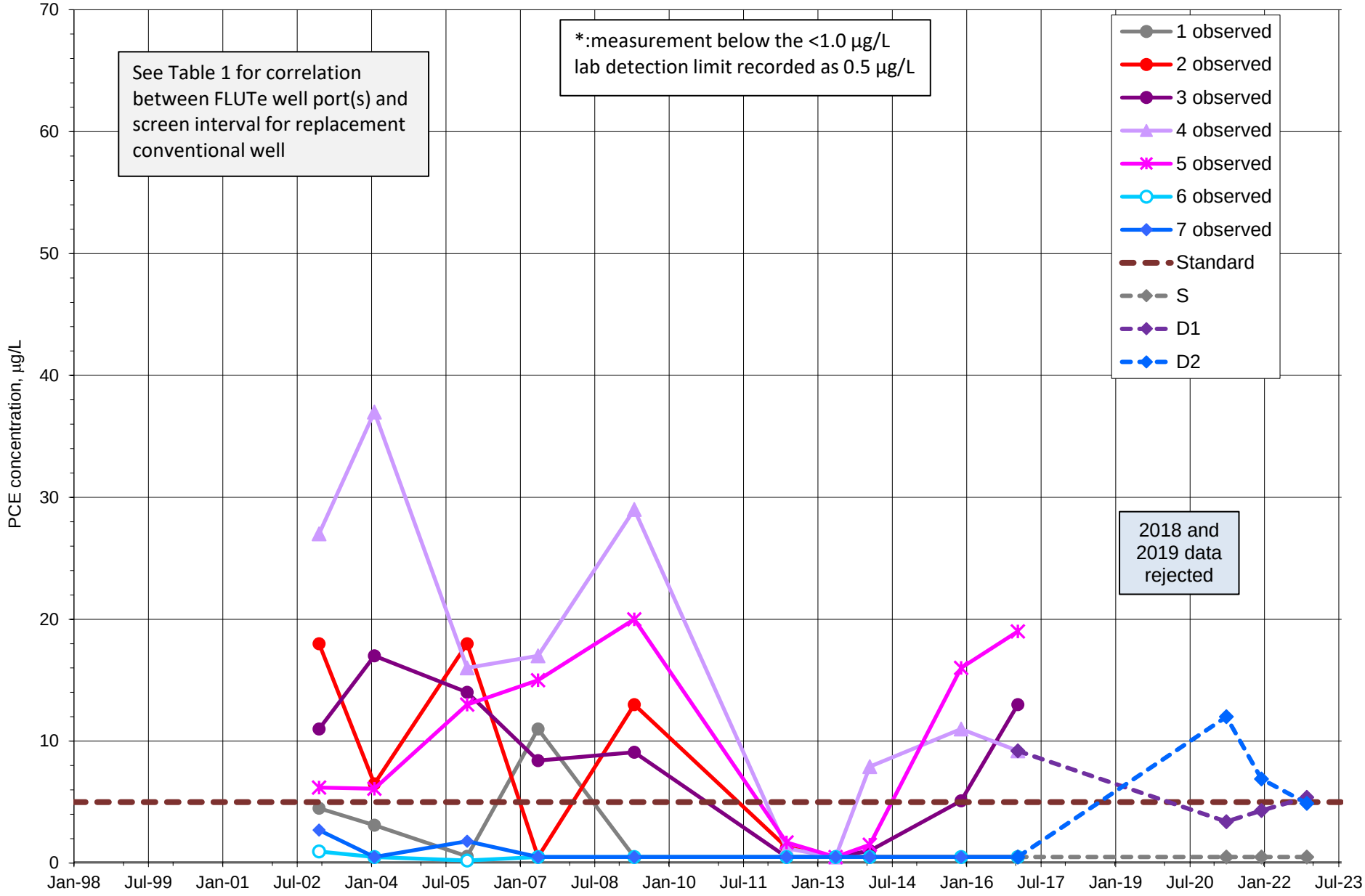


Figure D5. Graph of GWMW-09 (Ports 1 through 7) observed PCE concentrations, Griggs and Walnut site.

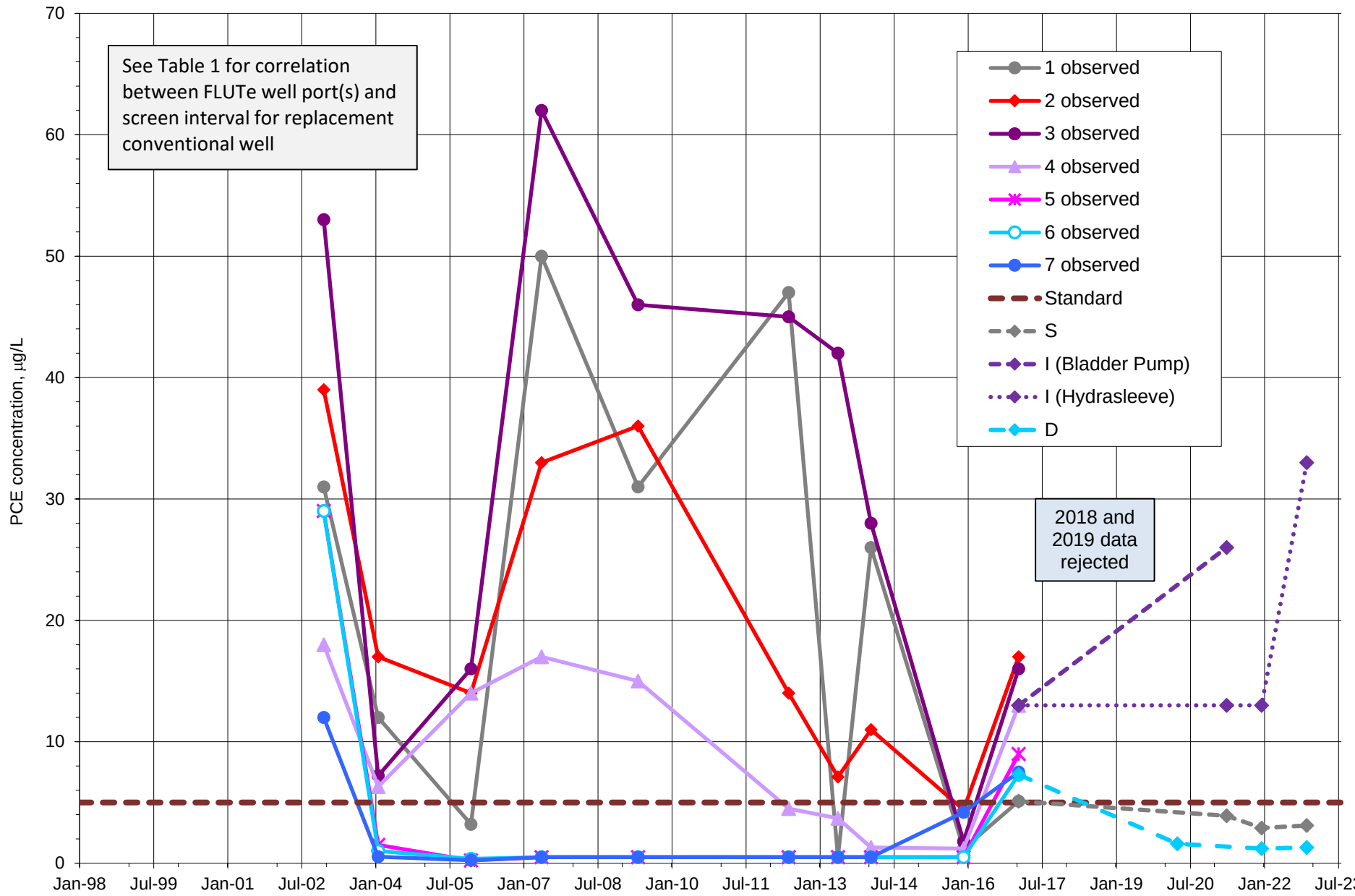


Figure D6. Graph of GWMW-10 (Ports 1 through 7) observed PCE concentrations, Griggs and Walnut site.

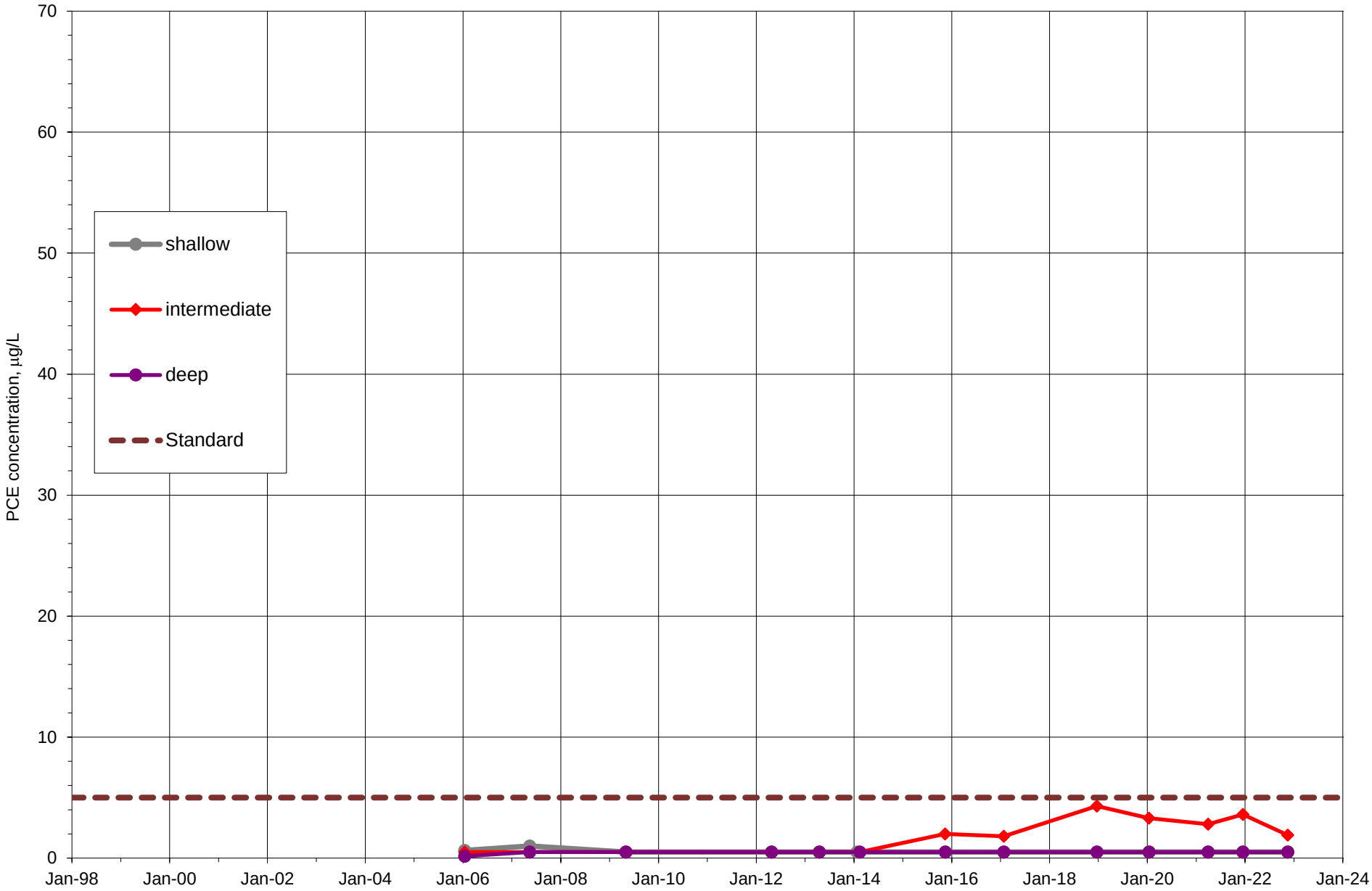


Figure D7. Graph of GWMW-11(S,I,D) (shallow, intermediate, and deep) observed PCE concentrations, Griggs and Walnut site.

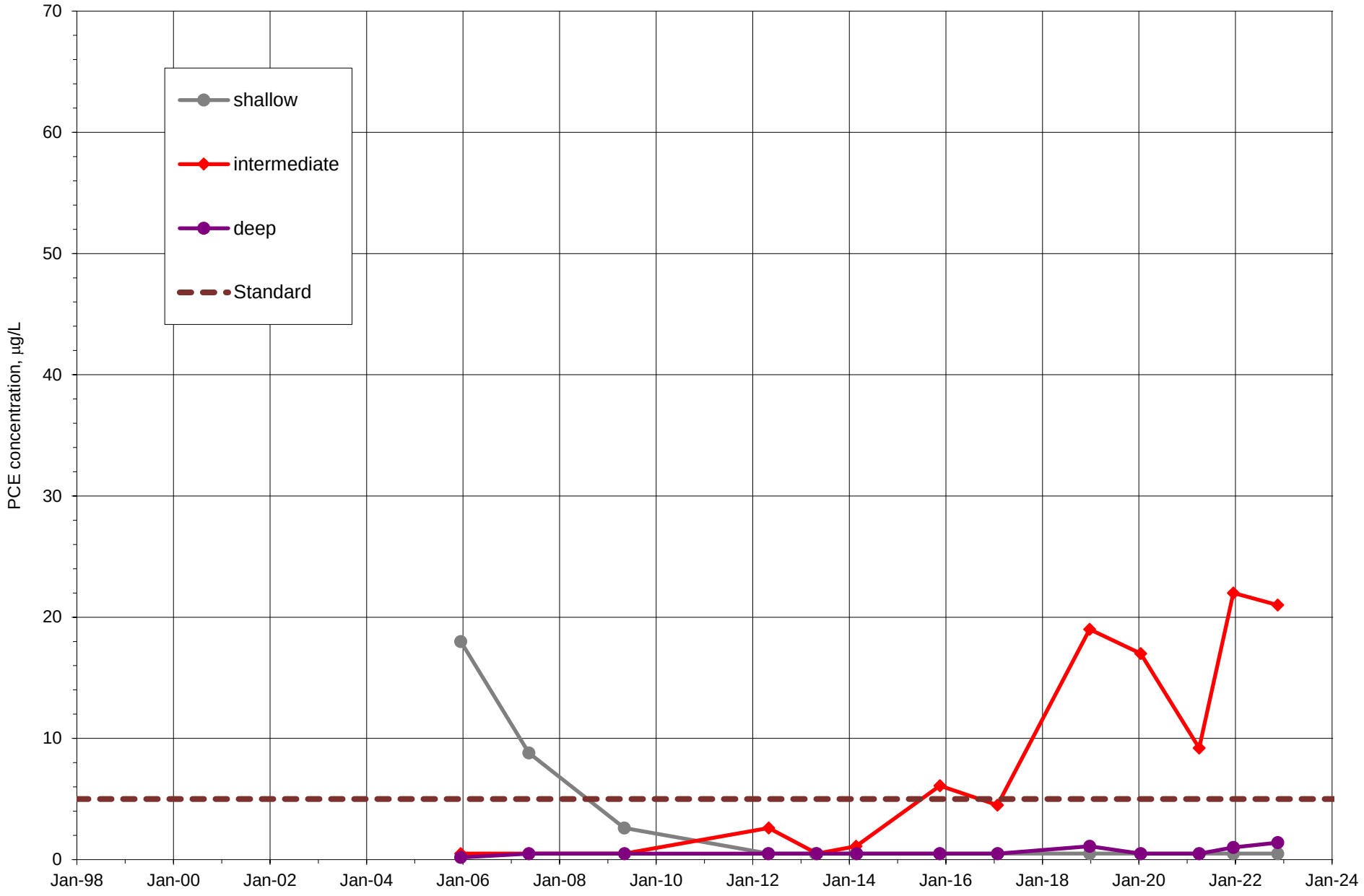


Figure D8. Graph of GWMW-15(S,I,D) (shallow, intermediate, and deep) observed PCE concentrations, Griggs and Walnut site.

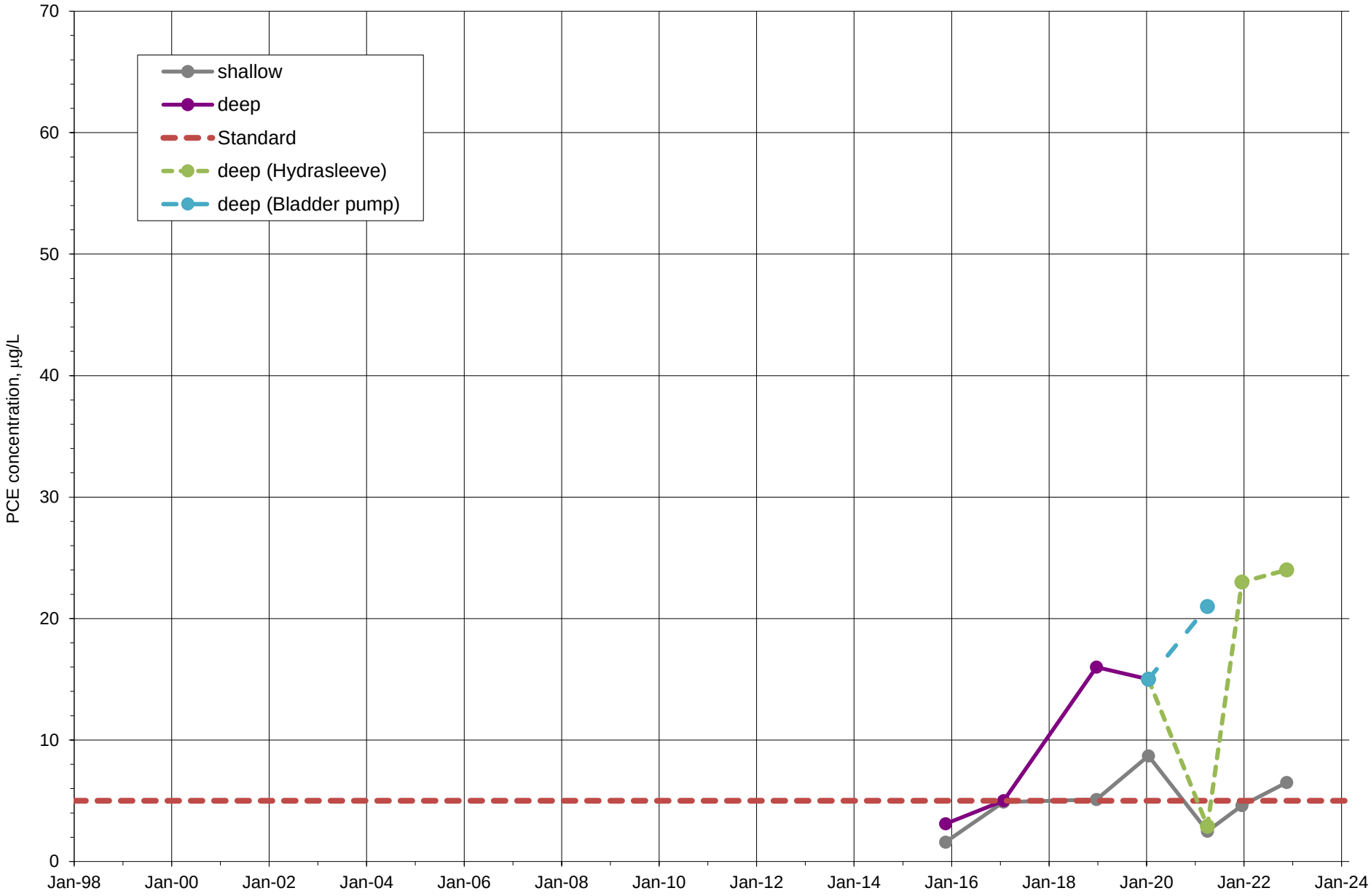


Figure D9. Graph of GWMW-16(S,D) (shallow and deep) observed PCE concentrations, Griggs and Walnut site.

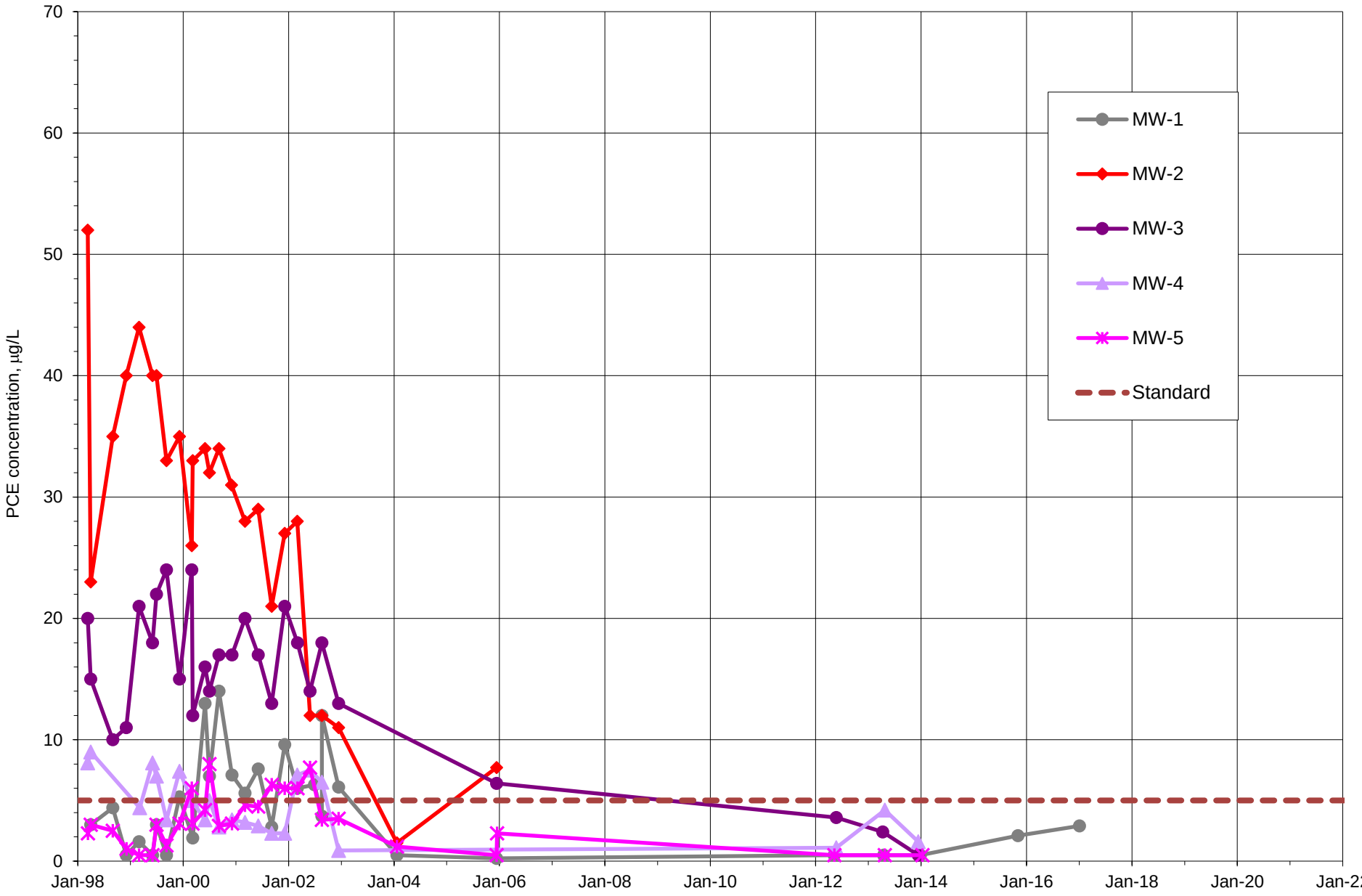


Figure D10. Graph of DACTD Monitoring Wells (PTSB) MW-1 through MW-5 observed PCE concentrations, Griggs and Walnut site.

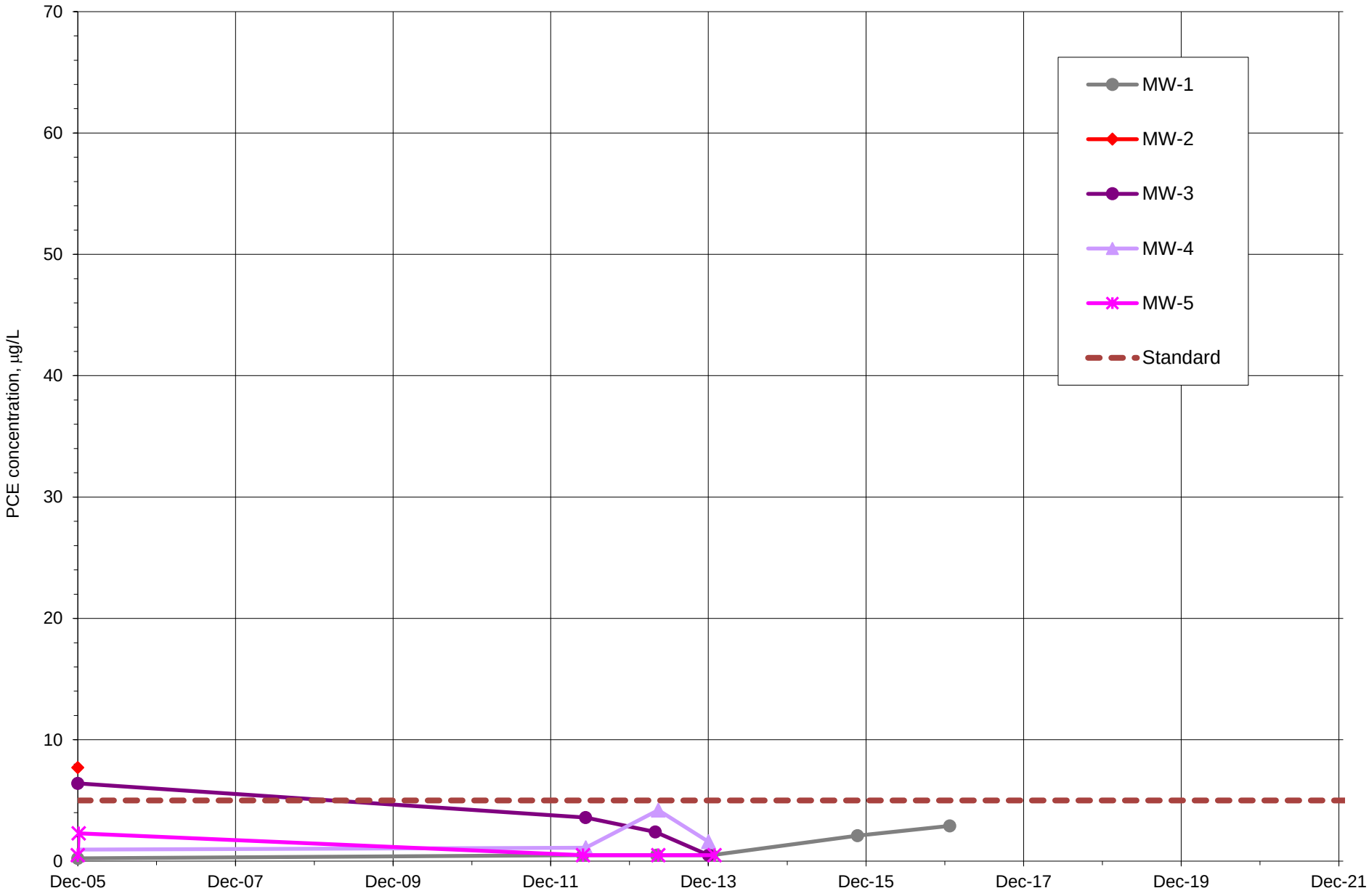


Figure D10a. Graph of DACTD Monitoring Wells (PTSB) MW-1 through MW-5 observed PCE concentrations, Griggs and Walnut site.

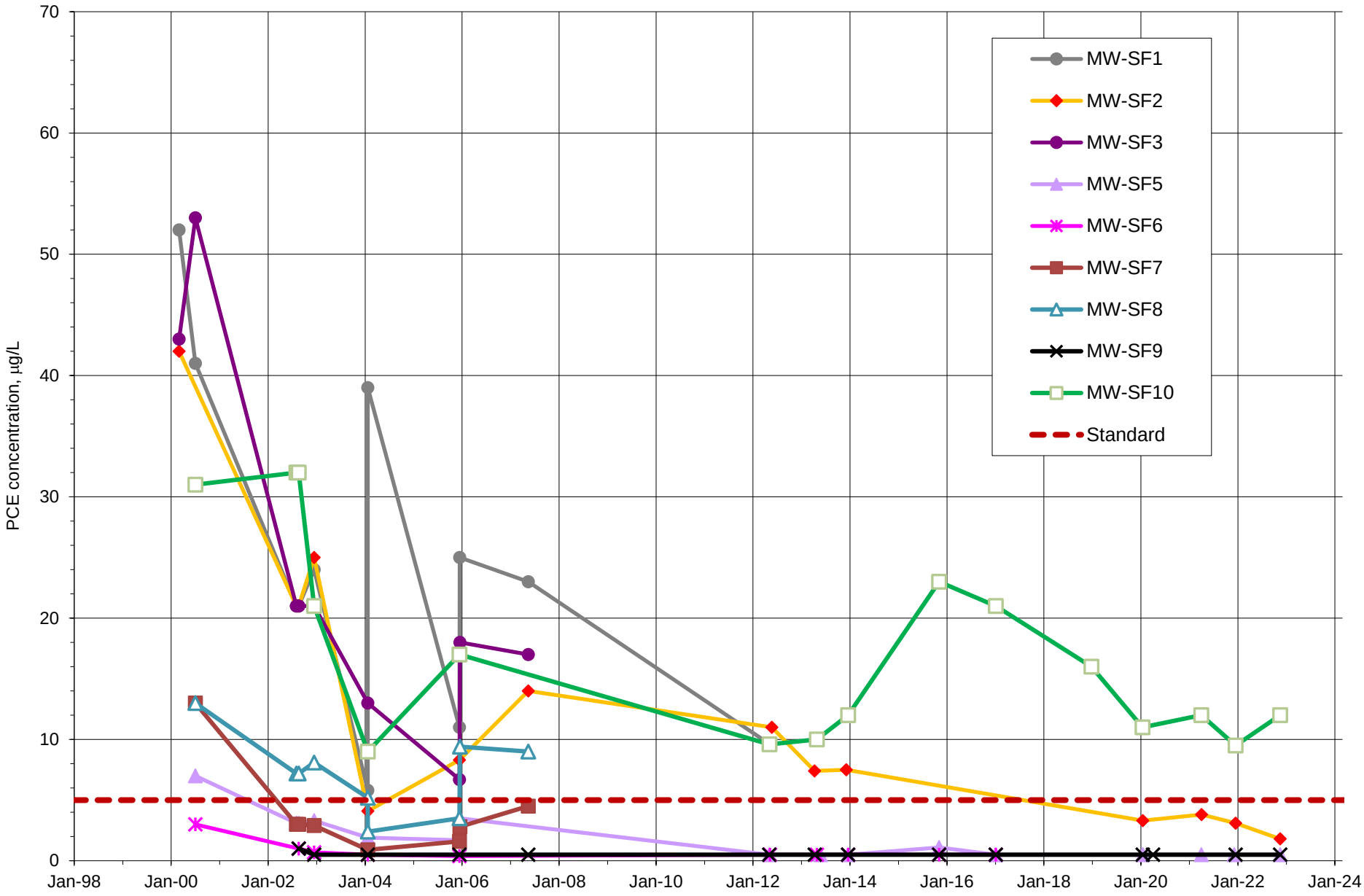


Figure D11. Graph of observed PCE concentrations for selected MW-SF-series monitor wells, Griggs and Walnut site.

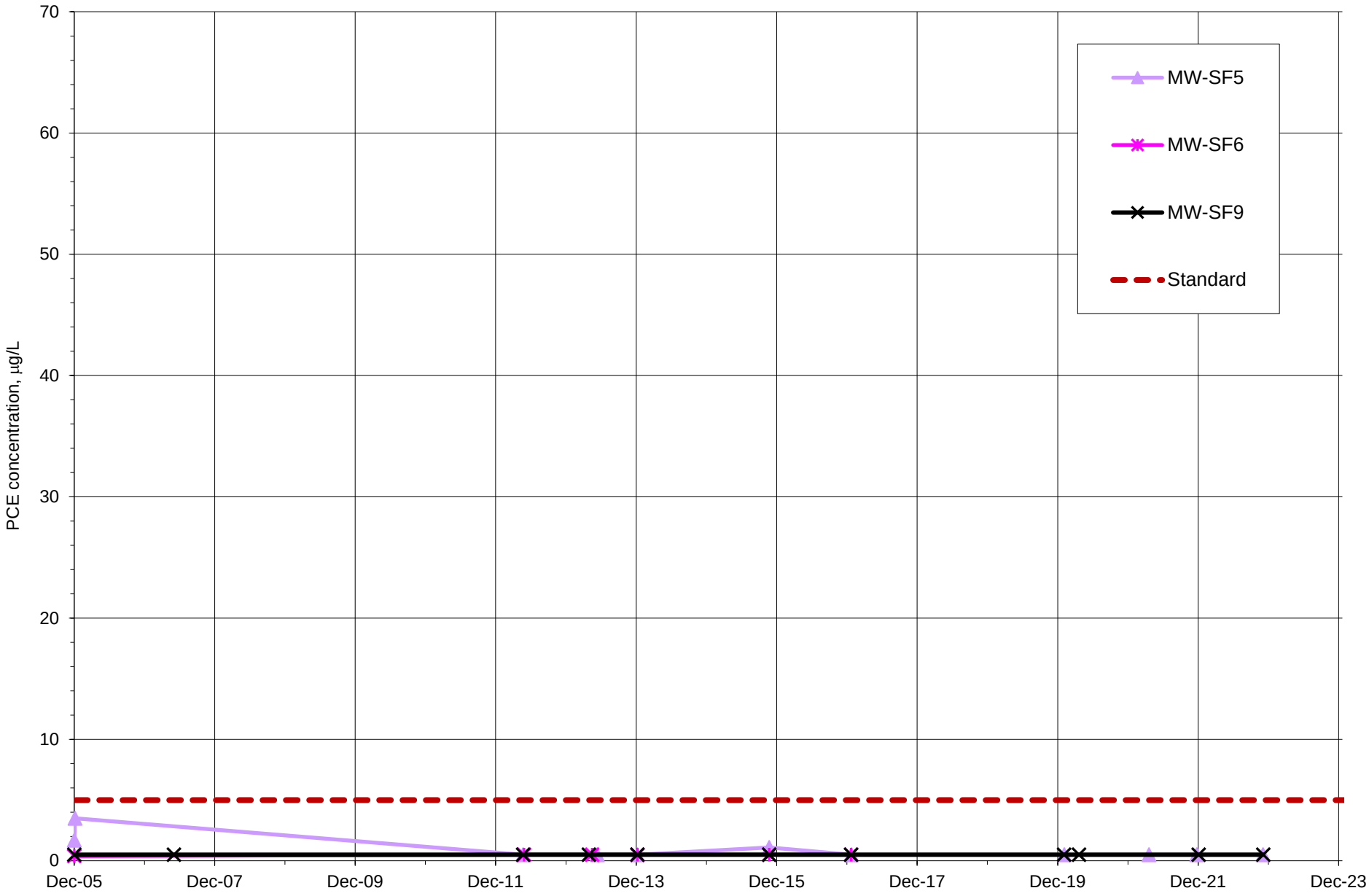


Figure D12. Graph of observed PCE concentrations for selected MW-SF5, MW-SF6, and MW-SF9 monitor wells, Griggs and Walnut site.

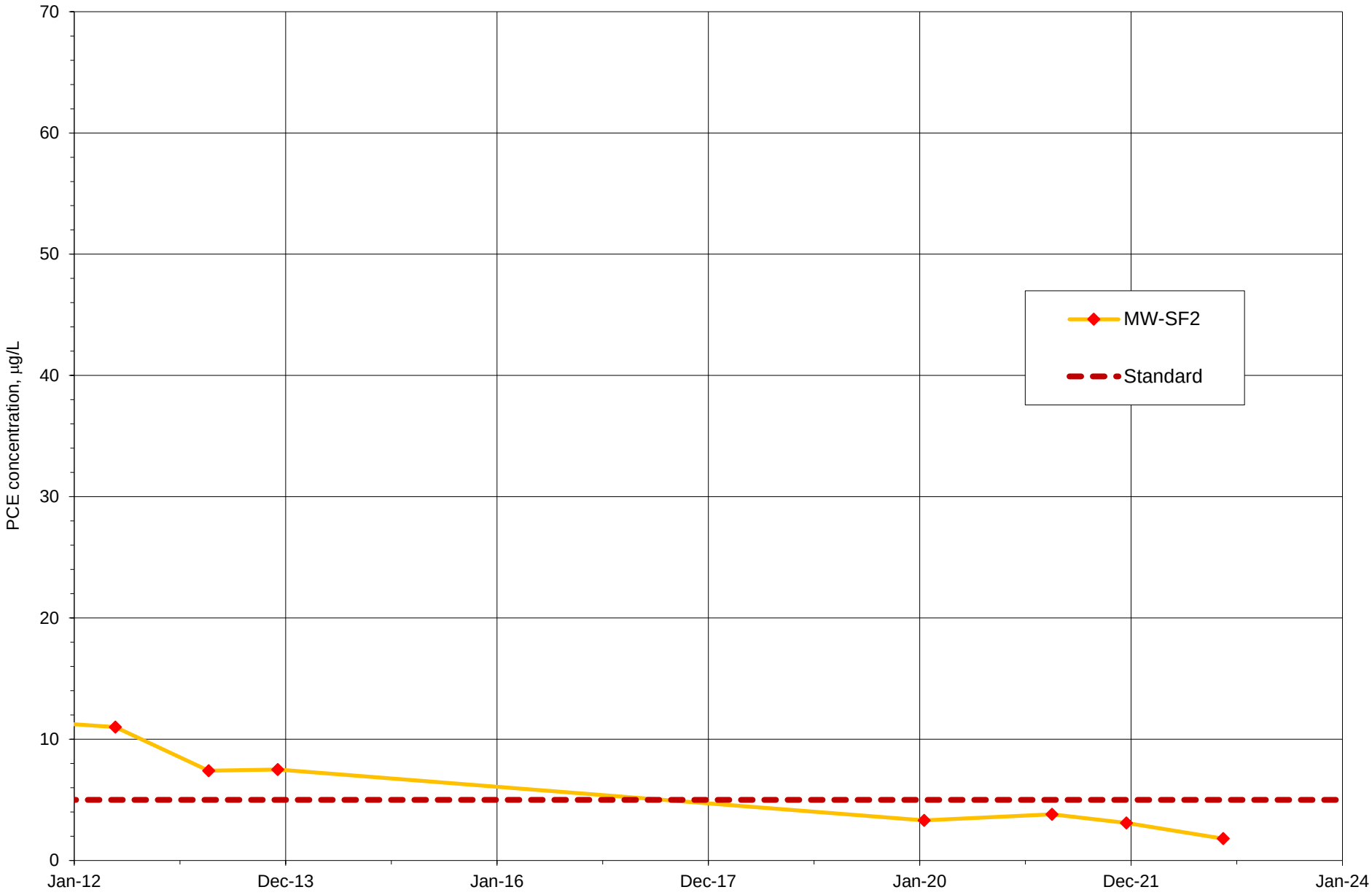


Figure D13. Graph of observed PCE concentrations for MW-SF2 monitor well, Griggs and Walnut site.

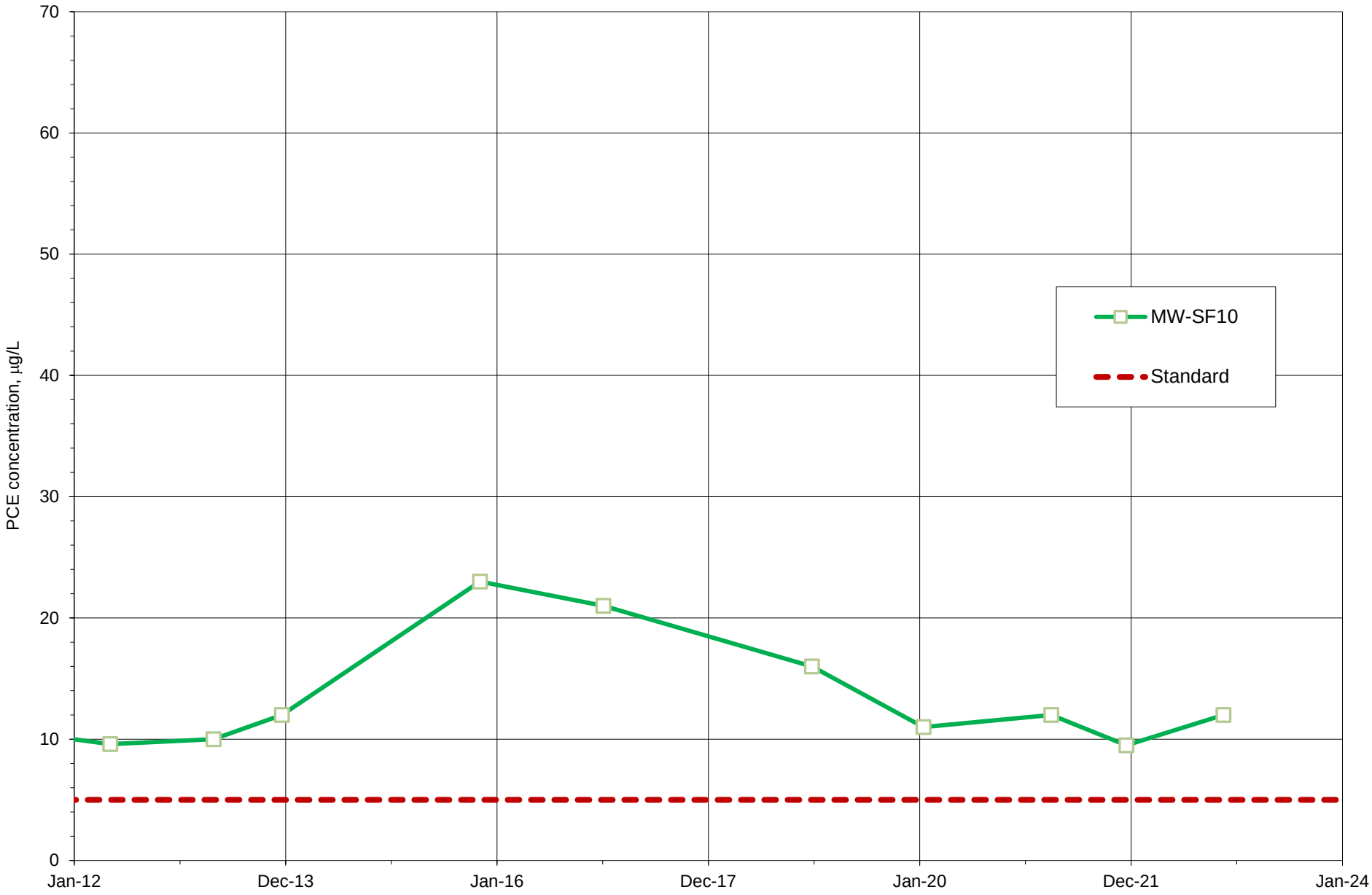


Figure D14. Graph of observed PCE concentrations for MW-SF10 monitor well, Griggs and Walnut site.

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.

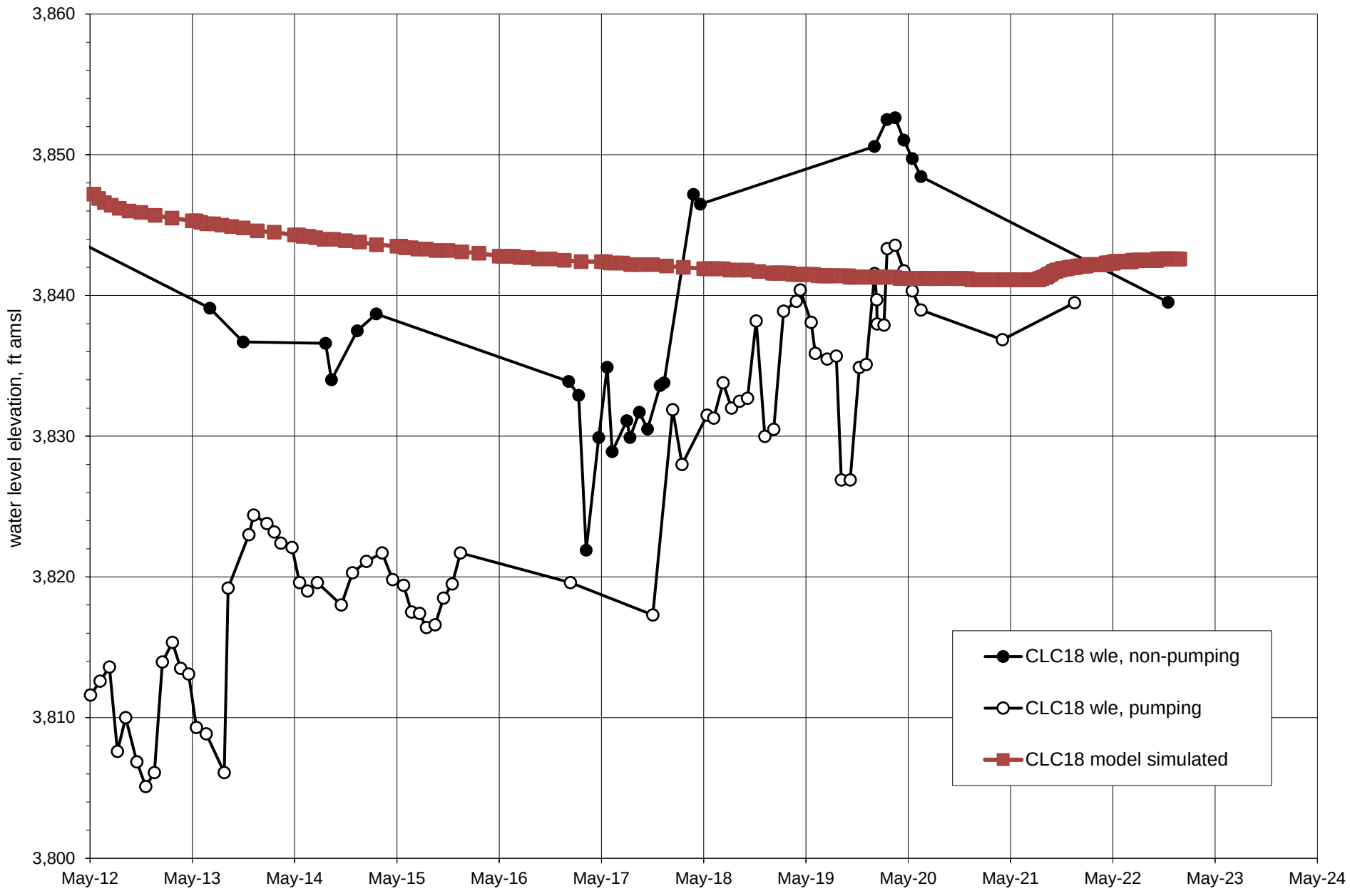


Figure E1. Graph of City of Las Cruces Well 18 observed and model-simulated water levels, Griggs and Walnut site.

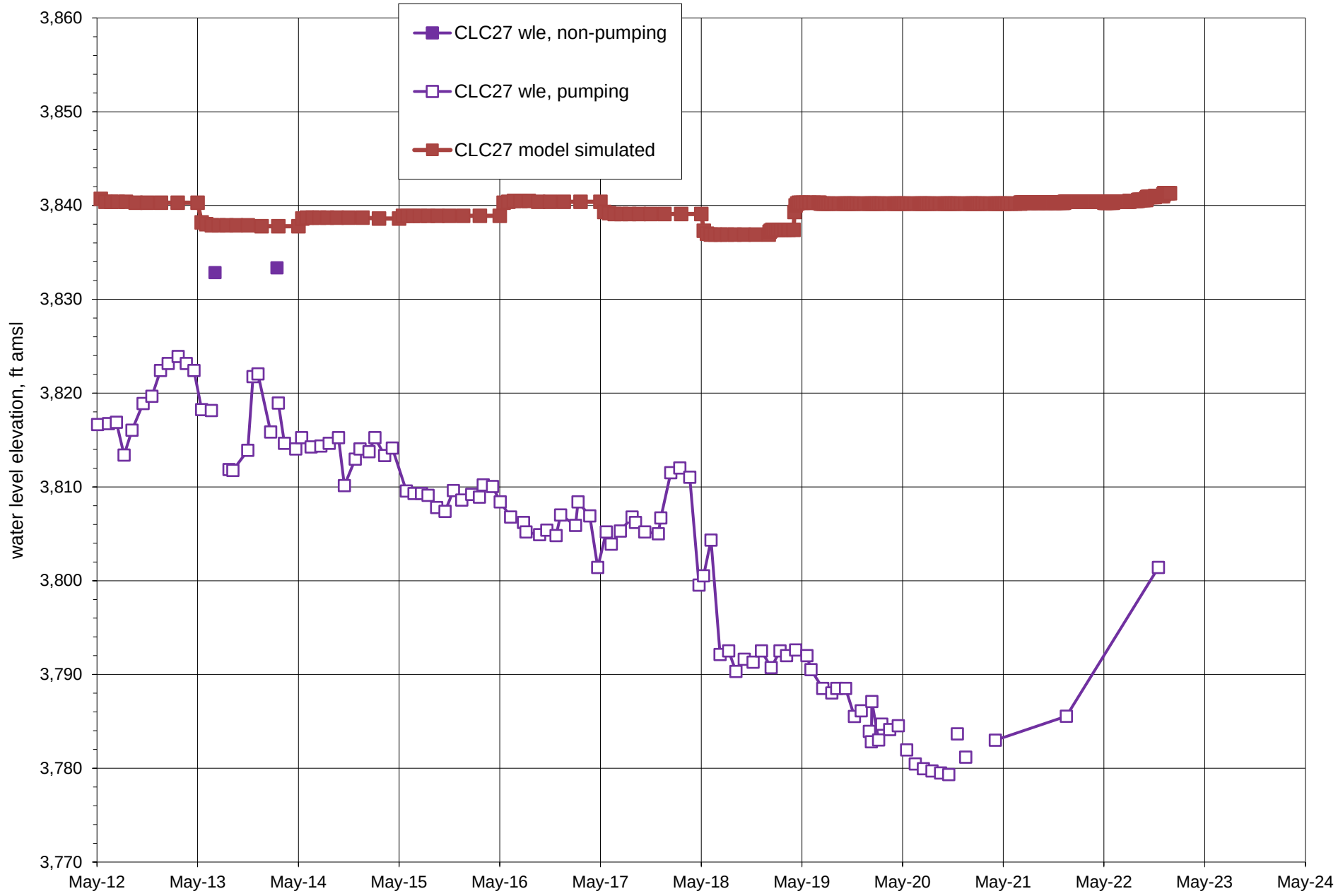


Figure E2. Graph of City of Las Cruces Well 27 observed and model-simulated water levels, Griggs and Walnut site.

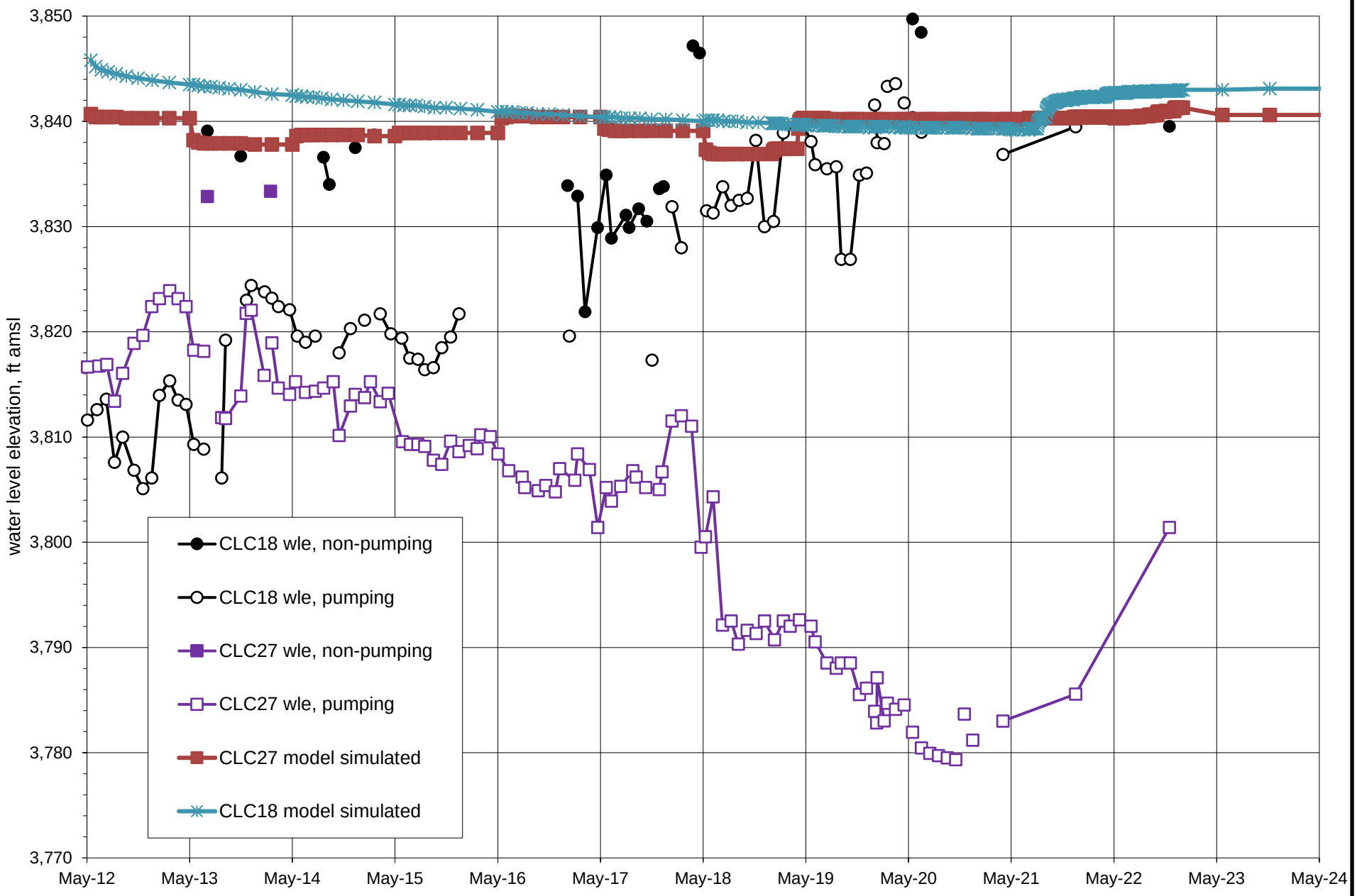


Figure E3. Graph of City of Las Cruces Well 18 and Well 27 observed and model-simulated water levels, Griggs and Walnut site.

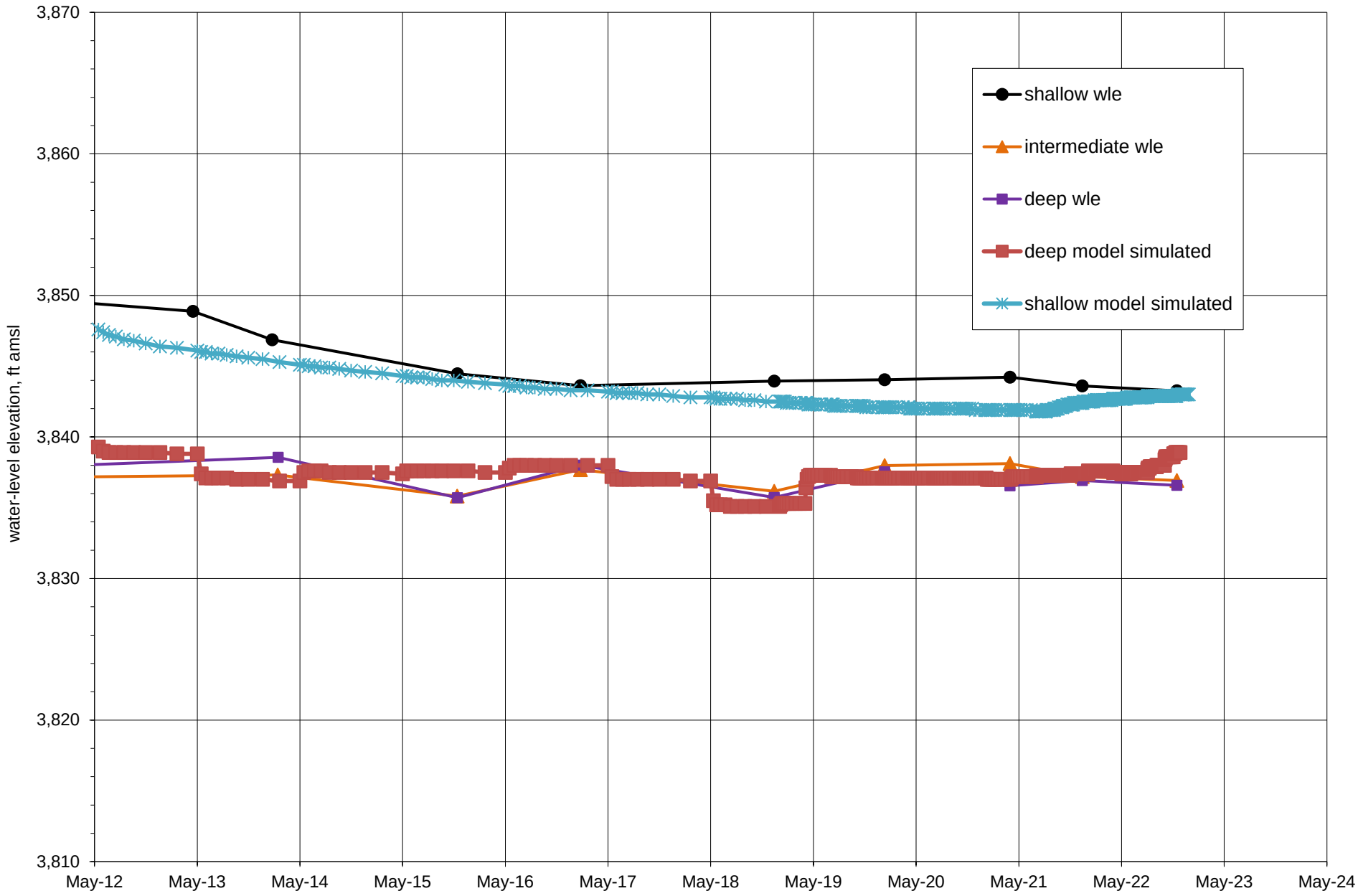


Figure E4. Graph of GWMW11 (shallow, intermediate, and deep) observed and model-simulated water levels, Griggs and Walnut site.

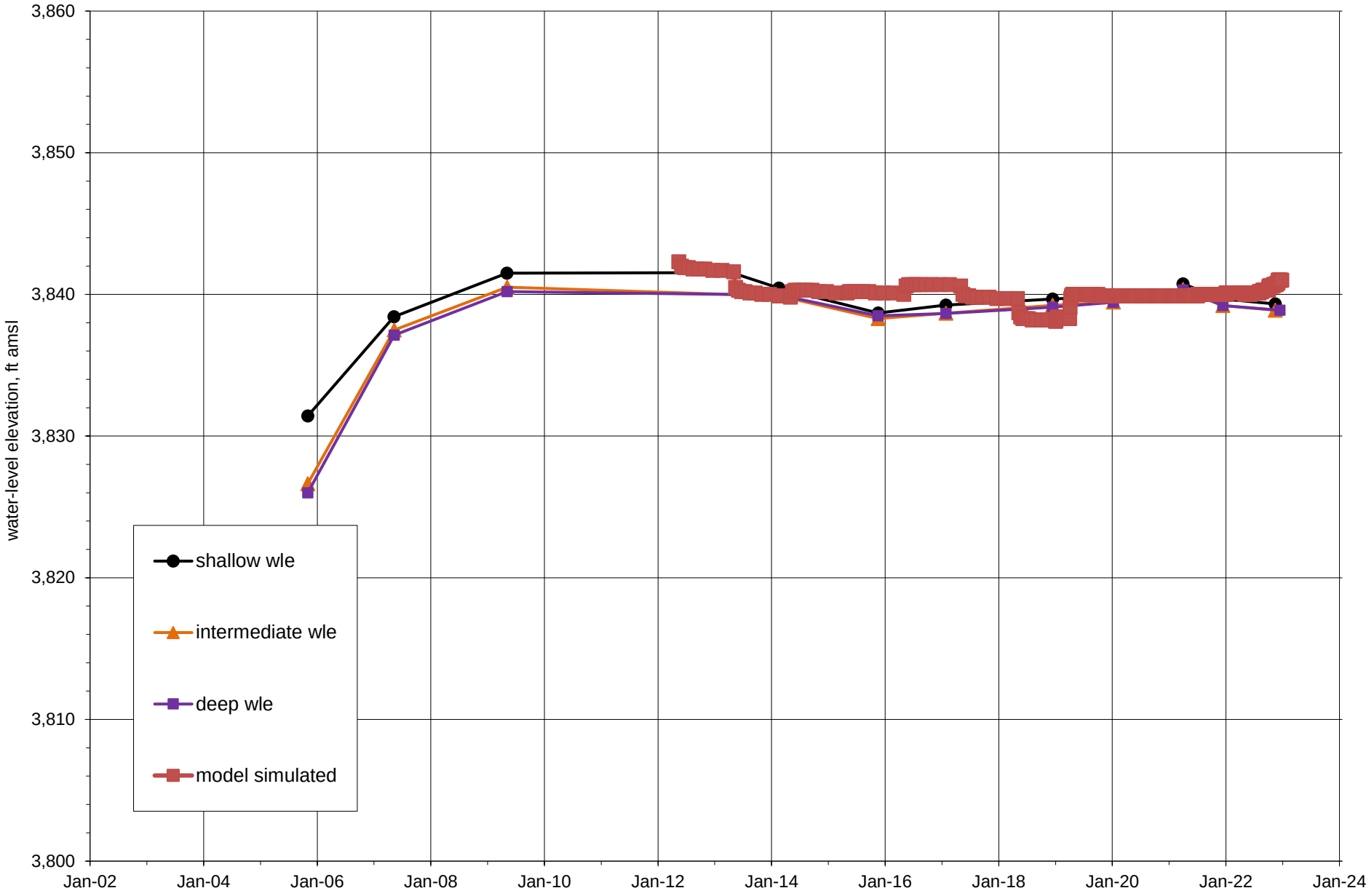


Figure E5. Graph of GWMW15 (shallow, intermediate, and deep) observed and model-simulated water levels, Griggs and Walnut site.

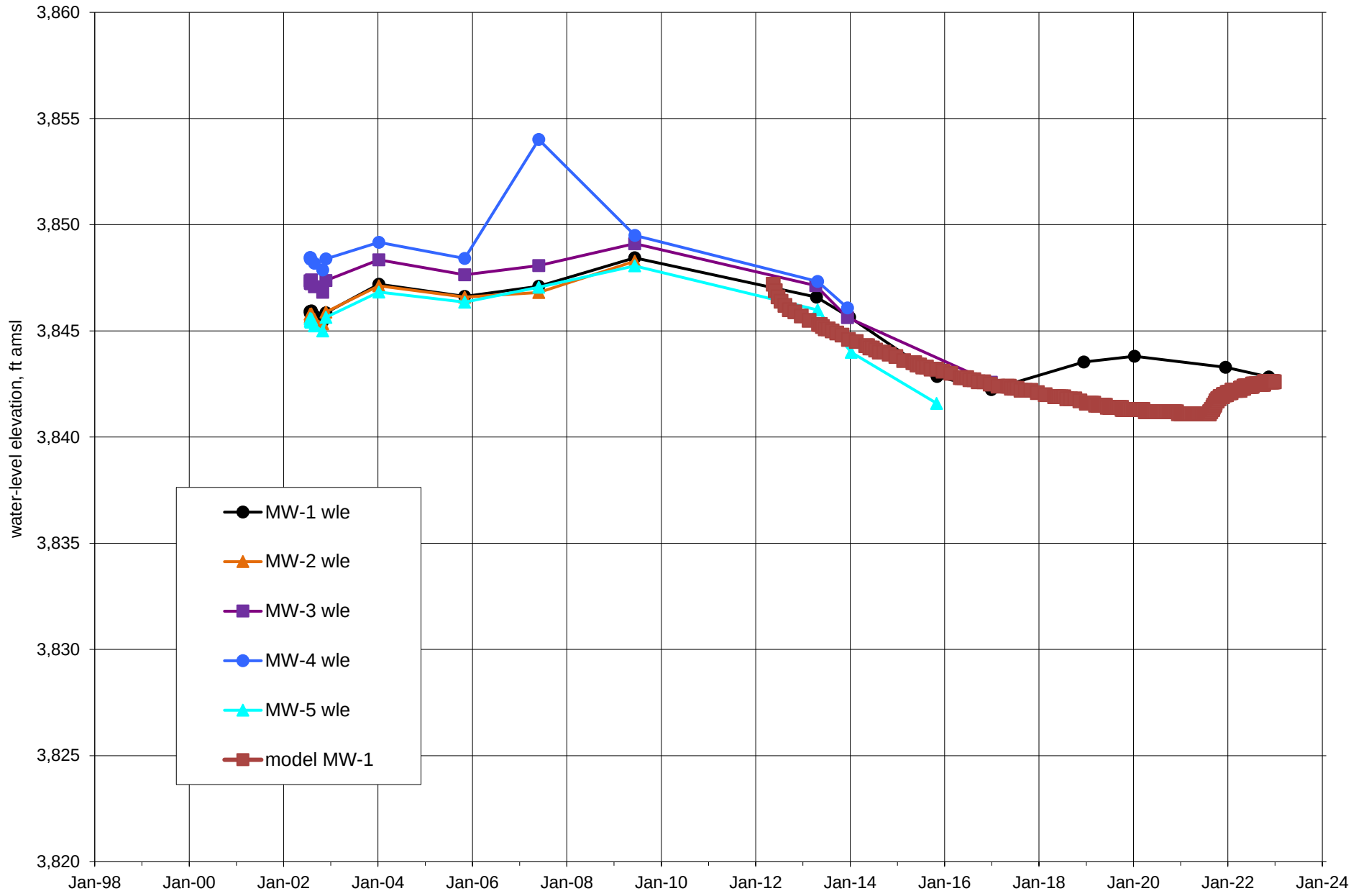


Figure E6. Graph of MW-1 through MW-5 observed and model simulated water levels, Griggs and Walnut site.

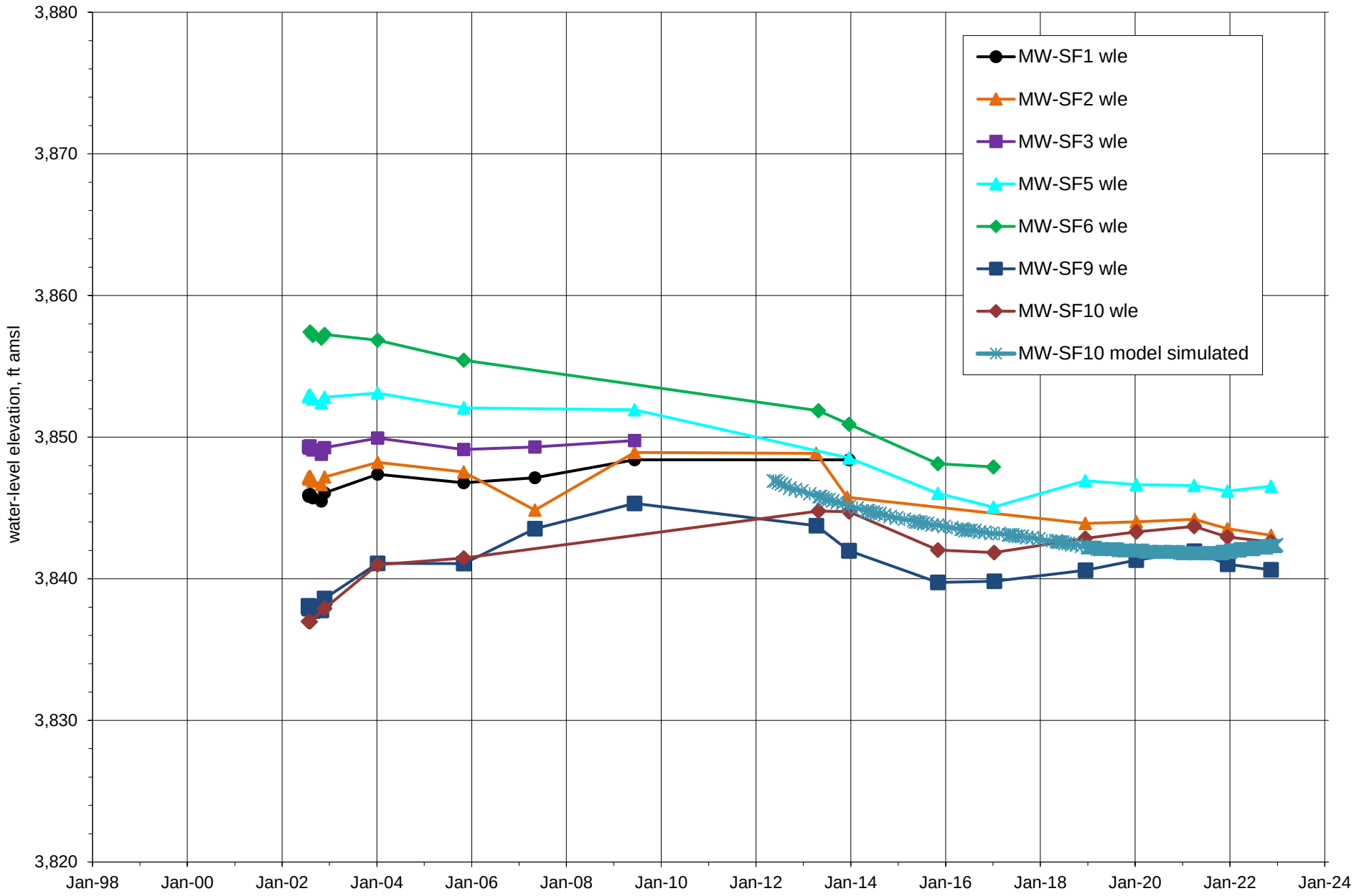


Figure E7. Graph of MW-SF1 through MW-SF10 observed and model-simulated water levels, Griggs and Walnut site.

Appendix F.

Analysis of CLC 61 Pumping Effects on PCE Plume and Data Gaps

APPENDIX F.

ANALYSIS OF CLC 61 PUMPING EFFECTS ON PCE PLUME AND DATA GAPS

CLC 61 Pumping Effects

Analysis of 2018 site data indicated that increased pumping from CLC 61 during 2013 to 2018 was starting to induce vertical (downward) movement of the Deep Zone PCE plume between GWMW-09 and GWMW-15 (JSAI, 2019). It was also noted that the extent of the PCE plume downgradient and southeast of CLC 27 was not well defined by the monitoring network (JSAI, 2019). The following was recommended in 2019:

> *Pumping from CLC 61 stopped in March 2019. Pumping from CLC 61 should be reduced to 500 ac-ft/yr or less or temporarily discontinued until water level rebound on the southern boundary of the LHZ PCE plume area is observed.*

The previous data analysis and model results indicated that pumping CLC 61 at high rate (1,500 acre-feet per year (ac-ft/yr)) increased the downward movement of the plume rather than horizontal. Because of the different completion depths, CLC 27 has a significantly greater drawdown impact on the Intermediate and Deep Zones than CLC 61. Through analysis of water-level data from the monitoring network, it was determined that continued pumping of 1,500 ac-ft/yr from CLC 61 would pull the plume downward potentially beyond the control of CLC 27.

Pumping from CLC 61 stopped in 2020 and remained inactive until 5 ac-ft was pumped in 2023 for operational and maintenance needs (Table C1; this report).

CLC 61 is a supply well completed with a screened interval from 600 to 1,000 ft: a greater depth than the GWP Deep Zone, and a greater depth than any other supply well in the area (Table 2, Fig. 1; this report). A completion diagram for CLC 61 is presented as Figure F1.

CLC 61 was actively pumped from 1996 to 2019, with the highest pumping rates occurring between 2013 and 2018 (Table C1). In 2018, CLC 18 had a non-pumping level of 205 ft and a pumping level of about 400 ft (Fig. B3; this report). Hydrographs for neighboring inactive CLC wells completed in the overlying Deep Zone (CLC 19, CLC 20, CLC 24, CLC 26, CLC 38, and CLC 57) were analyzed for increased drawdown due to pumping CLC 61. Hydrographs are presented as Figures F2 through F7. The analysis included a comparison of water level elevation trends with seasonal drawdown signatures including CLC 61 pumping. The lowest water levels in Deep Zone CLC inactive wells occurred around September 2018 at the peak of CLC 61 pumping.

Figure F8 is a map showing the estimated Deep Zone drawdown in 2018 from pumping CLC 61. The estimated 2018 CLC 61 incremental drawdown contours are centered on CLC 61 and elongated north-to-south in the high transmissivity trough simulated in the GWP groundwater flow model.

Drawdown due to pumping CLC 61 is easily identified in CLC 20 (Fig. F3) and CLC 24 (Fig. F4) hydrograph data when CLC 61 was pumped near continuously for more than 2 months at the design rate of 1,100 gallons per minute (gpm) (148 ac-ft/month). CLC 61 pumping influences on CLC 19, CLC 26, CLC 38, and CLC 57 were more difficult to discern from the seasonal drawdown that occurs from regional pumping. Pumping from CLC 27 was increased in 2018, which had an effect on water levels in nearby CLC 19, and possibly CLC 26 and CLC 57. Seasonal water-level fluctuations range from 3 to 6 ft from regional pumping, which also complicates the hydrograph analysis. There is no indication that CLC 61 pumping has an influence on CLC 27 water levels.

The GWP annual reports have always considered winter water-level data for developing potentiometric surface maps, primarily because many of the wells in the monitoring network are measured annually in the winter. JSAI developed a Deep Zone potentiometric surface map for September 2018 using data from the CLC inactive well monitoring network (Fig. F9), at the end of an extended period of withdrawals from well CLC 61. Prominent drawdown cones are evident in the Deep Zone around CLC 27 and CLC 61 with a hydraulic divide between the two wells when maximum pumping from CLC 61 occurred. Further analysis of the water level and pumping dataset results in the conclusion that pumping CLC 61 400 ac-ft/yr (approximately 2 months continuously at the design rate), or less, does not create a temporary Deep Zone drawdown cone. For comparison, Figure F10 is a map showing estimated Deep Zone potentiometric surface contours for September 2020 when CLC 61 was not pumping.

CLC 27 pumps directly from the Deep Zone and creates plume containment and capture in the Intermediate and Deep Zones. Water-level data have always shown a cone of depression from CLC 27 extraction well, whereas the observed cone of depression from pumping CLC 61 was seasonal. There are no water-level or PCE-concentration data indicating horizontal migration of the PCE plume towards CLC 61. Wells CLC 26 (D) and CLC 20 (I/D) have been sampled eight times and six times, respectively since 2013, all non-detect for PCE. CLC 61 was sampled in 2020, and was non-detect for PCE. The PCE plume is wide (west to east) and unlikely to completely bypass CLC 26 and CLC 20 if migrating southward.

As previously identified, a data gap remains for defining the Intermediate and Deep Zones PCE plume extent southeast of CLC 27. If the hydraulic divide formed between CLC 61 and CLC 27 and intersected the plume extent, it is possible that southeast horizontal movement of the PCE plume towards CLC 61 occurred intermittently. Any such seasonal plume capture is likely to have been reversed back toward CLC 27 after each significant seasonal CLC 61 pumping cycle. It is important to note that CLC 61 has not been pumped at a rate sufficient to affect capture since 2018.

Data Gap Analysis

EPA review of GWP 2022 data analysis reports identified two data gaps for the JSP to address: 1) defining the vertical PCE plume extent in the area of GWMW-16, and 2) defining the PCE plume extent southeast of CLC 27.

Hydrogeologic cross-section D-D' (Fig. F11) was prepared to further illustrate the vertical definition of the PCE plume in the area of GWMW-16 and to understand the CLC 61 pumping effect on the PCE plume and potential data gaps. The line of section can be referenced from Figure F8.

The vertical extent of PCE plume in the vicinity of GWMW-16 is reasonably defined by surrounding points GWMW-01(I,D), GWMW-08(D), GWMW-09(D2), and GWMW-10(D). GWMW-16(D) represents the top of the Deep Zone which is almost the same elevation as GWMW-10(I), which is completed at the base of the Intermediate Zone. There are no data to suggest the plume at GWMW-16 extends below the surrounding deeper monitoring points.

The PCE plume extent southeast of CLC 27 and south of GWMW-10 has been recognized as a data gap (JSAI, 2019). When it was discovered in 2018 that the FLUTe wells were compromised and needed replacing, it was determined to evaluate data from the new monitoring network to see if a data gap still exists southeast of CLC 27. Since the FLUTe wells have been replaced, PCE concentration contouring efforts have shown the Intermediate and Deep Zone PCE plume extent is not well-defined to the southeast.

Two monitoring wells approximately 1,750 ft southeast of CLC 27 are proposed in the Intermediate and Deep Zones. An Intermediate Zone well should be completed to about 280 ft depth, and a Deep Zone monitoring well should be completed to about 480 ft depth. Data from these wells will help define the plume extent, hydraulic heads, and groundwater gradients in the area southeast of well CLC 27. Final well placement will be determined in a workplan subject to EPA approval.

It is recommended to develop potentiometric surface maps for early September and December from LCU water-level monitoring network for evaluating effects of peak summer regional pumping and low-demand winter pumping, particularly if CLC 61 is significantly pumped. Based on analysis of past pumping and water-level trends, water-level measurements during the months of September and December would best represent these two seasonal periods.

ILLUSTRATIONS

Figure F1. CLC 61 completion diagram.

Figure F2. Hydrograph for CLC 19.

Figure F3. Hydrograph for CLC 20.

Figure F4. Hydrograph for CLC 24.

Figure F5. Hydrograph for CLC 26.

Figure F6. Hydrograph for CLC 38.

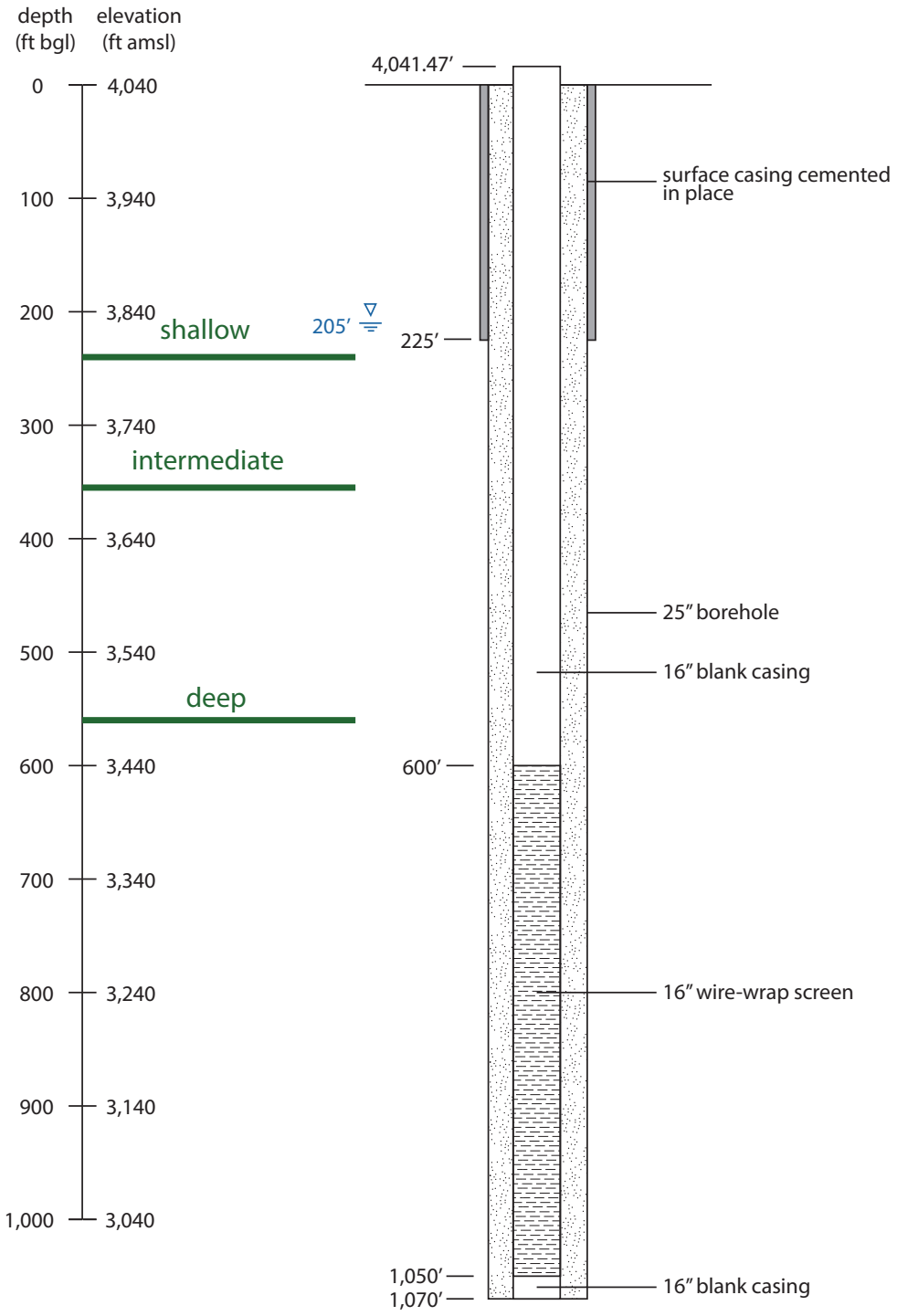
Figure F7. Hydrograph for CLC 57.

Figure F8. Aerial photograph showing September 2018 estimated drawdown in Deep Zone due to pumping greater than 1,000 gpm for seven previous months, Griggs and Walnut Site, Las Cruces, New Mexico.

Figure F9. Aerial photograph showing September 2018 Deep Zone potentiometric surface contours, Griggs and Walnut site, Las Cruces, New Mexico

Figure F10. Aerial photograph showing September 2020 Deep Zone potentiometric surface contours, Griggs and Walnut site, Las Cruces, New Mexico

Figure F11. Hydrogeologic cross-section D-D' with November 2022 PCE concentrations, Griggs and Walnut site, Las cruces, New Mexico



F1. Diagram showing as-built construction of CLC 61.

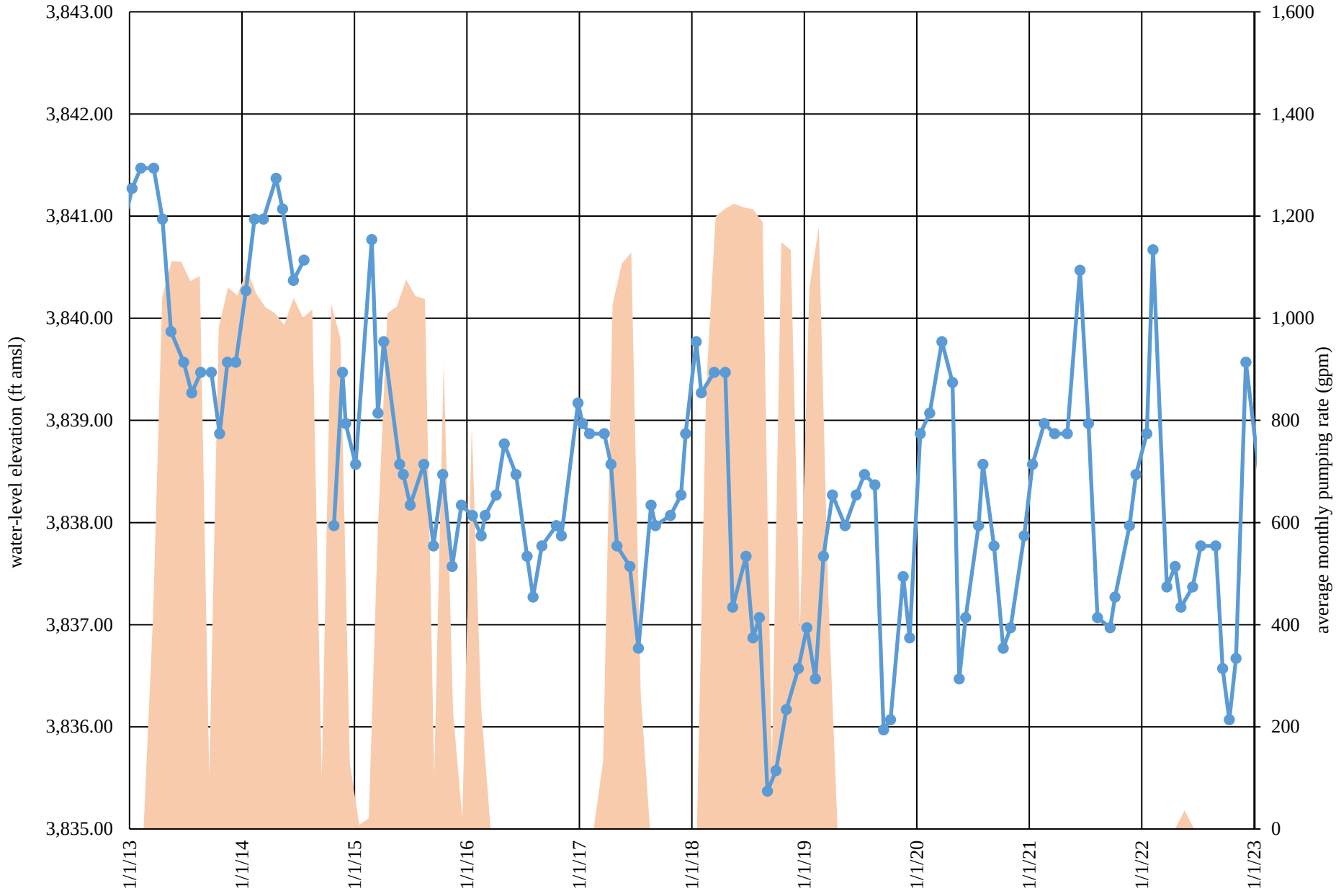


Figure F2. Hydrograph for CLC 19.

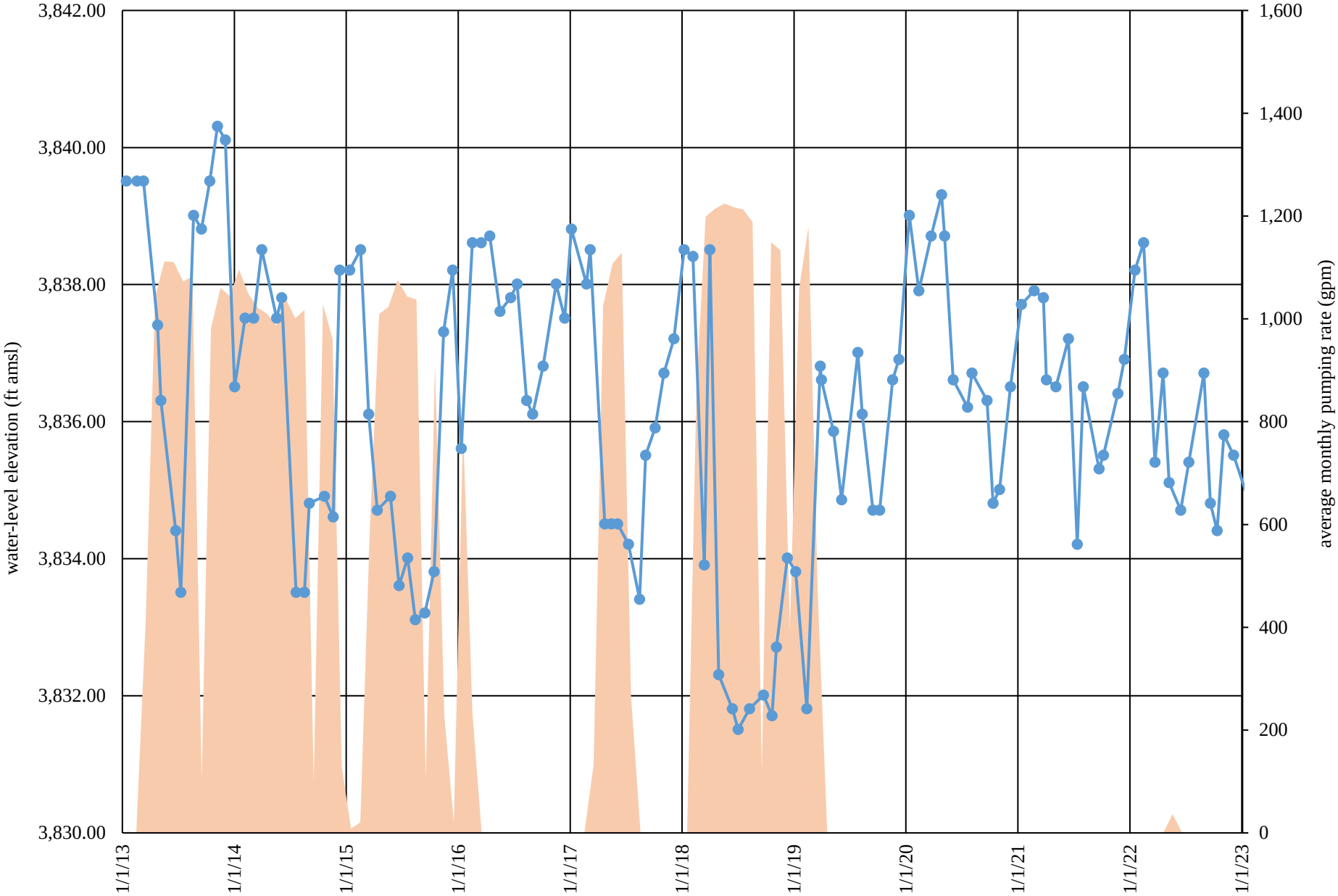


Figure F3. Hydrograph for CLC 20.

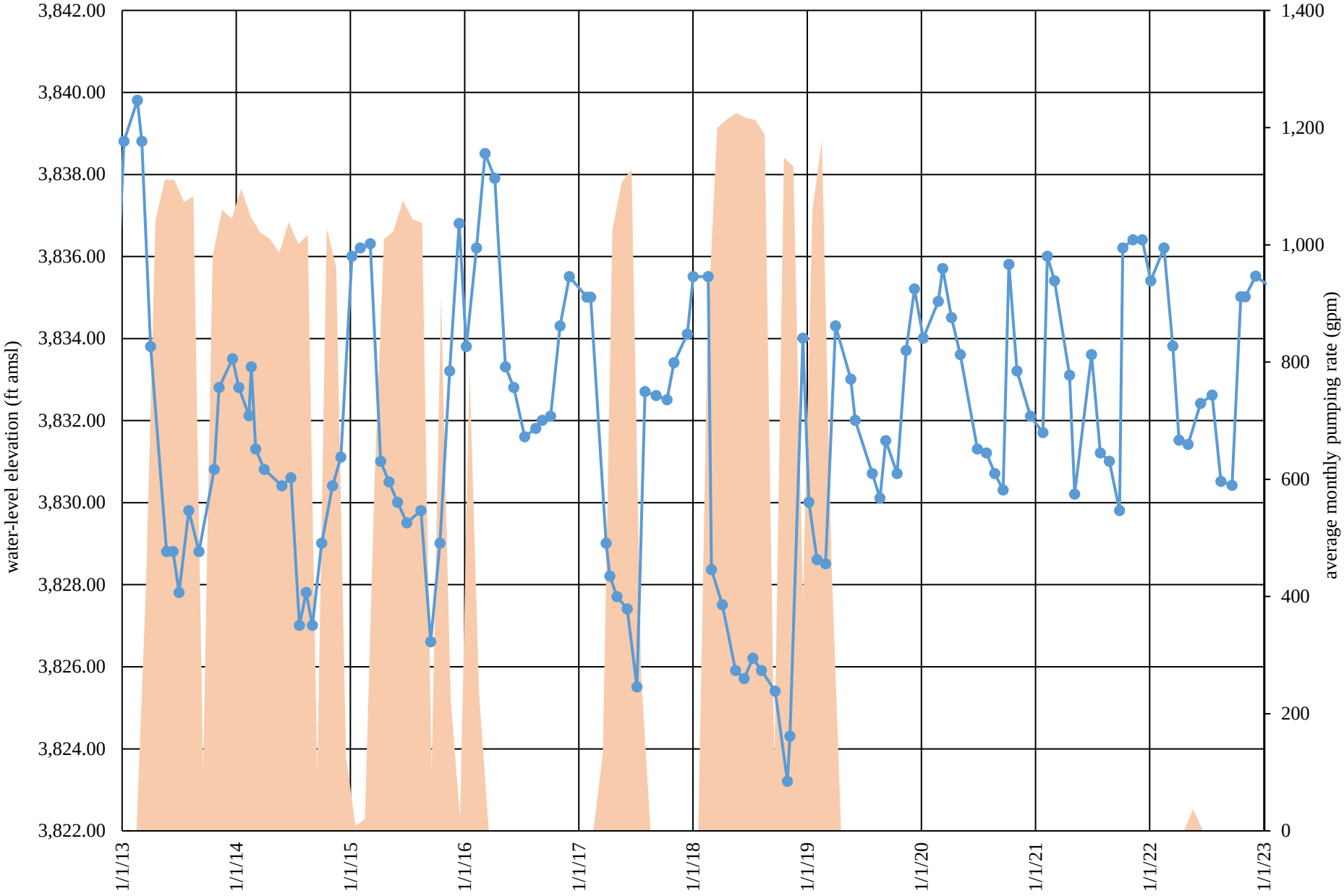


Figure F4. Hydrograph for CLC 24.

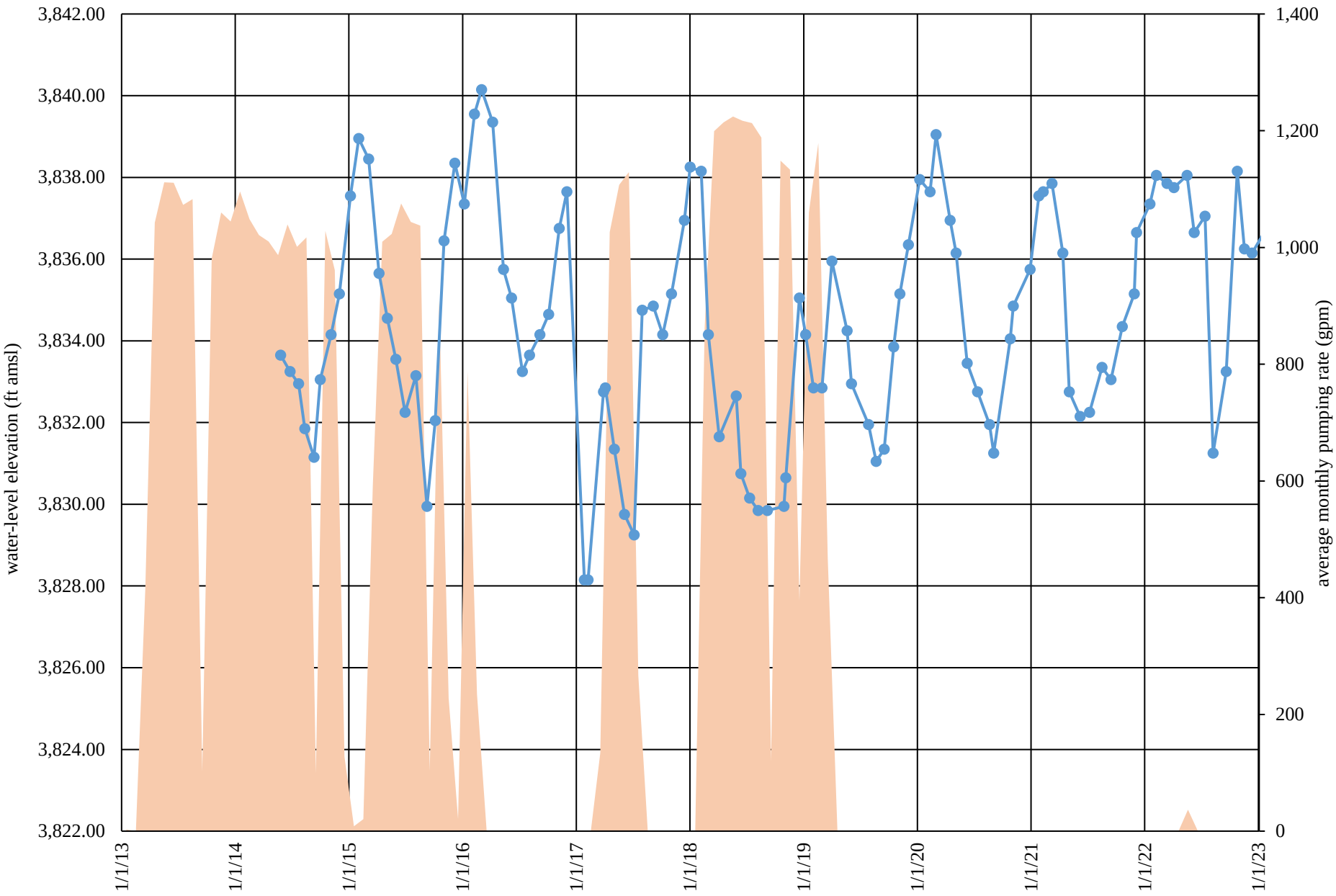


Figure F5. Hydrograph for CLC 26.

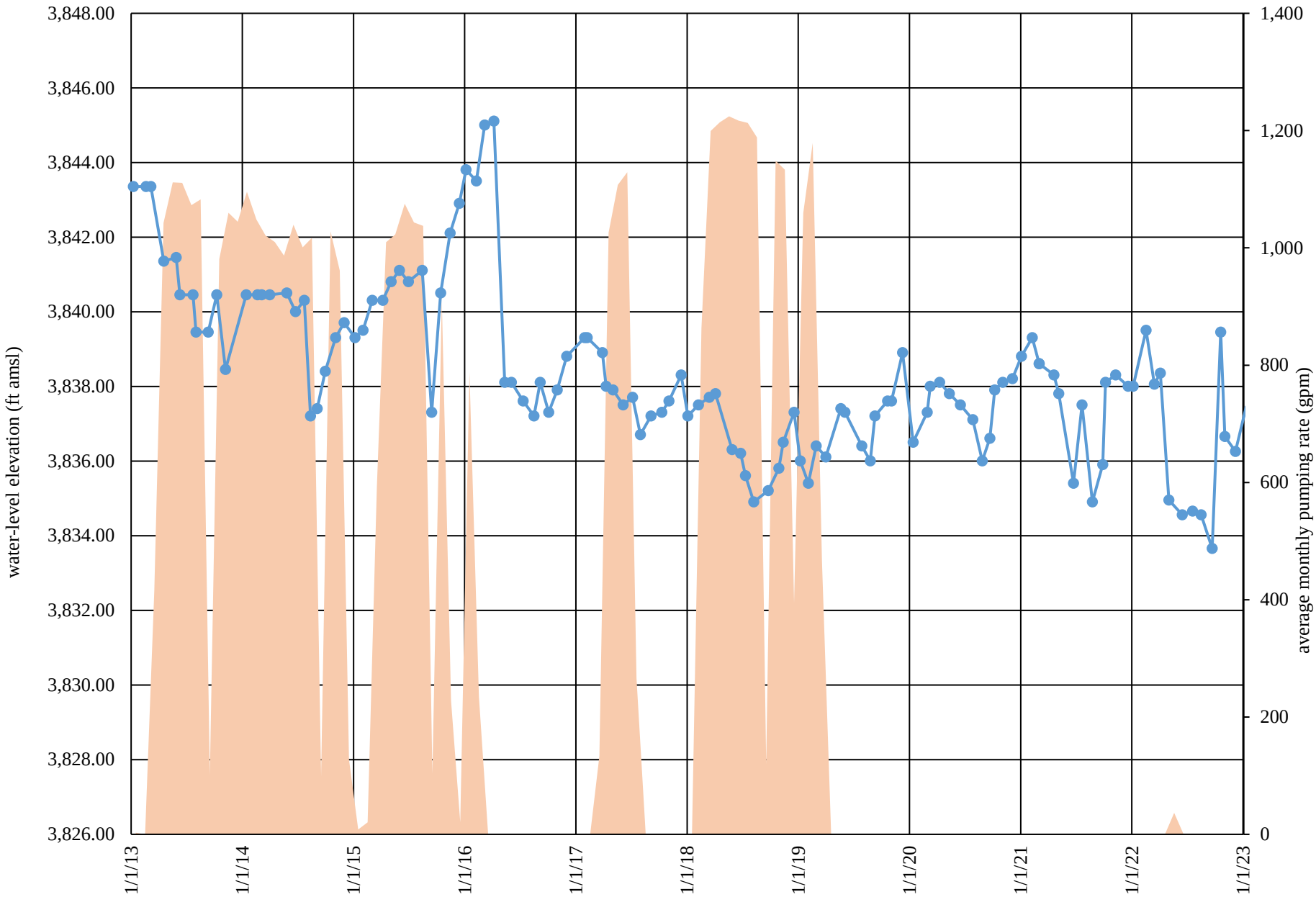


Figure F6. Hydrograph for CLC 38.

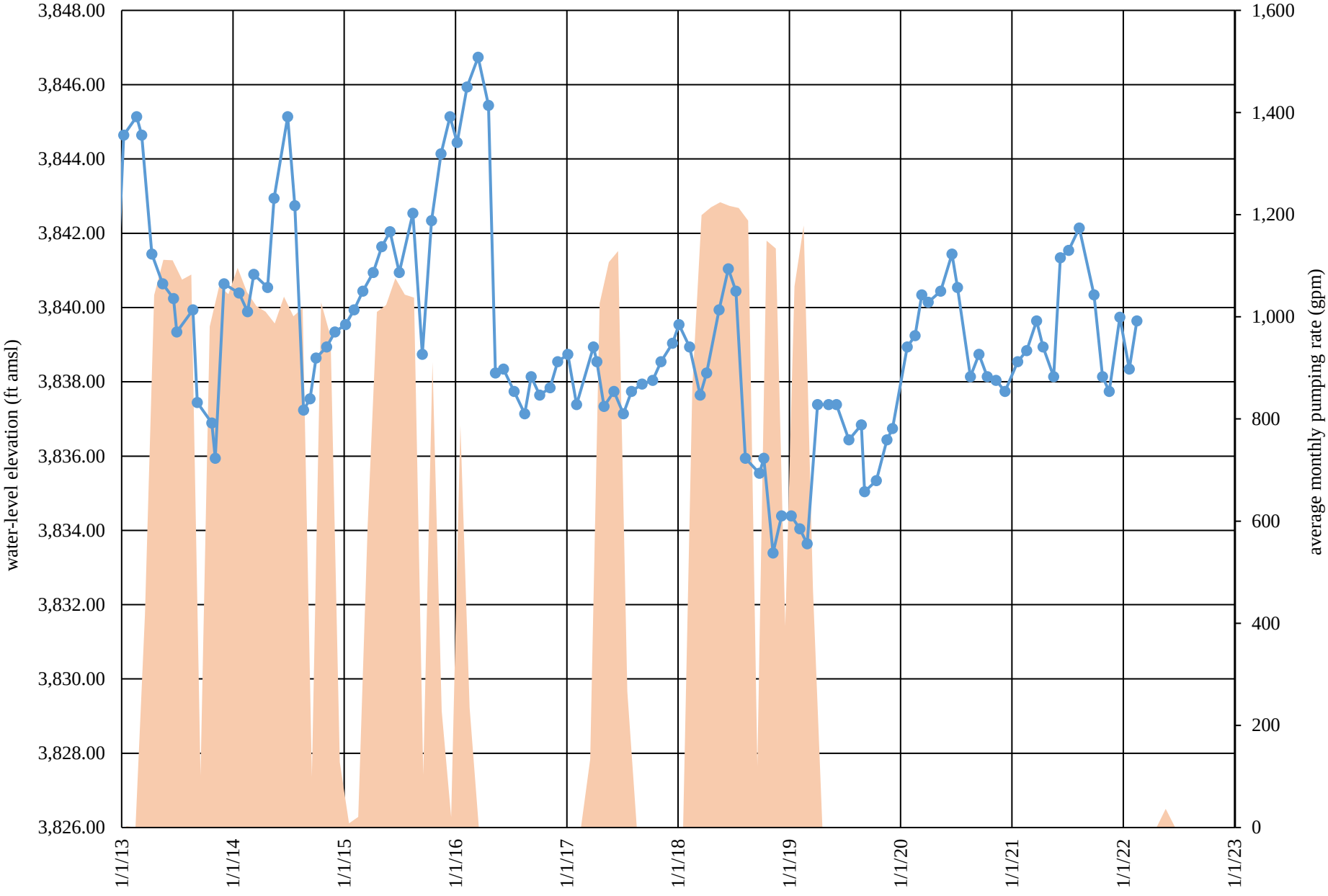


Figure F7. Hydrograph for CLC 57.



Figure F8. Aerial photograph showing September 2018 estimated drawdown in Deep Zone due to pumping greater than 1,000 gpm for seven previous months, Griggs and Walnut Site, City of Las Cruces, New Mexico.

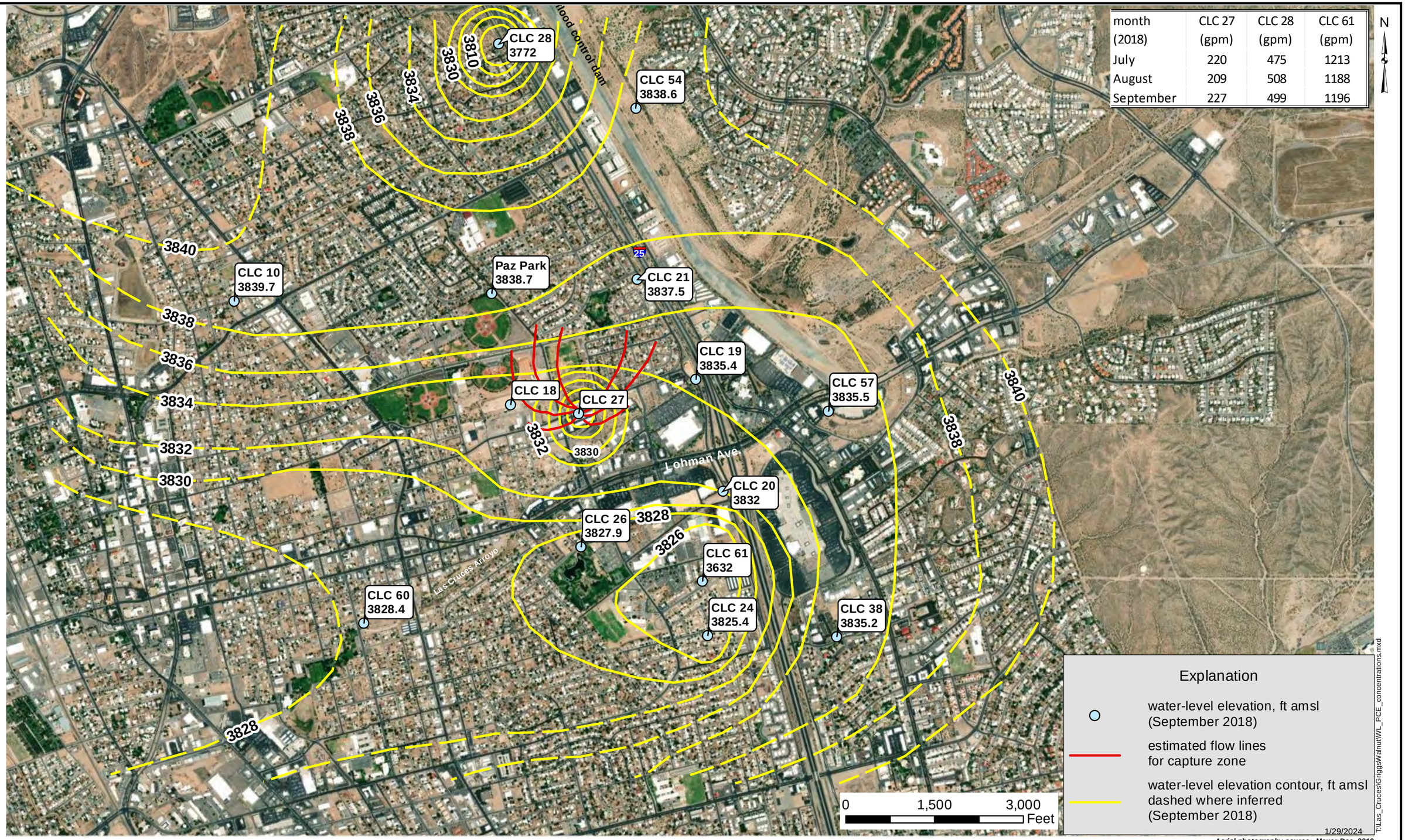


Figure F9. Aerial photograph showing September 2018 Deep Zone potentiometric surface contours, Griggs and Walnut Site, Las Cruces, New Mexico.

month (2020)	CLC 27 (gpm)	CLC 28 (gpm)	CLC 61 (gpm)
July	236	189	0
August	235	279	0
September	238	564	0

N

CLC 28 3759
CLC 54 3841.3
CLC 10 3837.8
Paz Park 3834.4
CLC 21 3838
CLC 19 3838
CLC 57 3838.7
CLC 18
CLC 27 3790
CLC 20 3836.3
CLC 26 3831.3
CLC 61 3832.6
CLC 60 3824.6
CLC 24 3830.3
CLC 38 3836.6

3838
3836
3834
3800
3840
3838
3832
3830
3820
3830
3828
3826
3826
3828
3234
3236

flood control dam
Lohman Ave.
Las Cruces Arroyo
25

0 1,500 3,000 Feet

Explanation

- water-level elevation, ft amsl (September 2020)
- estimated flow lines for capture zone
- water-level elevation contour, ft amsl dashed where inferred (September 2020)

1/15/2024

T:\Las_Cruces\GriggsWalnut\WL_PCE_concentrations.mxd

Aerial photography source: Maxar Dec. 2019

Figure F10. Aerial photograph showing September 2020 Deep Zone potentiometric surface contours, Griggs and Walnut Site, Las Cruces, New Mexico.

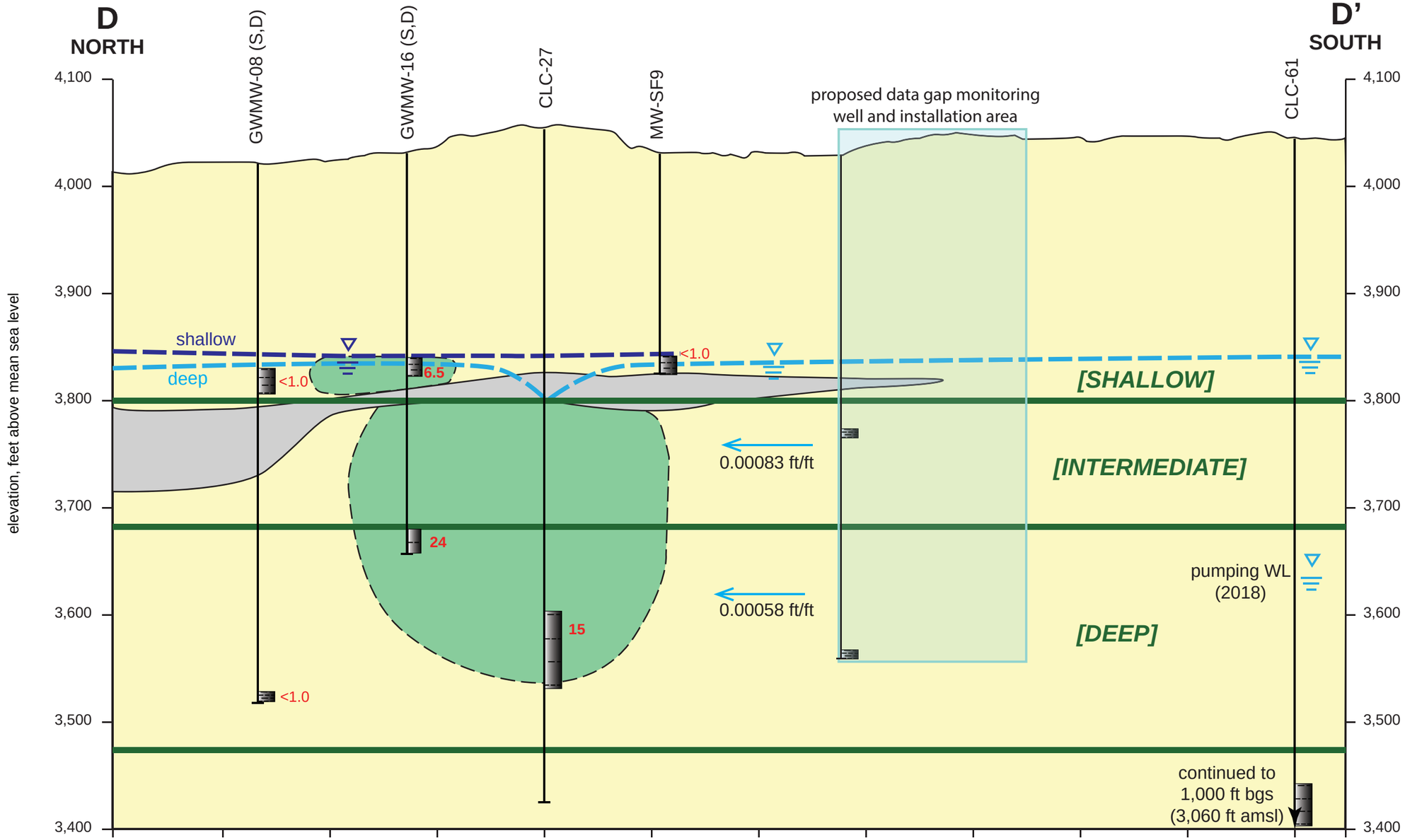


Figure F11. Hydrogeologic cross-section D-D' with November 2022 PCE concentrations, Griggs and Walnut Site, Las Cruces, New Mexico.

:\Las Cruces, City of\GRIGGS & WALNUT\2023 GWP reports\GW Monitoring Eval rpt\Appendices\Appendix F

Appendix B

Groundwater Remediation Optimization Report

DBS&A
a Geo-Logic Company

JUNE 2023
REVISED MARCH 2024

CALENDAR YEAR 2022

OPTIMIZATION ASSESSMENT REPORT

GRIGGS AND WALNUT GROUNDWATER PLUME SUPERFUND SITE

LAS CRUCES, NEW MEXICO

prepared for

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

REVISED

CALENDAR YEAR 2022
OPTIMIZATION ASSESSMENT REPORT
GRIGGS AND WALNUT
GROUNDWATER PLUME SUPERFUND SITE
LAS CRUCES, NEW MEXICO

prepared by

Steven T. Finch, Jr., CPG, PG

Jake Baggerman

JOHN SHOMAKER & ASSOCIATES, INC.
Water-Resource and Environmental Consultants
2611 Broadbent Parkway NE
Albuquerque, New Mexico 87107

505-345-3407
www.shomaker.com

prepared for

Daniel B. Stephens & Associates, Inc.
Albuquerque, New Mexico

City of Las Cruces
New Mexico

and

Doña Ana County
New Mexico

June 28, 2023
Revised March 6, 2024

CALENDAR YEAR 2022 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 sampling events from monitoring network has also confirmed that the plume is decreasing in mass and remedial progress is being made. The capture efficiency for extraction well CLC 18 was optimized to capture the Shallow 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 is maintained at rates greater than 200 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). The target capture zone for CLC 18 is the Shallow Zone PCE plume in the vicinity of CLC 18. As of August 2021, extraction well CLC 18 had entirely removed the Shallow Zone PCE plume around CLC 18. In 2022, it was recommended to discontinue pumping from CLC 18 if PCE concentrations remained below 5 µg/L with no increased trend in concentrations. The 2022 CLC 18 data resulted in continued decrease in PCE concentrations below 5 µg/L. It is recommended to discontinue pumping extraction Well CLC 18.

The majority of the PCE plume mass is in an area where the Shallow, Intermediate, and Deep Zones are hydraulically connected and the PCE plume is captured by extraction well CLC 27. The highest 2022 PCE concentration detected in the monitoring network was 33 µg/L at GWMW-10I. During 2022, CLC 27 PCE concentrations averaged 14.6 µg/L, which appears to be representative of the average for the primary plume mass, thereby indicating optimized extraction of plume mass. 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.

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 2022 operational data, John Shomaker & Associates, Inc. (JSAI) recommends maintaining an average pumping rate between 230 and 240 gpm from CLC 27, and to suspend pumping from CLC 18.

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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 November 2022 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 November 2022 PCE concentrations, Griggs and Walnut Site, Las Cruces, New Mexico.

Figure 6. Graph showing non-pumping and pumping water levels for extraction well CLC 18, Griggs and Walnut Site, Las Cruces, New Mexico

Figure 7. Graph showing non-pumping and pumping water levels for extraction well CLC 27, Griggs and Walnut Site, Las Cruces, New Mexico.

Figure 8. Graph of extraction well CLC 18 monthly pumping from 2017 through 2022 and PCE mass removal rate, Griggs and Walnut Site, Las Cruces, New Mexico.

Figure 9. Graph of extraction well CLC 27 monthly pumping from 2017 through 2022 and PCE mass removal rate, Griggs and Walnut Site, Las Cruces, New Mexico.

Figure 10. Bar graph of model-simulated annual pumping from 2012 to current, Griggs and Walnut Site, Las Cruces, New Mexico.

Figure 11. Map showing November 2022 Shallow, Intermediate, and Deep PCE plumes and Model Layer 3 hydraulic conductivity zones, Griggs and Walnut Site, Las Cruces, New Mexico.

Figure 12. Map showing November 2022 PCE plume and Model Layer 1 (Shallow Zone) 2032 simulated heads and 10-year particle tracking (2022 to 2032), Griggs and Walnut Site, Las Cruces, New Mexico.

Figure 13. Map showing November 2022 PCE plume and Model Layer 2 (Intermediate Zone) 2032 simulated heads and 10-year particle tracking (2022 to 2032), Griggs and Walnut Site, Las Cruces, New Mexico.

Figure 14. Map showing November 2022 PCE plume and Model Layer 3 (Deep Zone) 2032 simulated heads and 10-year particle tracking (2022 to 2032), Griggs and Walnut Site, Las Cruces, New Mexico.

Figure 15. Illustrated cross-section showing model-simulated particle tracking for Layers 1, 2, and 3, Griggs and Walnut Site, Las Cruces, New Mexico

ABBREVIATIONS

ac-ft/yr	acre-feet per year
amsl	above mean sea level
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 of drawdown
JSAI	John Shomaker & Associates, Inc.
JSP	Joint Superfund Project
LCU	Las Cruces Utilities
LHZ	Lower Hydrogeologic Zone (Intermediate and Deep Zones)
kg	kilograms
MCL	maximum contaminant level
ME	mean error
PCE	tetrachloroethene
Q/s	specific capacity
RI/FS	EPA Remedial Investigation and Feasibility Study
RAO	Remedial Action Objective(s)
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 2022 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 2022 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 United States Environmental Protection Agency (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 10 years. As defined in 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 ft above mean sea level (amsl), formerly referred to as the Upper Hydrogeologic Zone (UHZ)
- Intermediate wells: screened-interval elevation range 3,685 to 3,800 ft amsl, formerly 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, formerly 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 when PCE concentrations started to increase above the Maximum Contaminant Level (MCL) of 5 µg/L for drinking water (Fig. 3). Between the timing of the EPA Remedial Investigation and Feasibility Study (RI/FS) and remedial design (2003 and 2012), CLC 18 and CLC 27 were used for plume containment until the remediation system was in place. Groundwater pumped for containment was discharged to the sewer system. 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). The target capture zone for CLC 18 is the Shallow Zone PCE plume (Fig. 4), and the target capture zone for CLC 27 is the Intermediate and Deep Zone PCE plume where the intervening clay layer is present, and 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 via the gravel packed annular space (Fig. 4). 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 previously allowed the optimization of the CLC 18 pumping schedule to maximize capture from the Shallow Zone; however, because PCE concentrations over time have declined below the MCL, the specific conductance/PCE correlation is no longer present. It was determined through testing that the Deep Zone at CLC 18 did not contain PCE concentrations greater than 5 µg/L at that time.

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). CLC 18 pumping has been reduced over the past several years as an attempt to limit pumping of clean background water and to increase capture of any remaining PCE mass.

Monitoring results from Shallow Zone wells (NGMW-01, -02, -03, MW-SF2, and MW-SF5) upgradient of CLC 18 have been non-detect, and provide evidence that PCE from the Shallow zone will not rebound after CLC 18 pumping is discontinued for plume containment and capture. Detailed analysis of PCE data and CLC 18 pumping cycles demonstrate that the PCE plume is non-existent in the Intermediate and Deep Zones at CLC 18.

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 28 gpm as before.

CLC 18 had been operated at an average rate of about 28 gpm or 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, and reduced again for 2022.

Year 2022 sampling results from GWMW-01(I) indicates the PCE plume in the Intermediate Zone is near CLC 18 (see Fig. 4). Winter 2022 samples indicate GWMW-01(I) PCE concentrations are decreasing since the April 2021 monitoring event. The intent is for the Intermediate Zone PCE plume at GWMW-01(I) to be primarily contained and captured by CLC 27. Sampling results indicate that pumping from CLC 18 is not interfering with the capture of the Intermediate Zone PCE plume because GWMW-01(I) concentrations are decreasing. With the shallow zone PCE plume below 5 mg/L in the area of CLC 18, it will be important to maintain 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 or absent 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 3.3 µg/L in November 2022 (Fig. 2; Table 1). The 2022 CLC 18 dataset indicates the PCE concentrations have decreased to less than 5 µg/L but the shallow zone-specific conductance value has 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 water levels is presented as Figure 6. Gaps in transducer data were due to rejected readings from the QAQC analysis of Las Cruces Utilities (LCU) provided data. The hand measurements plotted on Figure 6 represent pumping water levels.

CLC 18 is located in a low spot of the clay layer (JSAI, 2019), and has captured the Shallow Zone PCE plume in the vicinity of the well and at this point PCE concentrations are below the EPA Drinking Water Standard of 5 µg/L (Table 1). The 2021 and 2022 data indicate the PCE plume cleanup for the Shallow zone in the vicinity of CLC 18 is complete. The 2022 monitoring network data show the remaining Shallow Zone PCE plume is moving east of CLC 18 to GWMW-16 and MW-SF10 and into the CLC 27 cone of depression.

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
2022	4.0	3.8 to 4.4	14.6	13.0 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 2022 monitoring network was 33 µg/L at GWMW-10(I) which is well within the CLC 27 capture zone.

CLC 27 is adequately capturing the PCE plume in the Intermediate and Deep Zones, as indicated by the cone of depression (JSAI, 2023). The 2022 PCE concentrations at CLC 27 represent the average concentration of the plume mass (approximately 17 µg/L) which is also an indication of efficient PCE plume capture.

2.2.1 Operational Constraints

From 2013 to 2017, the pumping rate from CLC 27 averaged 153 gpm (246 ac-ft/yr; Fig. 3). 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 is capable of pumping up to 400 gpm (Table 2). CLC 27 pumping in 2022 averaged 217 gpm (350 ac-ft/yr) until September when the pump performance started to decrease (Table 3) and pumping water levels rose (Fig. 7). Due to declining pump performance and subsequent pump service during Fall and winter of 2022, the annual average pumping rate decreased from about 229 gpm in 2021 to about 196 gpm in 2022.

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, LCU installed a transducer to track pumping and non-pumping water levels to assist with performance analysis.

A hydrograph of CLC 27 water levels is presented as Figure 7. Year 2022 pumping water level was 280 ft bgl while pumping 220 gpm, which resulted in an average specific capacity of about 4.2 gpm/ft of drawdown at 220 gpm.

The long-term 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 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 presented in Section 5.0.

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

[1] 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). Since 2007, more than 70 kg of PCE have been removed from the plume, and about 40 kg of PCE remains in the current plume configuration as calculated by estimating the plume volume from spatial extents and zone thickness. PCE mass removal rates by extraction well are discussed in the following sections.

3.1 CLC 18 PCE Mass Removal Rate

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. As the Shallow Zone PCE plume is removed and only water with lower PCE concentrations remains, the correlation between specific conductance and PCE has become less reliable (JSAI, 2023). 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) previously had the benefit of better quantifying short-term PCE concentration variability due to the more frequent specific-conductance data measurement. Mass removal calculations using Method 1 are presented in DBS&A (2023) and are also used in this report.

During 2022, CLC 18 had a PCE mass removal rate fluctuating around 0.004 kg/month until April, and then stabilized at 0.004 kg/month until it decreased to 0.003 kg/month in December (Fig. 8; Table 3). After March 2022, the PCE concentrations stayed below 5 µg/L regardless of the optimized pumping cycles. The negligible CLC 18 PCE mass removal rates during 2022 were primarily a result of the decreasing Shallow PCE plume concentrations below the MCL. About 0.047 kg of PCE was removed during 2022 from CLC 18 pumping (Table 4). Decommissioning CLC 18 will not significantly change the mass removal rate.

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

PCE – tetrachloroethene
kg – kilograms
gpm – gallons per minute

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

month	extraction well CLC 18		extraction well CLC 27	
	PCE removed (kg)	average pumping rate (gpm)	PCE removed (kg)	average pumping rate (gpm)
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
Jul-21 [1]	0.020	27.3	0.487	221.8
Aug-21 [1]	0.012	16.6	0.525	221.8
Sep-21 [1]	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
Jan-22	0.004	5.66	0.580	214.6
Feb-22	0.004	6.27	0.484	211.5
Mar-22	0.005	7.02	0.503	212.5
Apr-22	0.003	5.07	0.394	185.4
May-22	0.004	6.21	0.602	222.8
Jun-22	0.004	6.11	0.503	219.7
Jul-22	0.004	5.48	0.557	219.8
Aug-22	0.004	5.93	0.479	202.6
Sep-22	0.004	6.39	0.483	196.8
Oct-22	0.004	5.74	0.404	170.7
Nov-22	0.004	6.20	0.395	160.9
Dec-22	0.003	6.25	0.322	136.0

[1] Due to SCADA error, CLC 27 monthly average pumping rates for July, August, and September 2021 were based on the average for the time-period. All pumping data provided by LCU.

PCE – tetrachloroethene
kg – kilograms
gpm – gallons per minute

Table 4. Summary of annual PCE mass removal from extraction wells CLC 18 and CLC 27 for years 2017 through 2022

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
2022 total	0.047	5.705

[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 2022, CLC 27 was pumped nearly continuously, however, pumping rates decreased from September to November due to pump performance issues. 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 2022, CLC 27 had an average PCE mass removal rate of 0.48 kg/month (Fig. 9; Table 3). The relatively consistent PCE concentrations allows for the mass removal rate to be proportional to pumping rate. 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). Decreased pump performance in 2022 has similarly resulted in lower mass recovery rates. A total of 5.705 kg PCE was removed during 2022 CLC 27 pumping (Table 4). In comparison, the PCE mass removal was greater than 6.0 kg for 2019 and 2020 when average annual pumping rates were slightly higher than in 2022.

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.

4.0 TMR NUMERICAL MODEL

Details regarding the telescope mesh refinement (TMR) model, model update, and calibration are available in the companion JSAI (2023) 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 10 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)). Water levels and particle tracking were simulated for the historical and the future period. Future pumping simulation considers 0 gpm from CLC 18 and 240 gpm from CLC 27.

The capture zone refers to the three-dimensional region that contributes to the groundwater extracted by a well (EPA, 2008). Model-simulated results are presented in Figures 11 through 15, and used for plume containment and capture zone analysis.

4.1 Plume Containment Analysis

The capture zone is equivalent to the zone of hydraulic containment, and the target capture zone is the PCE plume defined by the 5 µg/L concentration contours in the Shallow, Intermediate, and Deep zones (Figs 12 through 14). CLC 27 pumping creates the primary zone of hydraulic containment. 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. 12 through 14). The Shallow plume travels horizontally until it reaches the edge of the clay layer and then travels downward, as illustrated by the change in elevation of the model-simulated particles, into the Deep zone where they are contained. Figure 15 is an illustrated cross section of model simulated particles showing the downward movement from Shallow to Deep zone by CLC 27 pumping.

Model simulations indicate that the eastern extent of the Intermediate and Deep plume is also well contained for the primary plume area west and south of GWMW-09. For the plume area east of GWMW-09, 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 regional pumping. It should be noted that the eastern extent of the Deep

Zone plume at GWMW-15 is located across a channel of relatively high hydraulic conductivity (see Fig. 11). If the channel extends farther east than currently simulated, the eastern extents of the lower plume may be more effectively captured by CLC 27 pumping.

Modeling simulations indicated that high rates of pumping (>1,500 ac-ft/yr) from CLC 61 in 2018 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. CLC 61 pumped 5.3 ac-ft from May 2022 to July 2022 for emergency use and fire flow testing but did not introduce any new potential capture at the well due to the relatively small amount pumped. Model results and historical water-level trends indicate pumping CLC 61 less than 400 ac-ft/yr does not interfere with eastern PCE plume containment.

4.2 Plume Capture Analysis

Model simulated water levels and particle tracking results are used to analysis plume capture for the Shallow, Intermediate, and Deep zones. As illustrated by the model simulated water level elevation contours, the modeled capture zone for CLC 27 pumping was approximately 2,200 ft to the northeast and 1,200 ft to the southwest from the well in 2022. By 2029, the capture zone increases east to west. For 2022, CLC 18 has no significant influence on the modeled capture zone, primarily due to the reduction in pumping.

The Shallow PCE plume in 2022 measured approximately 700 ft from north to south, 2,000 ft from east to west, and less than 45 ft thick (JSAI, 2023), which flows into the capture zone created by extraction well CLC 27. Shallow Zone model simulated particles travel horizontally southeast on top of the clay layer, and then, where the clay layer is absent, the particles migrate vertically into the CLC 27 capture zone (Figs. 12 and 15).

The Intermediate plume measures approximately 1,500 ft from north to south, 2,800 ft from east to west, and less than 115 ft thick, with the eastern extent within CLC 27's immediate capture zone. Intermediate Zone model simulated particles tend to travel vertically into CLC 27 Deep capture zone with some horizontal movement toward CLC 27 (Fig. 13). As illustrated by data analysis on Figure 5, Intermediate Zone plume migration is likely more horizontal toward CLC 27 than vertical, because the Intermediate Zone plume is based on PCE results from wells completed below the clay layer in permeable sand rather than in the model simulated clay layer.

The Deep Zone plume (Fig. 14) is approximately 800 ft north to south, over 4,500 ft in length from west to east, and less than 150 ft thick. PCE measurements collected in November 2022 indicate that concentrations in GWMW-09(D2) indicates two separate areas of PCE concentrations greater than 10 µg/L in the Deep Zone, one centered around GWMW-16 (primary plume), and the other centered around GWMW-15 (Fig. 14). Model simulated Deep zone particles travel horizontally at a higher velocity toward CLC 27 (Figs. 14 and 15).

The primary PCE plume around CLC-27, GWMW-16(D), and GWMW-10 is easily captured by CLC 27; travel times are less than 5 years from the plume edge to CLC-27. Particle tracking shows that the GWMW-15(I) portion of the plume is contained and still progressing towards CLC 27 in 2029, but not yet captured due to the slow groundwater velocities in that area. Continued monitoring and further development of time-series PCE trends from GWMW-15(I,D) are needed to determine if the plume is still moving vertically or if it is beginning to increase in horizontal movement towards CLC 27.

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, and monitoring data suggest the Shallow Zone PCE plume has been removed from the CLC 18 capture area. Shallow Zone PCE concentrations in the CLC 18 capture area have achieved the cleanup goal of less than 5 µg/L, therefore it is recommended to discontinue pumping from CLC 18. For the last 1.5 years, CLC 18 PCE concentrations have remained below 5 µg/L and no upward trend in concentration has been observed. The Shallow Zone has low PCE concentrations (< 12 µg/L) and minimal PCE mass. The remainder of the Shallow Zone plume is projected to be contained and captured by CLC 27.

The PCE removal rate for CLC 27 increased in 2019 and 2020 (Table 4) when pumping rates were greater than 225 gpm and PCE concentrations were about 15 µg/L (see Table 1). CLC 27 pumping rate declined in 2022 due to pump failure, thereby resulting an average pumping rate of 196 gpm and a lower PCE mass removal rate.

It is possible that pumping CLC 27 at the recommended rate of 230 to 240 gpm could increase the capture of clean groundwater because the plume is reducing in size. Therefore, to optimize CLC 27 mass removal, JSAI recommends incrementally increasing the CLC 27 pumping rate to determine if the mass removal rate can be increased with increased pumping. Increases would best be made as monthly time steps to coincide with monthly sampling for PCE. CLC 27 average monthly pumping rate could start at 200 gpm, and then increase pumping rate by 10 gpm each month until the capacity of the replaced pump is achieved.

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 µg/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 µg/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 40 kg and the current removal rate is about 6.0 kg/yr. The time to achieve restoration of the GWP site plume to below 5 µg/L is difficult to estimate given the uncertainty in 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 met in approximately 7 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 much of the GWP plume area will be flushed and one pore volume removed within the next 5 to 10 years (Figs. 12 and 14). Transport properties of PCE such as dispersion, sorption, and degradation may influence the number of pore volumes required to achieve clean-up and are not explicitly accounted for through the particle tracking analysis. However, according to the Feasibility Study Report (EPA, 2006) sorptive and biodegradation attenuation processes are likely to be small at the GWP site and therefore particle tracking results are a useful tool for providing insight into potential clean-up times. The mass removal analysis indicates similar estimates of cleanup time, giving additional support to the particle tracking estimates.

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. Site data show that the Intermediate and Deep Zones are fairly uniform in composition and hydraulic properties.

Further development of the PCE trend from GWMW-15(I,D) is 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 provided 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 µg/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 11 years to achieve the remedial goals.

CLC 18 has removed the part of the 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 less than 5 µg/L, which indicates the Shallow Zone in the vicinity of CLC 18 has achieved the PCE cleanup concentration of less than 5 µg/L.

The majority of the PCE plume mass is in an area where the Shallow, Intermediate, and Deep Zones are hydraulically connected and the PCE plume is captured by extraction well CLC 27. Model results indicate the majority of the plume mass between GWMW-16, MW-SF10 and GWMW-10 will likely be removed to achieve remedial goals. However, as indicated by the PCE results from GWMW-9, the PCE plume in the vicinity of GWMW-15 appears to be a separate PCE plume or the eastern side of a bifurcated plume. Cleanup time for the PCE plume in the vicinity of GWMW-15 is difficult to determine.

The updated Site Conceptual Model (JSAI, 2019) coupled with a significant decrease in local pumping has resulted in optimization of the system so remedial goals can be achieved. With sustained PCE concentrations and 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 (Figs. 2 and 4).

The majority of the PCE plume mass is in an area where the Shallow, Intermediate, and Deep Zones are hydraulically connected and the PCE plume is captured by extraction well CLC 27. The highest 2022 PCE concentration detected in the monitoring network was 33 µg/L at GWMW-10I. During 2022, CLC 27 PCE concentrations averaged 14.6 µg/L, which appears to be representative of the average for the primary plume mass, thereby indicating optimized extraction of plume mass.

Pumping extraction well CLC 27 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; however, this estimate is subject to uncertainty for the reasons stated above.

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, if needed. There is no other significant 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.

Based on the observed field data (hydraulic heads and PCE concentrations) and the updated groundwater modeling predictions, the extraction system is capturing the primary PCE plume mass to reach the remediation goals within the 14-year time period.

The ability to capture the PCE plume at GWMW-15(I) is difficult to determine from the monitoring data and the model analysis. Further development of time-series PCE trends from GWMW-15(I,D) would help understand if the plume is still moving vertically at the same rate or if it is beginning to increase in horizontal movement towards extraction well CLC 27. With increased pumping, CLC 27 continues to capture groundwater with PCE concentrations that resemble the plume mass. Extraction well CLC 27 is well suited for plume containment, capture, and cleanup with the remaining time period. However, the pumping from extraction well CLC 27 will need to be optimized every year to maintain or increase PCE mass removal.

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 2023 upon EPA approval.

1. Discontinue pumping from extraction well CLC 18.

2. Optimize CLC 27 mass removal rate by performing iterative steps of increased pumping. Increases would best be made as monthly time steps to coincide with monthly sampling for PCE. It is recommended to start CLC 27 average monthly pumping rate at 200 gpm, and then increase pumping rate by 10 gpm each month until the capacity of the replaced pump is achieved.

3. Maintain an average pumping rate between 230 to 240 gpm for extraction well CLC 27 after the recommended optimization testing. The replacement pump should be able to sustain an average rate of 230 to 240 gpm.

4. Model results indicate pumping CLC 61 less than 400 ac-ft/yr does not interfere with eastern PCE plume containment. It is recommended to allow for Las Cruces Utilities to pump CLC 61 for peak demand, so long as the total pumping does not exceed 300 ac-ft/yr.

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ILLUSTRATIONS

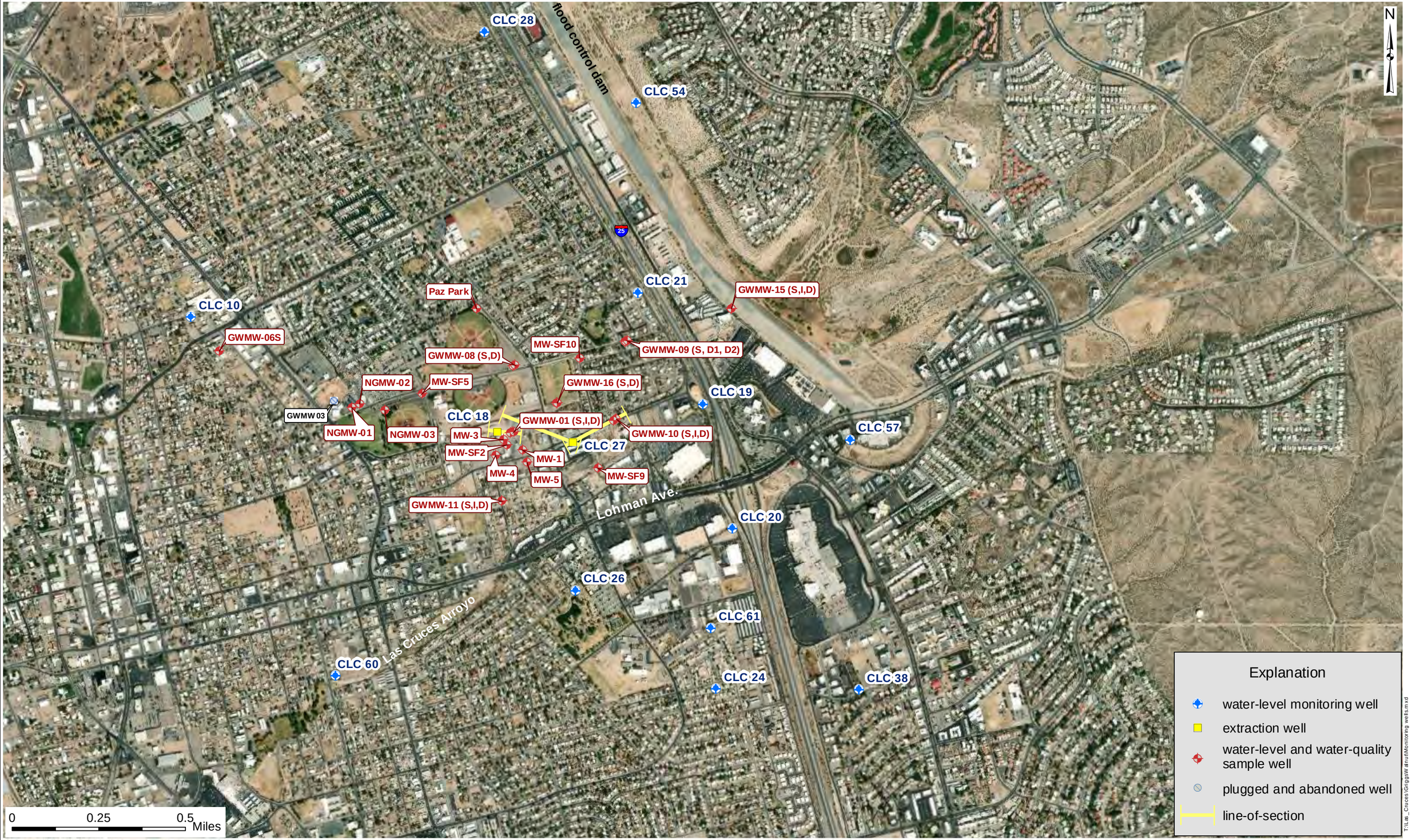


Figure 1. Aerial photograph of the Griggs and Walnut Site showing monitoring network, City of Las Cruces, New Mexico.

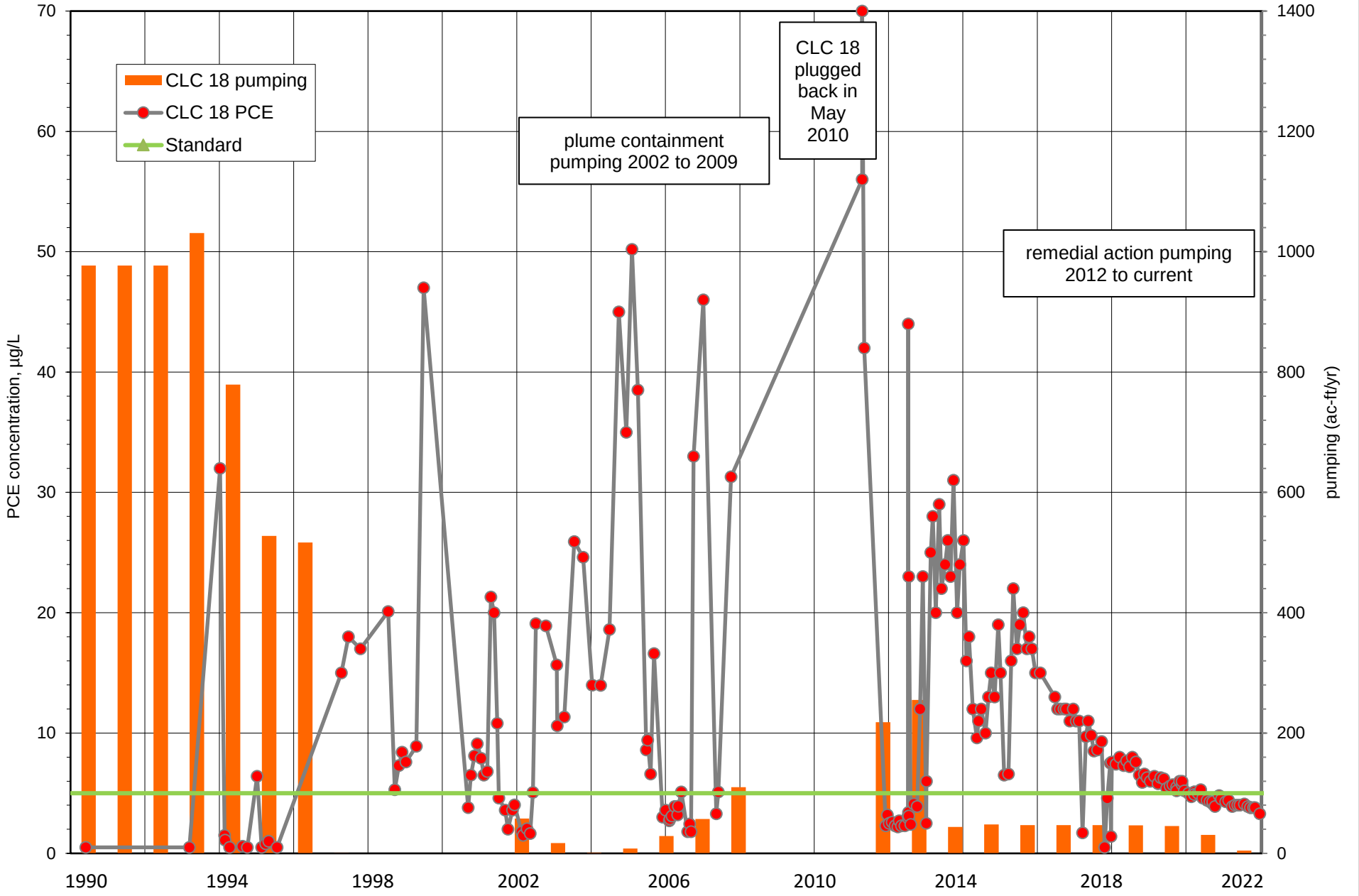


Figure 2. Graph showing PCE concentrations and pumping versus time for CLC 18, Griggs and Walnut Site, Las Cruces, New Mexico.

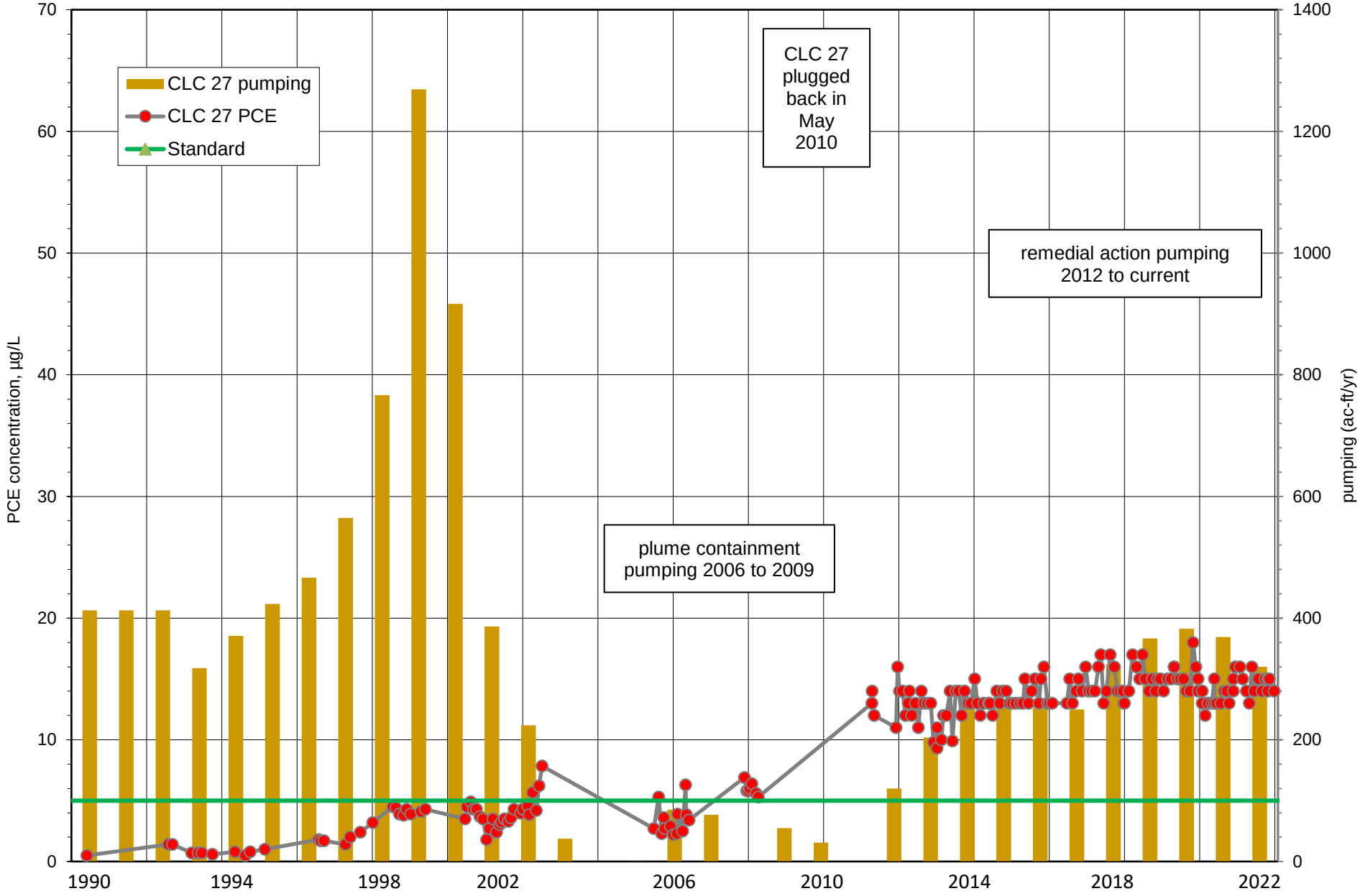


Figure 3. Graph showing PCE concentrations and pumping versus time for CLC 27, Griggs and Walnut Site, Las Cruces, New Mexico.

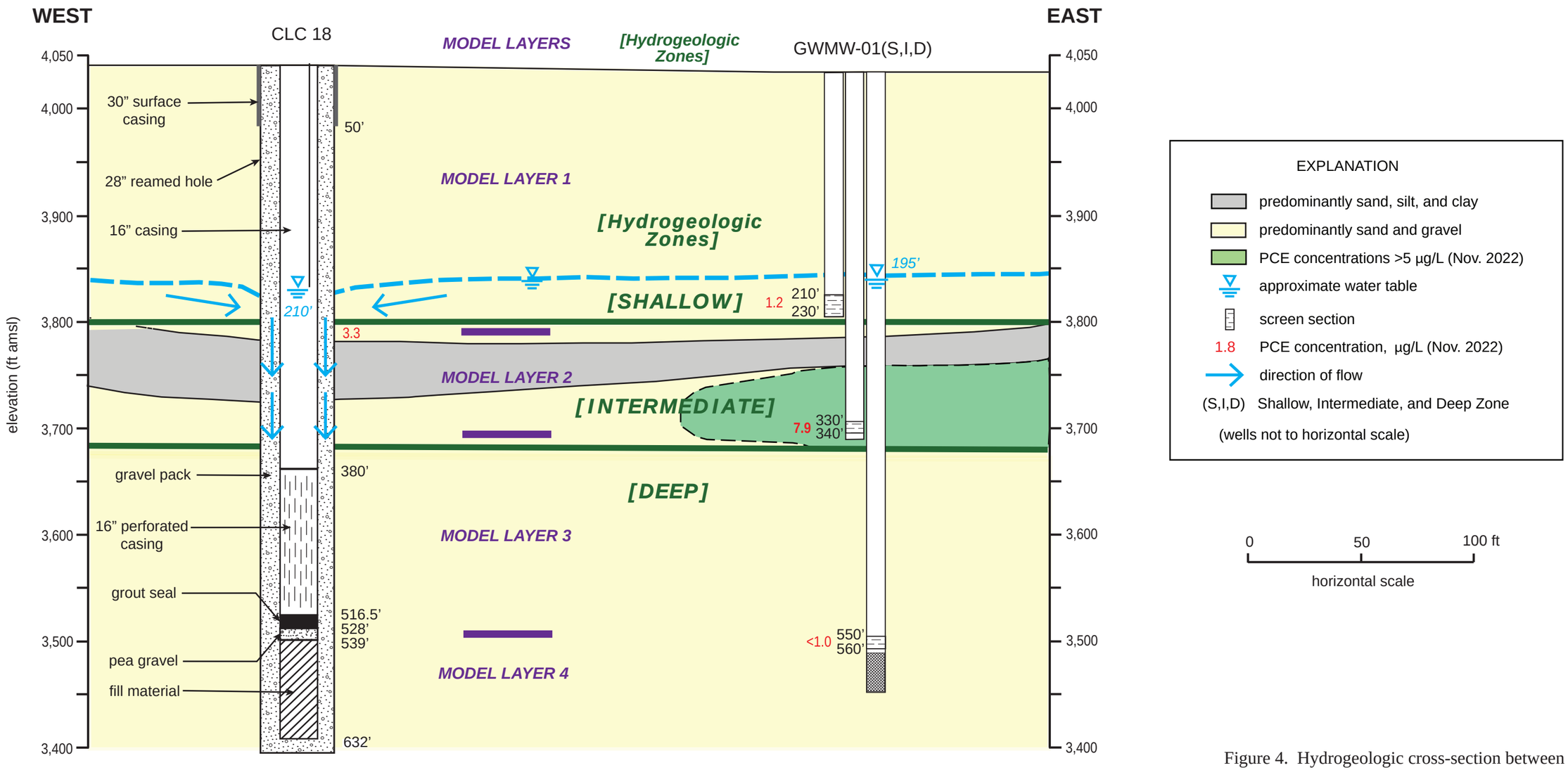


Figure 4. Hydrogeologic cross-section between CLC 18 and GWMW-01 showing well completion details and distribution of November 2022 PCE concentrations, Griggs and Walnut Site, Las Cruces, New Mexico.

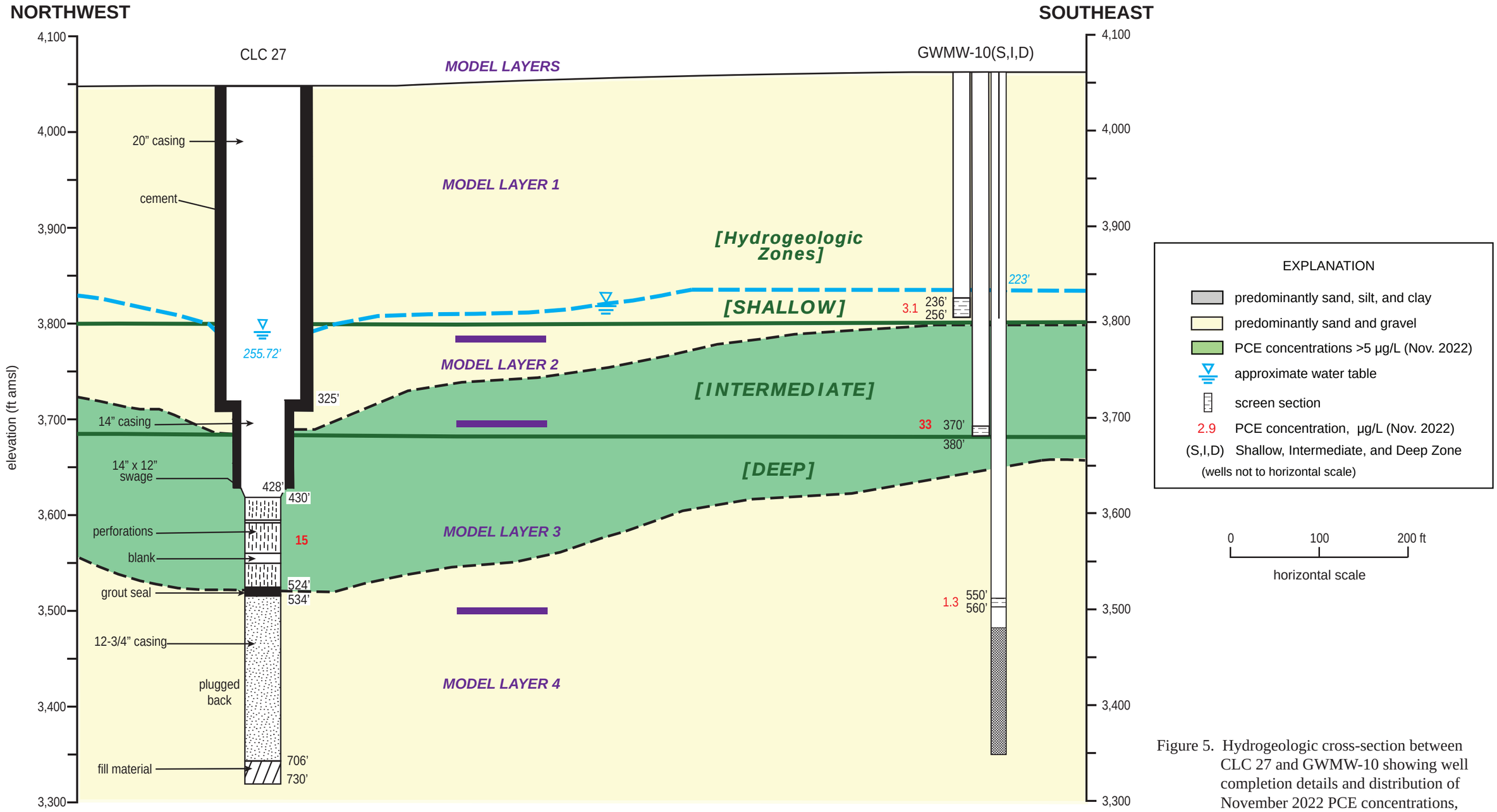


Figure 5. Hydrogeologic cross-section between CLC 27 and GWMW-10 showing well completion details and distribution of November 2022 PCE concentrations, Griggs and Walnut Site, Las Cruces, New Mexico.

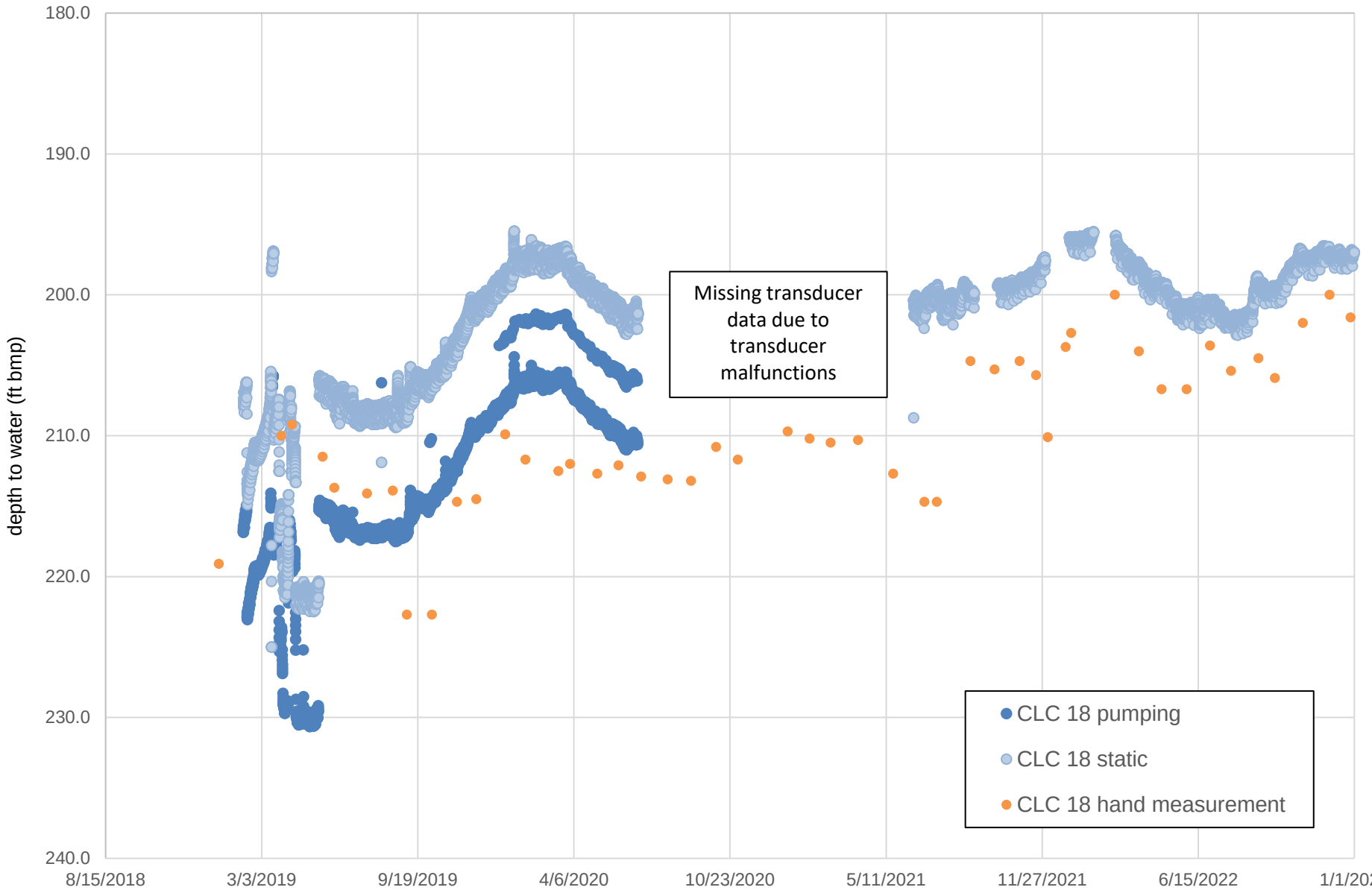


Figure 6. Graph showing non-pumping and pumping water levels for extraction well CLC 18, Griggs and Walnut Site, Las Cruces, New Mexico.

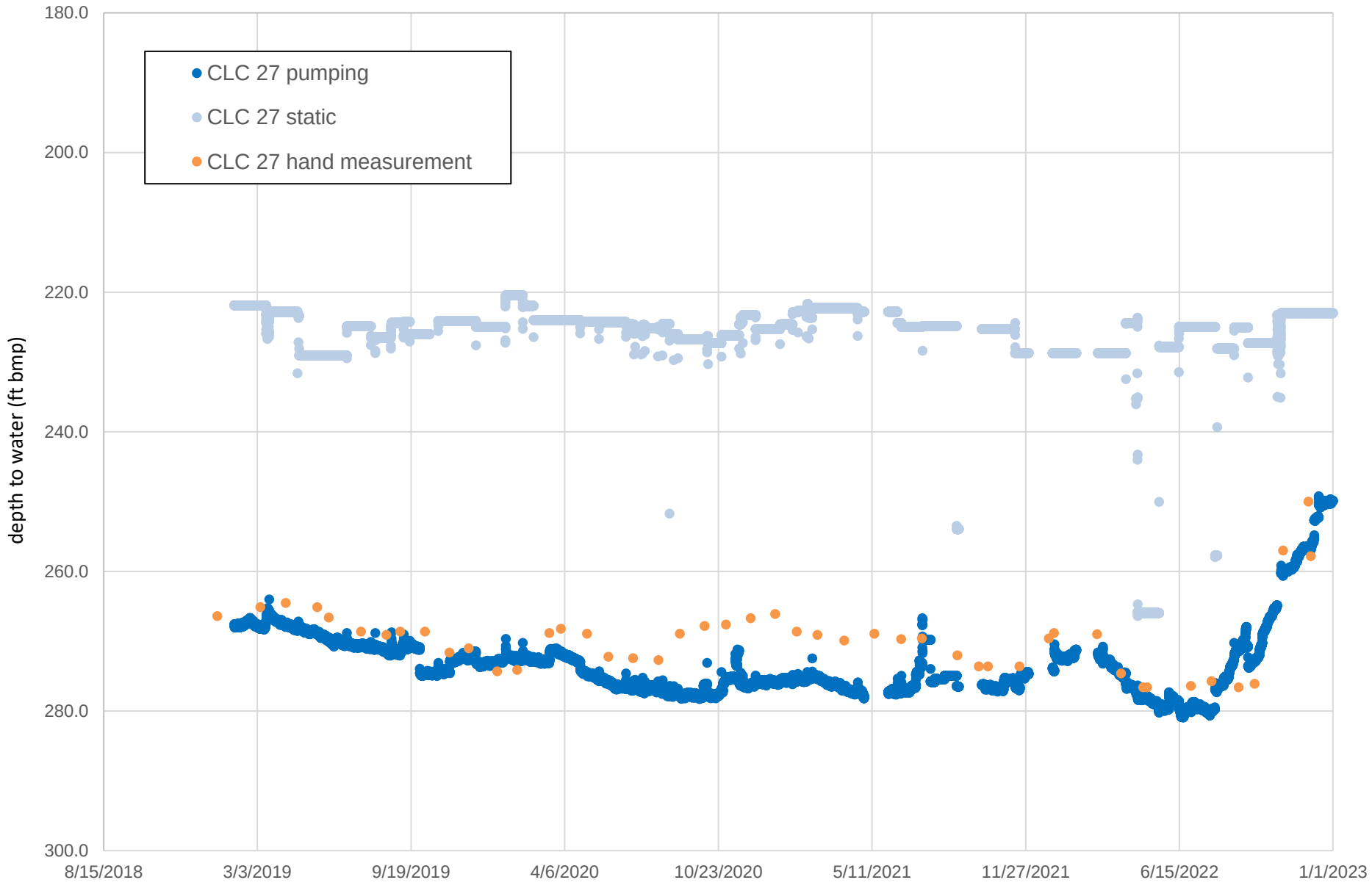


Figure 7. Graph showing non-pumping and pumping water levels for extraction well CLC 27, Griggs and Walnut Site, Las Cruces, New Mexico.

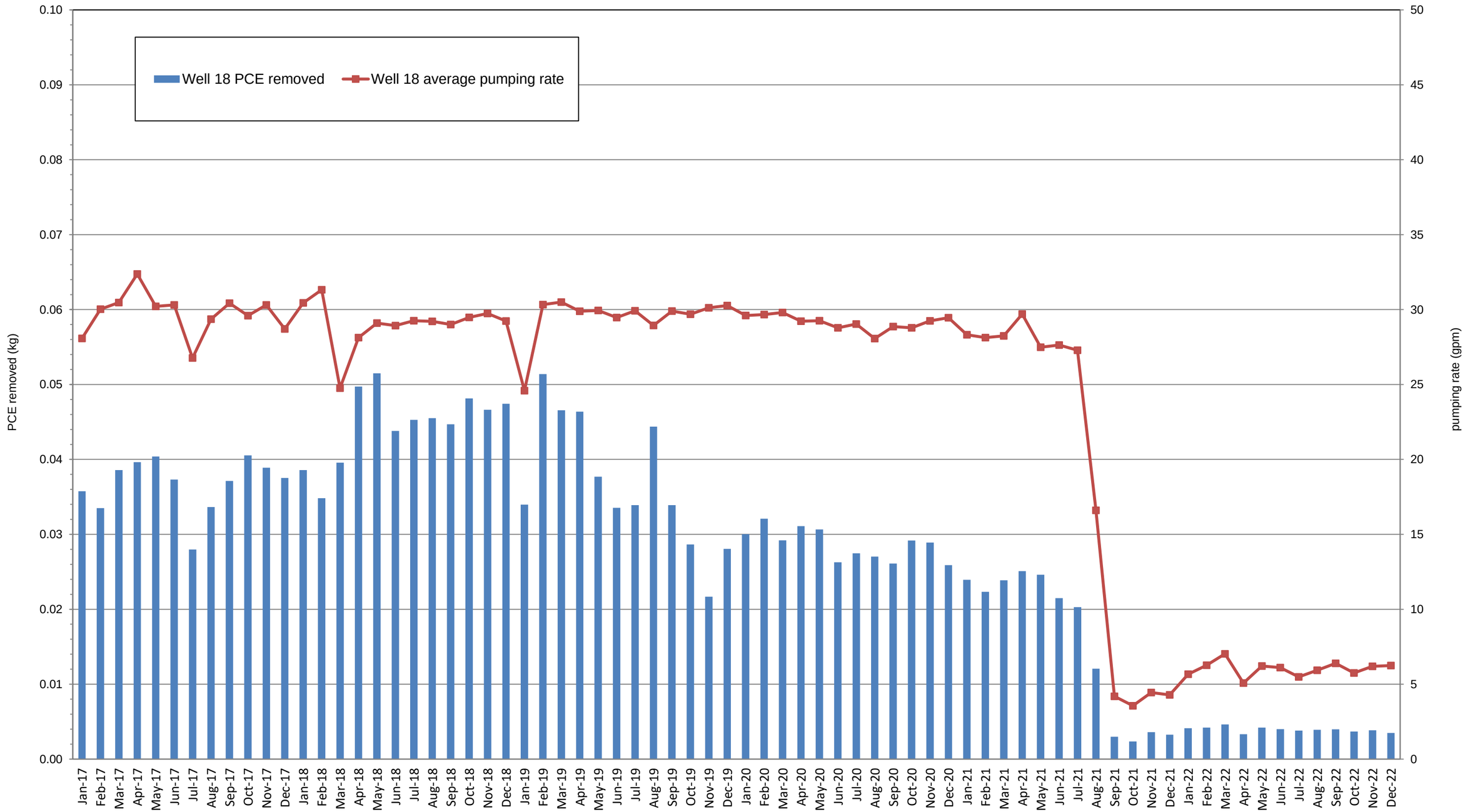


Figure 8. Graph of extraction well CLC 18 monthly pumping from 2017 through 2022 and PCE mass removal rate, Griggs and Walnut Site, Las Cruces, New Mexico.

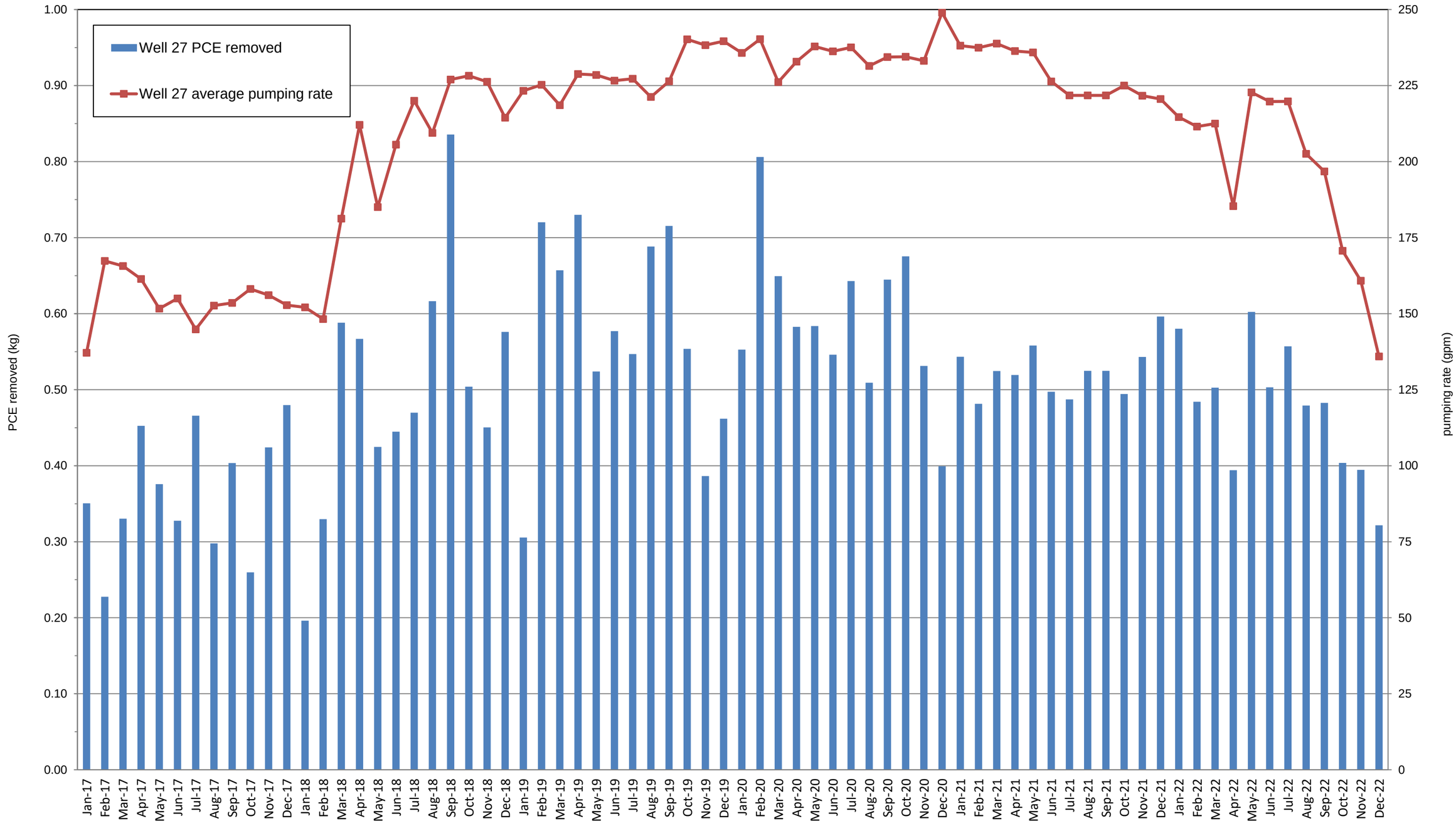


Figure 9. Graph of extraction well CLC 27 monthly pumping from 2017 through 2022 and PCE mass removal rate, Griggs and Walnut Site, Las Cruces, New Mexico.

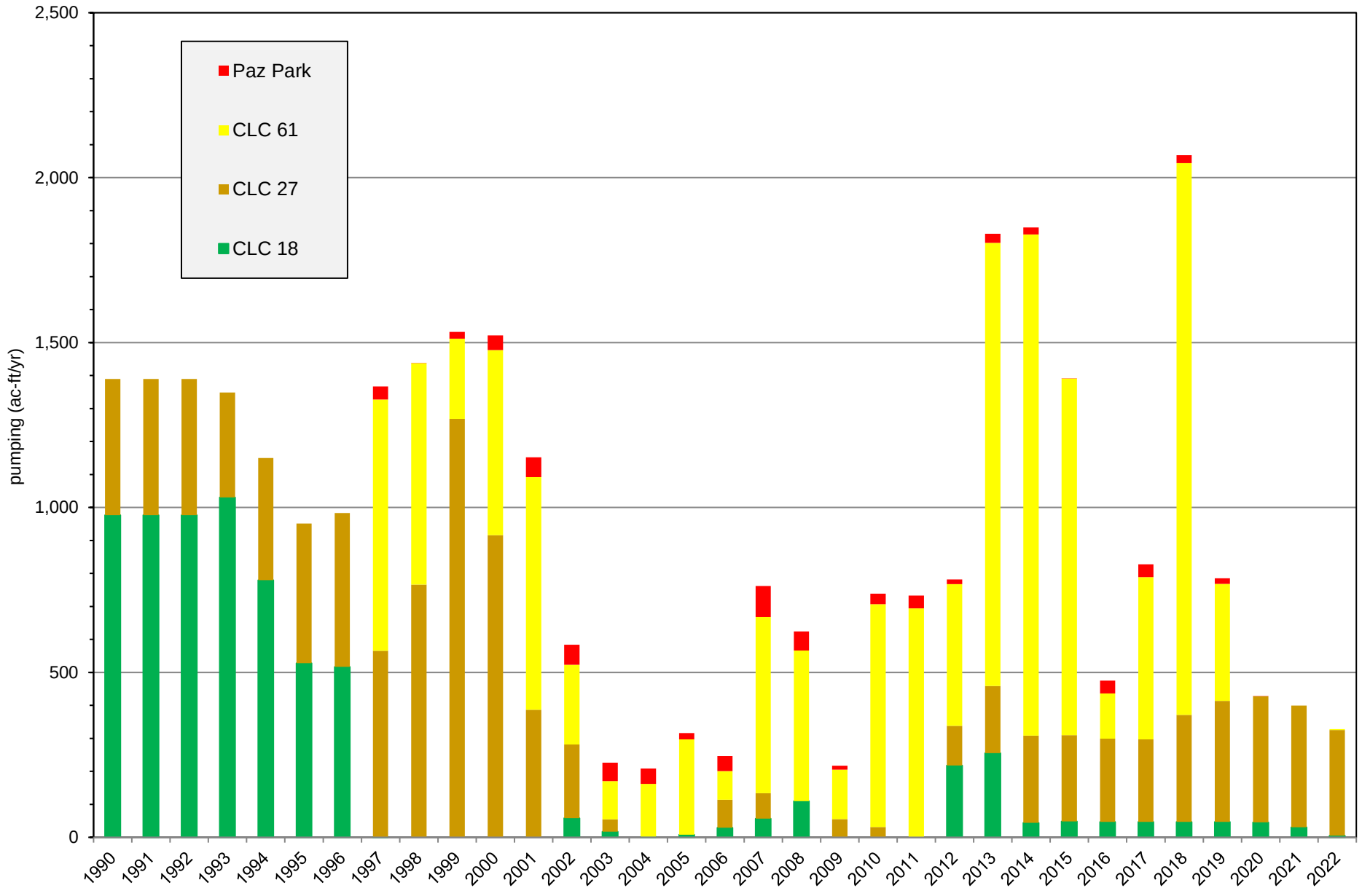


Figure 10. Bar graph of model-simulated annual pumping from 2012 to current, Griggs and Walnut Site, Las Cruces, New Mexico.

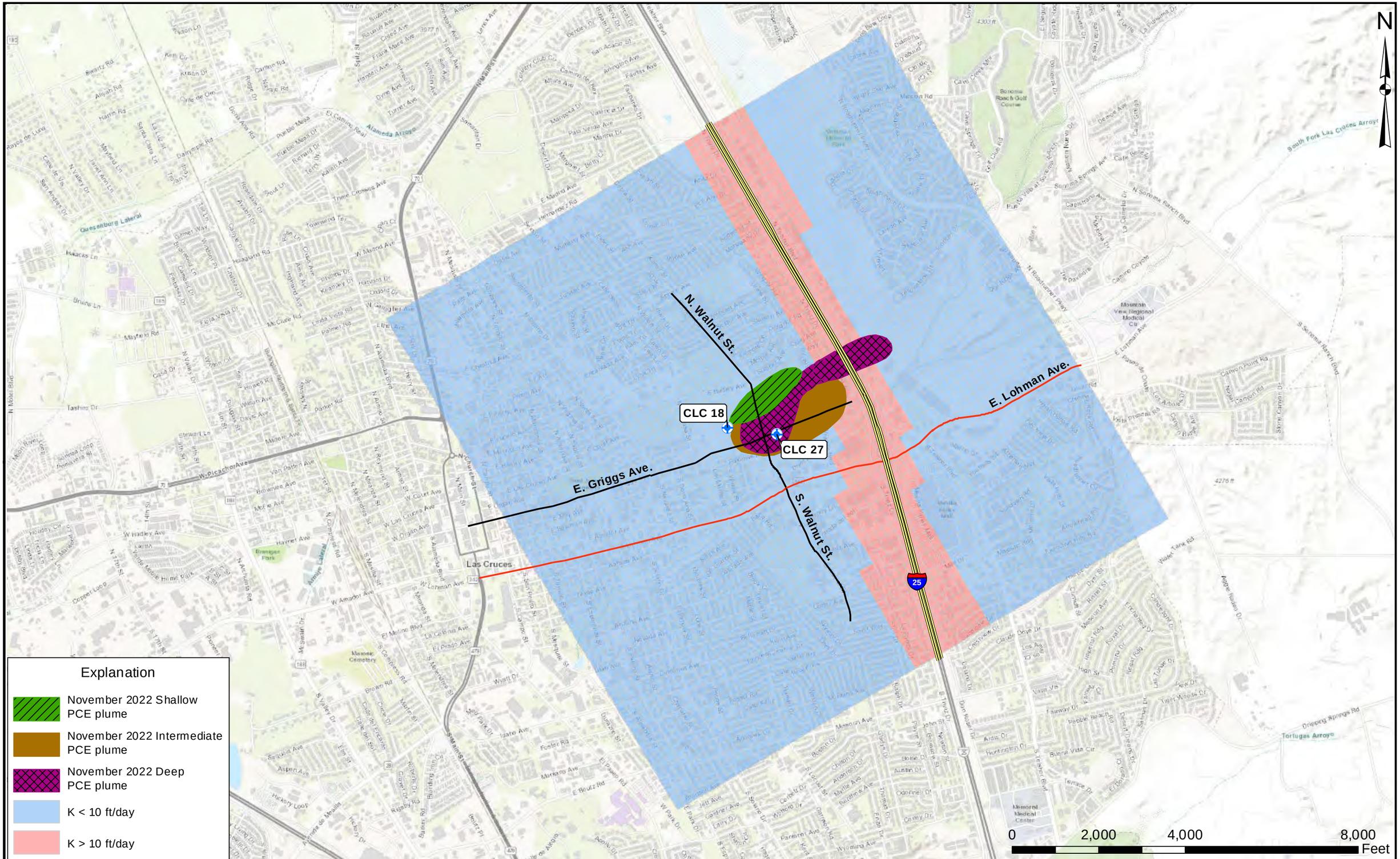


Figure 11. Map showing November 2022 Shallow, Intermediate and Deep PCE plumes and Model Layer 3 hydraulic conductivity zones, Griggs and Walnut Site, Las Cruces, New Mexico.

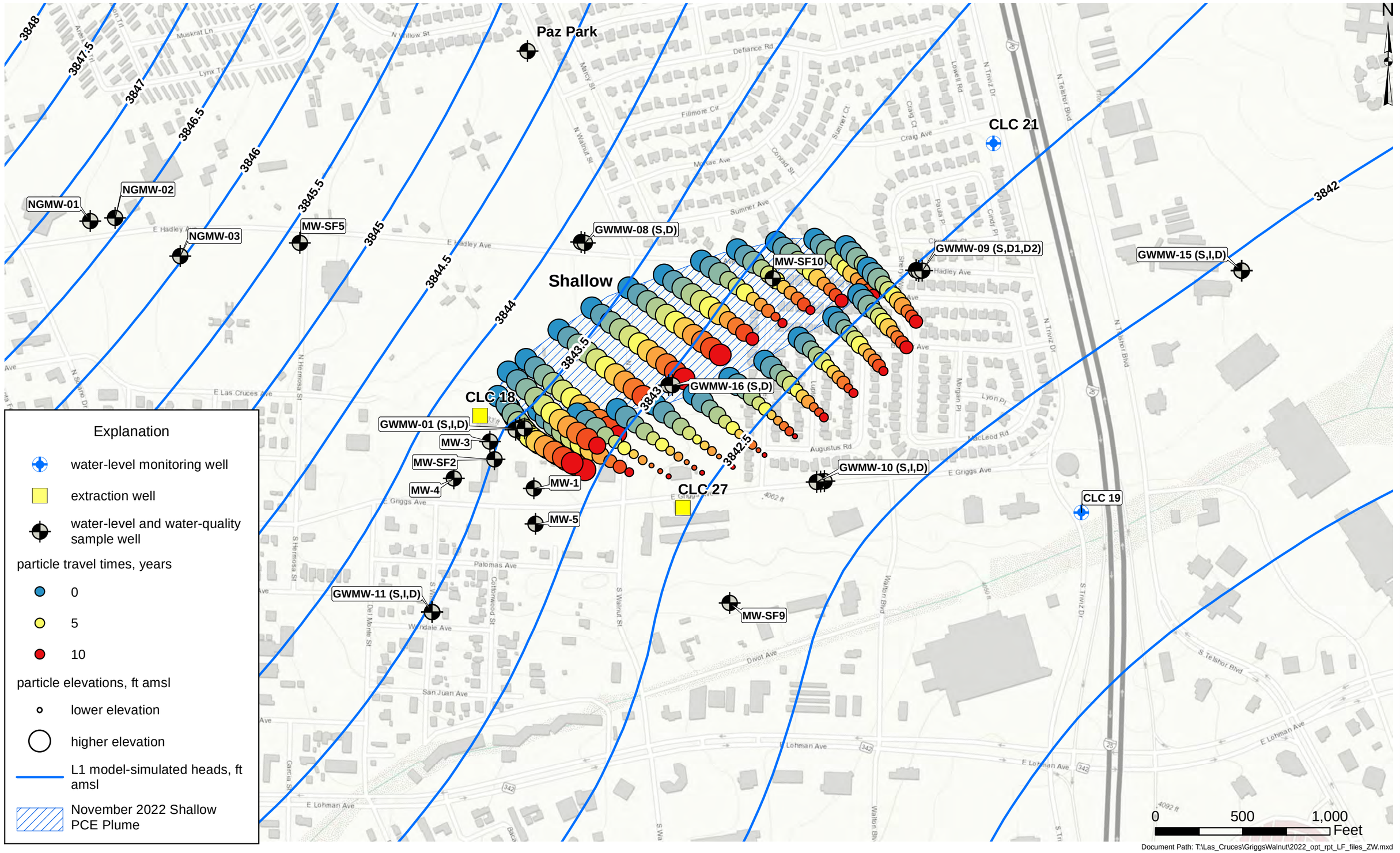


Figure 12. Map showing Novemberr 2022 PCE plume and Model Layer 1 (Shallow zone) 2032 simulated heads and 10 year particle tracking (2023 to 2032), Griggs and Walnut Site, Las Cruces, New Mexico.

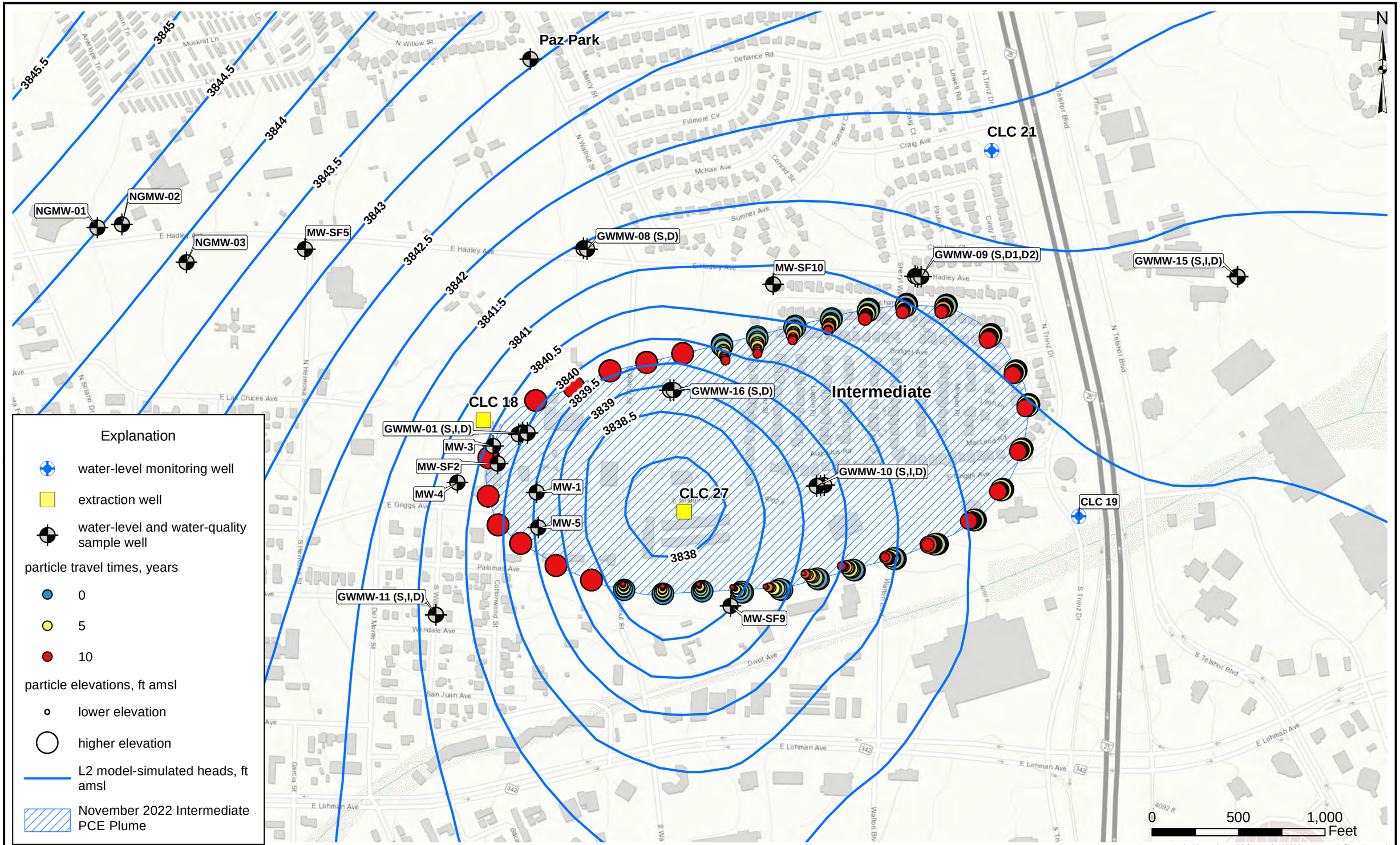


Figure 13. Map showing November 2022 PCE plume and Model Layer 2 (Intermediate zone) 2032 simulated heads and 10 year particle tracking (2023 to 2032), Griggs and Walnut Site, Las Cruces, New Mexico.

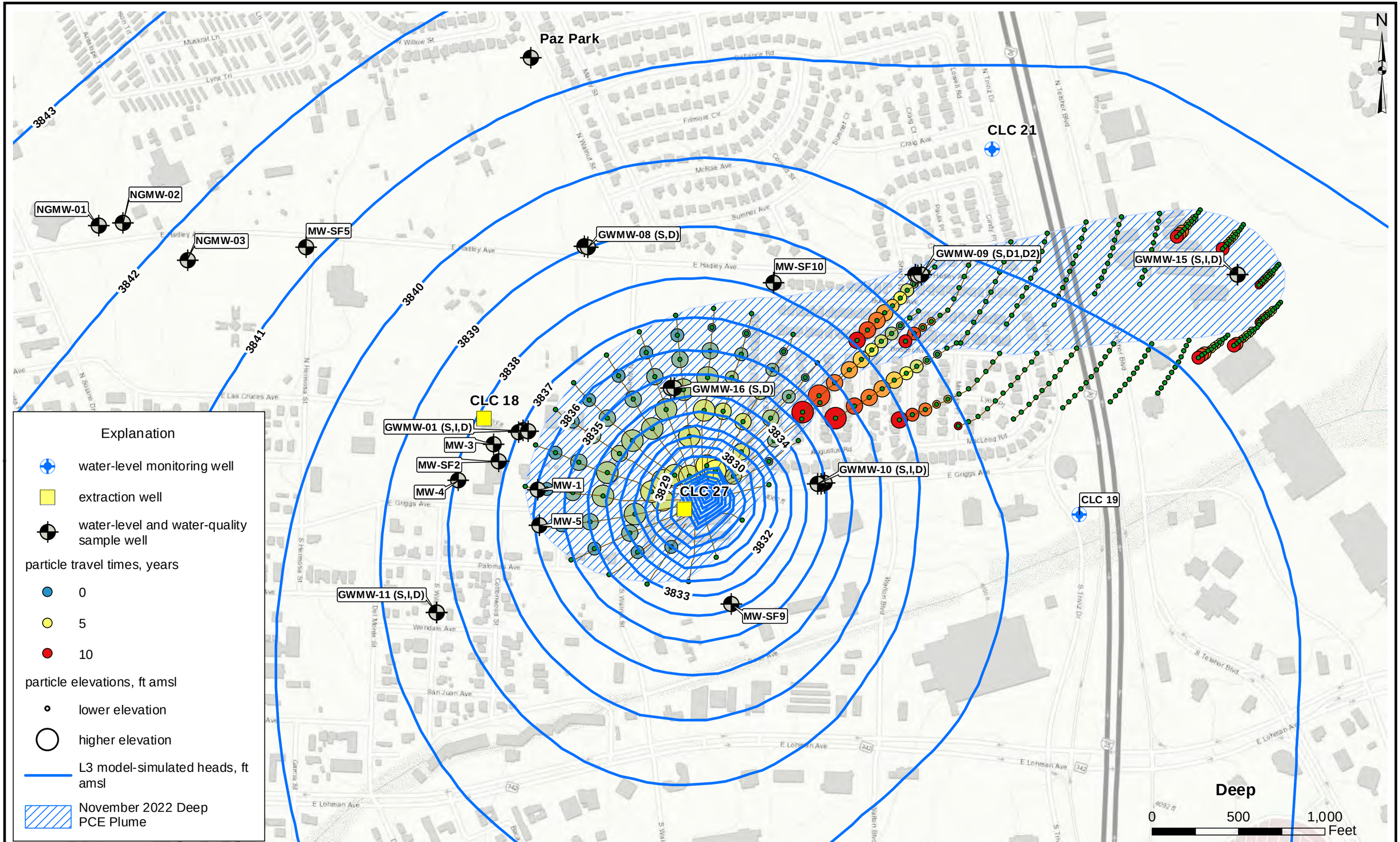


Figure 14. Map showing November 2022 PCE plume and Model Layer 3 (Deep zone) 2032 simulated heads and 10 year particle tracking (2023 to 2032), Griggs and Walnut Site, Las Cruces, New Mexico.

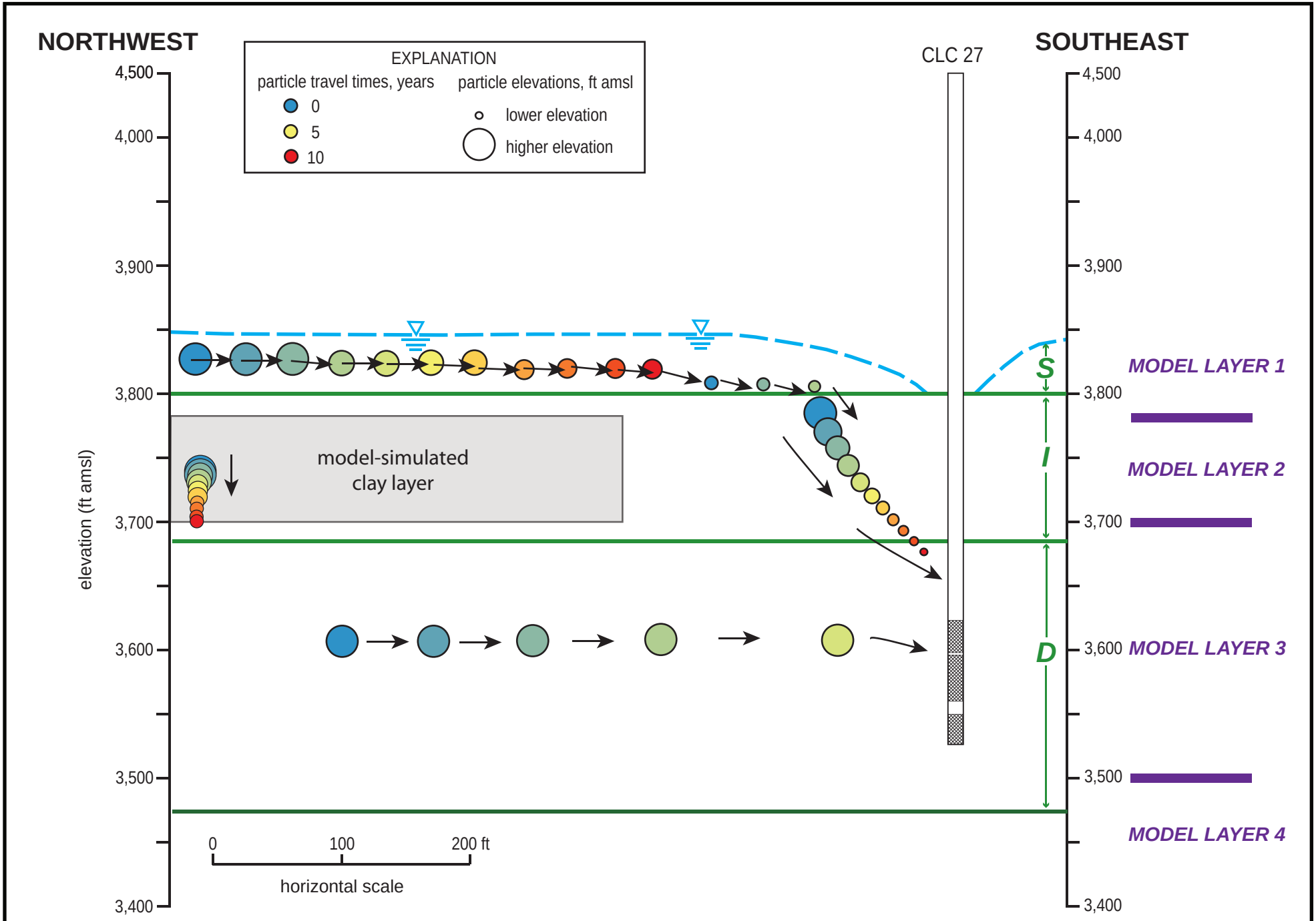


Figure 15. Illustrated cross-section showing model-simulated particle tracking for Layers 1, 2, and 3, Griggs and Walnut Site, Las Cruces, New Mexico.

Appendix C

Sampling Report with Laboratory Reports for Annual Groundwater Monitoring Event

DBS&A
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Appendix C. Groundwater Sampling Activities, November 2022

This appendix provides summarizes the groundwater monitoring and groundwater sampling activities that took place in November 2022 for inclusion in the 2022 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 November 14 through 17, 2022 in accordance with the current sampling and analysis plan (SAP) dated April 26, 2021 (DBS&A, 2021).

Groundwater elevations were measured site-wide on November 14 through 15, 2022, and groundwater samples were collected on November 15 through 17, 2022. A total of 28 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).

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 reports generated by HEAL are provided in Attachment C-3.

With the exception of two wells, 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 monitoring wells after sampling to be used again during the next sampling event. Deviations from the 24-hour period are explained below.

On November 15, 2022, Hydrasleeves were deployed to wells GWMW-10I and GWMW-10D at incorrect depths of 330 and 380 feet, respectively. The correct deployment depths for these wells are 380 and 570 feet, respectively. Because nested well location GWMW-10 is not accessible without traffic control in place, the deployment depths could not be rectified immediately when the error was discovered. Traffic control was remobilized to the well location on November 16, 2022 as planned, at which time the erroneously installed Hydrasleeves were recovered and disposed of, and new Hydrasleeves were deployed to the proper depths in wells GWMW-10I and GWMW-10D. Due to the limited availability of traffic control personnel, DBS&A was unable to schedule an additional traffic control deployment 24 hours after installation of the new Hydrasleeves. With traffic control in place on November 16, 2022, the sampling team waited more than 1 hour for equilibration, and then pulled the sleeves to collect the samples.

DBS&A notes that the standard operating procedure (SOP) recommends leaving the sleeves in the wells overnight (24 hours) for full equilibration of the water column prior to sampling. In order to work within the established traffic control schedule and avoid closing the roadway during busy rush-hour periods, DBS&A's field team consulted with Hydrasleeve technical staff to determine if an abbreviated equilibration period would be acceptable for these installations. A shortened period of approximately 1 hour was deemed adequate based on the well diameter, screen length, and size of the sampling assembly. Because an empty Hydrasleeve assembly displaces little water in the well casing during installation, there is minimal disturbance of the water column, requiring only a short re-equilibration. Analytical results for GWMW-10D are consistent with those from previous years. The PCE concentration in GWMW-10I is slightly higher than during previous sampling events, which shows that results have not been biased

low. These sampling results have been flagged with an "A1" designation, defined as "sample not collected according to SOP." Data collected during this sampling event meet the quality objective of 90 percent completeness, per Table 3 of the SAP.

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. No sampling equipment was reused during the November 2022 sampling event.

C.3 Sampling Difficulties and Well Conditions

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

- A new 225-foot-long tether was installed at GWMW-01S.

- In GWMW-01D, black particles in the sample and tether staining were observed by field staff. An anoxic odor was also noted in this well.
- A new 205-foot-long tether was installed at GWMW-08S.
- A new 225-foot-long tether was installed at GWMW-09S.
- A new 560-foot-long tether was installed at GWMW-09D1. Field staff noted black particles in the sample and tether staining. An anoxic odor was also noted in this well.
- A new 255-foot-long tether was installed at GWMW-10S.
- A new 380-foot-long tether was installed at GWMW-10I after the correct depth was sampled, as explained in Section C.2
- A new 570-foot-long tether was installed at GWMW-10D after the correct depth was sampled, as explained in Section C.2.
- A new 200-foot-long tether was installed at GWMW-11S. Field staff noted a moderate anoxic smell in the sample.
- In GWMW-11I, field staff noted a moderate anoxic smell in the sample.
- In GWMW-11D, field staff noted a moderate anoxic smell in the sample, along with black particles in the bottom of the Hydrasleeve. Field staff also recommend using extra weights in order to sink the tether and Hydrasleeve to the correct depth.
- In GWMW-15D, field staff noted a moderate anoxic smell in the sample.
- There were access issues with GWMW-16S and GWMW-16D. The City could not find the well key, and the locks needed to be cut off by our crew. To prevent recurrence of this issue, the City replaced the dedicated well locks with their standard master-keyed locks.
- The water level measurement in GWMW-16D is approximately 1 foot lower than the measurement taken in 2021.
- A new 140-foot-long tether was installed in NGMW-01 and NGMW-02.
- At NGMW-03, a 6-inch-thick layer of a gray, gelatinous substance was inside the steel vault that protects the polyvinyl chloride (PVC) cap. The sampling team removed this substance (which might have been bentonite mixed with fluid that leaked in under the steel lid) and disposed of it in a CLC dumpster. It was necessary to clean the PVC cap and the entire vault to prevent the substance from entering the well during gauging and sampling.

- A pile of concrete, soil, and vegetation debris was located in the vicinity of MW-SF9. This could lead to a potential access issue during future sampling events.
- The PVC casings at numerous wells apparently have pinch points where the diameter (e.g., 3-inch, 4-inch, or 5-inch) is reduced. Hydrasleeves do not sink as expected at these locations. The field crew applied additional weights at these locations to help submerge the sleeves and tethers. It is necessary for the team to slowly submerge samplers at each well to avoid knots in the tethers that would prevent sleeves from deploying to the targeted depths.

Appendix C Tables

DBS&A
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Table C-1. Groundwater Samples Collected, November 2022

Sample Type	Number of Samples	Analyses [a]	Well ID
Monitoring wells	26	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	2	Arsenic (total and dissolved), uranium (total and dissolved), and field parameters	CLC 18 and CLC 27
Duplicate	3	VOCs by EPA method 8260B	GWMW-01I, GWMW-09D1, GWMW-16D
MS/MSD	4	VOCs by EPA method 8260B	GWMW-08S (1 MS and 1 MSD), and GWMW-10I (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, November 2022

Sampling Method	Number of Samples	Well ID
Hydrasleeve	26	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

Table C-3. Groundwater Elevation Data, November 2022
Page 1 of 2

Well ID	Date of Measurement	Depth to Water (feet btoc)	Hydrologic Zone	Total Well Depth (feet)	Surveyed Measuring Point Elevation [a] (feet msl)	Groundwater Elevation (feet msl)
CLC 18	11/15/2022	210.07	S/I/D[b]	516.5	4,039.59	3,829.52
CLC 26	11/15/2022	178.35	D	700 [c]	4,014.15	3,835.80
CLC 27	11/15/2022	255.72	D	524	4,057.12	3,801.40
GWMW-01S	11/14/2022	195.42	S	230	4,038.69	3,843.27
GWMW-01I	11/14/2022	201.82	I	346	4,038.96	3,837.14
GWMW-01D	11/14/2022	201.47	D	560	4,038.29	3,836.82
GWMW-06S	11/14/2022	97.29	S	130	3,946.78	3,849.49
GWMW-08S	11/14/2022	175.74	S	210	4,020.09	3,844.35
GWMW-08D	11/14/2022	181.76	D	506	4,019.85	3,838.09
GWMW-09S	11/15/2022	210.13	S	230	4,051.10	3,840.97
GWMW-09D1	11/15/2022	212.44	D	426	4,050.79	3,838.35
GWMW-09D2	11/15/2022	212.76	D	565	4,051.11	3,838.35
GWMW-10S	11/15/2022	223.10	S	257 [c]	4,063.84	3,840.74
GWMW-10I	11/15/2022	227.22	I	386	4,063.95	3,836.73
GWMW-10D	11/15/2022	228.20	D	575	4,064.60	3,836.40
GWMW-11S	11/14/2022	179.46	S	205	4,022.72	3,843.26
GWMW-11I	11/14/2022	185.81	I	314	4,022.74	3,836.93
GWMW-11D	11/14/2022	186.09	D	540	4,022.67	3,836.58
GWMW-15S	11/14/2022	241.70	I	304.2	4,081.03	3,839.33
GWMW-15I	11/14/2022	242.18	D	475	4,081.06	3,838.88
GWMW-15D	11/14/2022	242.15	D	595	4,081.03	3,838.88
GWMW-16S	11/15/2022	190.44	S	205	4,033.07	3,842.63
GWMW-16D	11/15/2022	195.36	D	370	4,032.73	3,837.37
MW-1	11/14/2022	194.31	S	NM	4,037.14	3,842.83
MW-3	11/14/2022	DRY	S	189.7	4,034.56	DRY
MW-4	11/14/2022	DRY	S	185.7	4,031.59	DRY
MW-5	11/14/2022	DRY	S	191.8	4,036.24	DRY
MW-SF2	11/14/2022	192.64	S	200	4,035.71	3,843.07
MW-SF5	11/14/2022	150.10	S	152.73	3,995.63	3,845.53
MW-SF9	11/14/2022	191.71	S	203.1	4,032.35	3,840.64

Notes are provided at the end of the table.

Table C-3. Groundwater Elevation Data, November 2022
Page 2 of 2

Well ID	Date of Measurement	Depth to Water (feet btoc)	Hydrologic Zone	Total Well Depth (feet)	Surveyed Measuring Point Elevation [a] (feet msl)	Groundwater Elevation (feet msl)
MW-SF10	11/14/2022	196.06	S	204.4	4,038.66	3,842.60
NGMW-01	11/14/2022	128.71	S	170	3,975.48	3,846.77
NGMW-02	11/14/2022	134.07	S	170	3,980.79	3,846.72
NGMW-03	11/14/2022	138.86	S	170	3,985.11	3,846.25

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

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

[c] Total depth based on most current records from Las Cruces Utilities. Total depth was not measured in the field.

btoc = Below top of casing
msl = Above mean sea level
NM = Not measured

Table C-4. Field Parameter Data, November 2022

Well ID	Date	Time	pH	Temperature (°C)	Specific Conductance (µS/cm)
CLC 18	11/15/2022	9:36	7.13	19.4	1,970
CLC 27	11/15/2022	8:20	7.40	21.6	1,084
GWMW-01S	11/15/2022	12:53	7.10	19.8	2,035
GWMW-01I	11/15/2022	12:32	7.26	19.6	1,633
GWMW-01D	11/15/2022	12:06	7.60	20.4	1,096
GWMW-08S	11/15/2022	16:00	7.35	18.8	1,842
GWMW-08D	11/15/2022	16:23	7.59	18.4	1,304
GWMW-09S	11/16/2022	10:51	7.36	19.9	1,814
GWMW-09D1	11/16/2022	10:20	7.28	19.5	2,065
GWMW-09D2	11/16/2022	10:33	7.62	19.8	1,430
GWMW-10S	11/16/2022	12:14	7.27	20.6	1,874
GWMW-10I [a]	11/16/2022	13:40	7.23	18.3	1,762
GWMW-10D [a]	11/16/2022	14:05	7.72	20.3	1,343
GWMW-11S	11/16/2022	14:25	7.31	19.1	1,639
GWMW-11I	11/16/2022	14:35	7.48	19.6	1,156
GWMW-11D	11/16/2022	14:45	7.56	17.3	584
GWMW-15S	11/16/2022	15:25	7.54	20.1	1,015
GWMW-15I	11/16/2022	16:00	7.31	19.0	1,486
GWMW-15D	11/16/2022	16:20	7.40	19.2	873
GWMW-16S	11/16/2022	8:20	7.17	18.7	1,578
GWMW-16D	11/16/2022	8:12	7.33	17.3	1,513
MW-5	Dry				
MW-SF2	11/15/2022	14:30	7.36	19.3	1,312
MW-SF5	11/15/2022	16:43	7.36	19.0	1,774
MW-SF9	11/16/2022	8:51	7.69	18.6	922
MW-SF10	11/16/2022	9:50	7.41	18.7	1,819
NGMW-01	11/16/2022	11:13	7.1	19.2	2,978
NGMW-02	11/15/2022	17:00	7.23	20.1	1,854
NGMW-03	11/16/2022	9:23	7.15	18.6	2,345

[a] Sample not collected according to SOP
µS/cm = Microsiemens per centimeter

Attachment C-1

Field Forms

DBS&A
a Geo-Logic Company

Daniel B. Stephens & Associates, Inc.

GROUNDWATER ELEVATION DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
Sample Date: ~~11-15-22~~ 11-14-22 - 11-16-22
Sheet # 1 of 3

11-14-22	Well ID	Depth to NAPL	Depth to Water	Total Depth	Comments: (well dia., sampled, condition)
0740	GWMW08-S	—	175.74	210	4", New Hs 2.9" x 12" New 005" letter
0757	GWMW08-D	—	181.76	506	3", New 500' letter New Hs-2-IL
0840	MWSF5	—	150.10	152.73	2" dedicated letter New 18" Hs set on bottom
0910	NGMW03	—	138.86	170	4" - dedicated letter / New New Hs
0935	NGMW02	—	134.07	170	4" - New letter 2.9" x 12" Hs
0954	NGMW01	—	128.71	170	4" - New letter 2.9" x 12" Hs
1043	GWMW01-D	—	201.47	560	3" dedicated letter 1.9" x 36" Hs
1112	GWMW01-I	—	201.82	346	5", dedicated letter 2.9" x 12" Hs
1124	GWMW01-S	—	195.42	230	4", New letter 225'
1145	MW-1	—	194.31		WL only.
1153	MW-5	—	Dry	191.8'	No Sample
1215	MWSF2	—	192.64	200	2" dedicated letter 18" x 1.9" Hs
1226	MW3	—	Dry	189.7	2" WL only
1235	MW4	—	Dry	185.7	2" WL only
1249	MWSF9	—	191.71	203.1	2" dedicated letter 1.9" x 36" Hs

11-14-22

Comments:

Daniel B. Stephens & Associates, Inc.

GROUNDWATER ELEVATION DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
Sample Date: 11-14-22 — 11-16-22
Sheet # 2 of 3

11-14-22

Well ID	Depth to NAPL	Depth to Water	Total Depth	Comments: (well dia., sampled, condition)
1316 GWMW11-S	—	179.46	205	3", New 200' tether, 1.9" x 36" HS
1335 GWMW11-D	—	186.09	540	3", dedicated tether, 1.9" x 36" HS
14:00 GWMW11-I	—	185.81	314	3" dedicated tether 1.9" x 36" HS
14:21 GWMW06	—	97.29	130	6" WL only
14:40 MWSF10	—	196.06	204.4	2" dedicated tether 1.9" x 18" HS
15:42 GWMW15-S	—	241.70	304.2	Triple checked 3" 1.9" x 36" HS.
15:30 GWMW15-I	—	242.18	475	3" dedicated tether New 1.9" x 36" HS
15:20 GWMW15-D	—	242.15	595	3" dedicated tether, New 1.9" x 36" HS,
HS 09:41 CLC-18		210.07		Grab
08:15 CLC-27		255.72		Grab - pumping 24/7
10:06 CLC-26		178.35		WL only - DS corrected not pumping
0852 GWMW16-D	—	195.36	370	4" New 29" x 12" HS dedicated tether
0915 GWMW16-S	—	190.44	205	↓
1031 GWMW09-D1	—	212.44	426	5" New 29" x 12" HS dedicated tether
1850 GWMW09-D2	—	212.76	565	New 560' tether New 1.9" x 36" HS

11-14-22 I

↑ 11-14-22
↓ 11-15-22

↑ 11-15-22

Comments:

1223
200
1423

Daniel B. Stephens & Associates, Inc.

GROUNDWATER ELEVATION DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
Sample Date: 11-14-22 – 11-16-22
Sheet # 3 of 3

Well ID	Depth to NAPL	Depth to Water	Total Depth	Comments: (well dia., sampled, condition)
GWMW09-S	—	210.13	~~355~~ ~~338~~	4" New 330' tether 325' & 2-9"x12" HS
GWMW10-S	—	223.10		New 255' tether & New 2.9"x12" HS
GWMW10-I	—	227.22	336	New 330' tether New 2.9"x12" HS
GWMW10-D	—	228.20	575	New 575' tether New ~~2.9"xD~~ 1.9"x36"

11-15-22

Comments:

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut

Project #: DB22.1354.00 Ph 1 Task 1

Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres

~~H.Sleeve Deploy Date/Time:~~ N/A

Sample Date/Time: 11-15-22 Grab Sample 0932

Well #: CLC 18 → 210.07 Pumping

Well Diameter: _____(inches)

Depth to Water: 210.07 (feet btoc)

Total Depth of Well: 316.5 (feet)

Height of Water Column: _____(feet)

Purge Volume: _____(gal)

Purge Method: ~~HydraSleeve~~ 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	7.13	19.4	1970	165.3	3.2	Clear
1						
2						
3						

Sample Description: ~~3 VOA Vials preserved w/ HgCl2~~ 2 plastic / HCl, HNO3

86.21 gpm Totalizer: 113692.9 US KG (Kilo gallons)

Physical Observations: Grab from spigot - ~~Pumping 24/7 per Josh (CLC)~~ Pumping since 0900 today, pumps only 2 days/week (Tu & Th) from 0900-1500

Analytical Method(s): ~~VOCs 8260B~~ AS + Uranium

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: Grab N/A
Sample Date/Time: 11-15-22 0820

Well #: CLC-27 pumping
Well Diameter: _____ (inches)
Depth to Water: 255.72 (feet btoc)
Total Depth of Well: 524 (feet)

Height of Water Column: — (feet)
Purge Volume: N/A (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	~~[illegible]~~					
1	7.40	21.6	1084	133.7	0.6	Clear
2						
3						

Sample Description: ~~3 VOA Vials preserved w/ HgCl2~~ — Grab
2 plastic containers HCl / HNO3

Physical Observations: Pumping 161.1 gpm Flow @ 08:33
858923.2 US KG
Running 24/7 per Josh — unless tank fills
Kilo-gallons

Analytical Method(s): ~~VOCs 8260B~~
Ast Uranium

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11.14.22 11:30
Sample Date/Time: 11-15-22 12:53

Well #: GWMW01-S
Well Diameter: 4" (inches)
Depth to Water: 195.42 (feet btoc)
Total Depth of Well: 230 (feet)

Height of Water Column: 34.58 (feet)
Purge Volume: 750 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	7.10	19.8	2035	16.8	3.2	very
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2
rust-brown color - very turbid

Physical Observations: New 225' letter (screen 210-230), 2.9" x 12"

Analytical Method(s): VOCs 8260B

996
225
1221

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11-14-22 / 11:17
Sample Date/Time: 11-15-22 12:32
12:34 Dup

Well #: GWMW01-I (12:32) + GWMW01-I_Dup (12:34)
Well Diameter: 5" (inches)
Depth to Water: 201.82 (feet btoc)
Total Depth of Well: 346 (feet)
Height of Water Column: 144.18 (feet)
Purge Volume: 750 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	7.26	19.6	1633	-64.0	1.0	Clear
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2
+3 " " " " for Duplicate

Physical Observations: New 12"x24" HS dedicated tether

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11-14-22 1047
Sample Date/Time: 11.15.22 1206

Well #: GWMW01-D
Well Diameter: 3" (inches)
Depth to Water: 201.47 (feet btoc)
Total Depth of Well: 560 (feet)
Height of Water Column: 358.53 (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	7.60	20.4	1096	-129.6	1.0	Clear to DRK gray
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2
Black particles in Hydrosleeve / Sample

Physical Observations: Black stained dedicated tether w/ anoxic odor
New 19" x 38" HS.

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11-14-22 0745
Sample Date/Time: 11-15-22 16:00

GWMW08-S, GWMW08-S_MS 16:02, GWMW08-S_MSD 16:04

Well #: ~~GWMW-09~~
Well Diameter: 4" (inches)
Depth to Water: 175.74 (feet btoc)
Total Depth of Well: 210 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 750 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	7.35	16.8	1842	148.0	3.0	Very
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2
Reddish-brown - very turbid

Physical Observations: New 29" x 12" LTS, New filter 20S

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11.14.22 0800
Sample Date/Time: 11.15.22 16:23

Well #: GWMW08-D
Well Diameter: 3" (inches)
Depth to Water: 181.76 (feet btoc)
Total Depth of Well: 506 (feet)

Height of Water Column: 324.24 (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	7.59	18.4	1304	-122.2	1.7	Clear for turbid lower layer
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

New 4" x 36" Sleeve

Physical Observations: Upper part of Sleeve is Non-turbid
Lower " " " " turbid

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11-15-22 11:24
Sample Date/Time: 11-16-22 10:51

Well #: GWMW09-S
Well Diameter: 4" (inches)
Depth to Water: 210.13 (feet btoc)
Total Depth of Well: 230 (feet)

Height of Water Column: 19.87 (feet)
Purge Volume: 750 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	7.34	19.9	1814	3.2	5.0	very rust color
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2
very turbid, rust-colored

Physical Observations: New 225' tether, New 13" x 2.9" HS

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11-15-22 10:38
Sample Date/Time: 11-16-22 10:30
Dup @ 10:31

10:20 10:21

Well #: GWMW09-D1 & GWMW09-D1_Dup

Well Diameter: 5" (inches)
Depth to Water: 212.44 (feet btoc)
Total Depth of Well: 426 (feet)

Height of Water Column: 213.56 (feet)
Purge Volume: 750 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	7.28	19.5	2065	158.1	3.6	very turbid rust color
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2
very turbid, rust-colored

Physical Observations: Dedicated HSL w/ new 13" x 2.9" HS

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11-15-22 10:56
Sample Date/Time: 11-16-22 10:33

Well #: GWMW09-D2
Well Diameter: 3" (inches)
Depth to Water: 212.76 (feet btoc)
Total Depth of Well: 565 (feet)

Height of Water Column: 352.24 (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	7.62	19.8	1430	-149.3	4.1	Moderate - Black particle
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2
Black particles, anoxic odor

Physical Observations: New 560' tether, New HS 1.9" x 36"

Analytical Method(s): VOCs 8260B

1439
560
1439

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11.15.22 / 13:31
Sample Date/Time: 11.16.22 12:14

Well #: GWMW10-S
Well Diameter: 4" (inches)
Depth to Water: 223.10 (feet btoc)
Total Depth of Well: 255 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 750 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	7.27	20.6	1874	139.4	2.6	Very
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2 - very turbid, reddish brown

Physical Observations: New 12" x 2.9" HS w/ New Jeter 255'
Screen 250-260

Analytical Method(s): VOCs 8260B

227
255
482

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut

Project #: DB22.1354.00 Ph 1 Task 1

Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres

H.Sleeve Deploy Date/Time: 11-15-22 / 1344

Sample Date/Time: ~~11-16-22 12:30~~ 11-16-22 13:40

Well #: GWMW10-I, GWMW10-I_MS, GWMW10-I_MSD (13:40, 13:41, 13:42) disposed of HS set @ incorrect depth (330')

Well Diameter: 5" (inches)

Depth to Water: 227.22 (feet btoc)

Total Depth of Well: 386 (feet)

Height of Water Column: _____ (feet)

Purge Volume: 750 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	7.23	18.3	1762	20.8	1.3	Very
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2 - very turbid, rust-colored

Physical Observations: New letter to 330', New HS 10"x25" pulled HS set @ 330' (wrong depth) Replaced w/ New HS set @ 330' screen ~~220-230'~~ ~~320-330'~~ screen 370-380'

Analytical Method(s): VOCs 8260B

485
330
815

330

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut

Project #: DB22.1354.00 Ph 1 Task 1

Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres

H.Sleeve Deploy Date/Time: ~~11-6-22 10:55~~ 11-15-22/14:20

Sample Date/Time: 11-6-22 14:05

Disposed of HS on 380' tether - wrong length

Well #: GWMW10-D

Well Diameter: 3" (inches)

Depth to Water: 228.20 (feet btoc)

Total Depth of Well: 575 (feet)

Height of Water Column: 346.80 (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	7.72	20.3	1343	64.9	2.8	Clear
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

Physical Observations: ~~New 380' tether~~, New 575' tether, New HS 1.9" x 18", No 36" sleeves remaining

Screen ~~370-380'~~ 560-570'

Analytical Method(s): VOCs 8260B

897 + 380 = 1197

482

1051 + 190 = 1241

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11-14-22 1321
Sample Date/Time: 11-16-22 14:25

Well #: GWMW11-S
Well Diameter: 3" (inches)
Depth to Water: 179.46 (feet btoc)
Total Depth of Well: 205 (feet)

Height of Water Column: 25.54 (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	7.31	19.1	1639	~~-535~~	~~3.8~~	None
1				-633	1.5	
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2 - No Color / turbidity
Moderate anoxic odor

Physical Observations: New 200' tether, 38" x 1.9" HS-New

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11-14-22 14:07
Sample Date/Time: 11-16-22 14:35

Well #: GwMW11-I
Well Diameter: 3" (inches)
Depth to Water: 185.81 (feet btoc)
Total Depth of Well: 314 (feet)

Height of Water Column: 128.19 (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	7.48	19.6	1156	-1	2	None
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2 – Moderate amount odor
Slightly turbid, No color but 2 samples turned brownish when GW touched HgCl2 - other Sample VOA stayed clear - All 3 from same portion of sleeve.

Physical Observations: Dedicated tether, 1.9" x 36" HS - New

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11-14-22 13:45
Sample Date/Time: 11-16-22 14:45

Well #: GWMW11-D
Well Diameter: 3" (inches)
Depth to Water: 186.09 (feet btoc)
Total Depth of Well: 540 (feet)

Height of Water Column: 353.91 (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	7.56	17.3	584	-	1.9	None
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2 - No color/turbidity but w/ moderate anoxic odor, some black particles in bottom of sleeve but not in sample - Light brown color in VOA when sample touched HgCl2

Physical Observations: Extra weights needed to get tether & HS to sink in tall WC.

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11-14-22 1551
Sample Date/Time: 11-16-22 15:25
~~1650~~

Well #: GWMW15-5
Well Diameter: 3" (inches)
Depth to Water: 241.70 (feet btoc)
Total Depth of Well: 304.20 (feet)

Height of Water Column: 62.50 (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	7.54	20.1	1015	-82.3	5.3	Clear Anoxic Smell
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2, Anoxic odor, Nontwisted

Physical Observations: 1.9" x 36" lts - New, dedicated tether

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11-14-22/15:40
Sample Date/Time: 11-16-22 1600

Well #: GWMW5-I
Well Diameter: 3" (inches)
Depth to Water: 242.18 (feet btoc)
Total Depth of Well: 475 (feet)

Height of Water Column: 232.82 (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	7.31	19.0	1488	11.5	3.8	Clear and odorless
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

Physical Observations: 1.9" x 3" 185-New, dedicated tether

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11-14-22 15:24
Sample Date/Time: 11-16-22 16:20

Well #: GWMW 15-D
Well Diameter: 3" (inches)
Depth to Water: 242.15 (feet btoc)
Total Depth of Well: 595 (feet)

Height of Water Column: 352.85 (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	19.2	873	-139.9	3.3	Clear anoxic
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2 - Moderately turbid, anoxic odor
Sample Water turned yellowish color in VOAs

Physical Observations: Dedicated Teflon, 1.9" X 3" HS

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11-15-22 08:19
Sample Date/Time: 11-16-22 08:20

Well #: GWMW16-S
Well Diameter: 4" (inches)
Depth to Water: 190.44 (feet btoc)
Total Depth of Well: 205 (feet)

Height of Water Column: 14.56 (feet)
Purge Volume: 150 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	7.17	18.7	1578	173	4.2	Very
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2
Dark reddish brown, turbid

Physical Observations: New 2.9" x 18" LFS on dedicated tether

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11-15-22 0857
Sample Date/Time: 11-16-22 08:12

GWMW16-D_Dup 0813

Well #: GWMW16-D 0812

Triple-checked, from N. side of PVC casing

Well Diameter: 4 (inches)
Depth to Water: 195.36 (feet btoc)
Total Depth of Well: 370 (feet)

Height of Water Column: ~~174.64~~ 174.64 (feet)
Purge Volume: 750 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	7.33	17.3	1513	184.8	0.8	None
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2, Nonturbid, No color

Physical Observations: Dedicated tether, New 12" x 2.9" lbs cut lock + replaced

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11-14-22 1219
Sample Date/Time: 11.15.22 14:30

Well #: MW5F2
Well Diameter: 2" (inches)
Depth to Water: 192.64 (feet btoc)
Total Depth of Well: 200 (feet)

Height of Water Column: 7.36 (feet)
Purge Volume: 0.25L (~~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	7.36	19.3	1312	125.5	5.7	slight
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2 – slightly turbid
only 1.5 vials filled w/ first sleeve, lowered a 2nd sleeve w/ knot in it & shorter weight to bottom – barely enough for 3 vials & QC
Physical Observations: Dedicated tether 1.9" x 18" (shorter) HS
** Get a 12" sleeve for next year

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11-14-22 0845
Sample Date/Time: 11-15-22 1643

Well #: MWSF5
Well Diameter: 2 (inches)
Depth to Water: ~~153.4~~ 150.10 (feet btoc)
Total Depth of Well: ~~153.4~~ 152.73 (feet)

Height of Water Column: 2.63 (feet)
Purge Volume: 250 mL (~~gal~~)
Purge Method: HydraSleeve 18"

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	7.36	19.0	1774	45.1	4.9	None
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2
Non-turbid, No color/odor

Physical Observations: 18" x 8" x 19" PS, dedicated tube

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11-14-22 12:56
Sample Date/Time: 11-16-22 08:51

Well #: MWSF9
Well Diameter: 2" (inches)
Depth to Water: 191.71 (feet btoc)
Total Depth of Well: 203.1 (feet)

Height of Water Column: 8.39 (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	7.49	18.6	922	122.3	6.2	Clear
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

Physical Observations: Dedicated tether, 1.9" x 36" HS

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11-14-22 1445
Sample Date/Time: 11-16-22 / 0950

Well #: MW5F10
Well Diameter: 2" (inches)
Depth to Water: 196.06 (feet btoc)
Total Depth of Well: 204.4 (feet)

Height of Water Column: 7.80 (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	7.41	18.7	1819	138.7	6.1	None
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

Physical Observations: Shelter #5 1.9" x 18" New, dedicated tether

Analytical Method(s): VOCs 8260B

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11-14-22 0958
Sample Date/Time: 11-16-22 11:13

Well #: NGMW01
Well Diameter: 4" (inches)
Depth to Water: 128.71 (feet btoc)
Total Depth of Well: 170 (feet)

Height of Water Column: 41.29 (feet)
Purge Volume: 780 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	7.10	19.2	2978	97.5	4.3	Clear
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

Physical Observations: New letter @ 140' bgs, new 29"x17" 145

Analytical Method(s): VOCs 8260B

854 + 140 = 994

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11-14-22 0940
Sample Date/Time: 11-15-22 17:00

Well #: NGMW02
Well Diameter: 4" (inches)
Depth to Water: ~~170~~ 134.07 (feet btoc)
Total Depth of Well: 170 (feet)

Height of Water Column: _____ (feet)
Purge Volume: 750 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	7.23	20.1	1854	97.0	4.7	Clear
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2

Physical Observations: New tether 140' bgs, 2.9"x1.7" HS

Analytical Method(s): VOCs 8260B

717 140 2852

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Griggs Walnut
Project #: DB22.1354.00 Ph 1 Task 1
Project Manager: J. Raucci

Sampler: Y. Morgan & I. Torres
H.Sleeve Deploy Date/Time: 11-14-22 0913
Sample Date/Time: 11-16-22 0923

Well #: NGMW03
Well Diameter: 4" (inches)
Depth to Water: 138.86 (feet btoc)
Total Depth of Well: 170 (feet)

Height of Water Column: 31.14 (feet)
Purge Volume: 750 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	7.15	18.6	7345	181.8	4.0	Moderate
1						
2						
3						

Sample Description: 3 VOA Vials preserved w/ HgCl2, Light brown, turbid

Physical Observations: New 29"x 12" HS, dedicated tether

Analytical Method(s): VOCs 8260B

Attachment C-2

Field Notes

DBS&A
a Geo-Logic Company

Griggs-Walnut Y. Morgan, I. Torres 11-14-22

Weather: 30-58°F, Clear, 10 mph wind

0630 - Leave hotel, meet I. Torres onsite

- No YSI in load-up - trying to resolve

- Prep paperwork & gear, Tailgate Safety

- GWMW08-S - New tether set @ 205' bgs
New HydraSleeve 2.9"x12" deployed @0748

- 0757 - GWMW08-D - New 500' tether.
Deployed New HS-2-12 w/ new hardware/weights

- 0845 - MWSF5 - New 18" HydraSleeve set on bottom - short WC

- 0910 NGMW03 - New 2.9"x12" HS deployed 6" thick - gelatinous substance & stormwater inside vault. Bailed it out & disposed of. Could not open cap w/o removing substance. Sorbent booms & cups used to clean up mess.

- 0940 NGMW02 - New 2.9"x12" HS deployed w/ New 140' tether

- 0958 NGMW01 New 2.9"x12" HS deployed w/ New 140' tether

- 1047 GWMW01-D dedicated tether is black w/ orange odor. New 1.9"x36" HS. Difficult lowering sleeve. Used smaller weight & feel for resistance - even.

- 1107 GWMW01-I dedicated tether, New 2.9"x12" HS

Griggs-Walnut Y. Moyer, I. Torres (cont.) 11-14-22

11:30 - GWMW01-S New 225' tether
10" x 2.9" HS deployed
11:45 MW-1 - WL only
11:53 MW-5 - Dry - No Sample
Lid hinge slightly stuck w/ rock in it
12:19 MWSF2 - dedicated tether, deploy New 18" x 1.9" HS
12:56 MWSF9 - dedicated tether deploy New 36" x 1.9" HS
Pile of broken concrete, Soil, dead tree very nearby covering well.
13:21 GWMW11-S - New 200' tether, 36" x 1.9" HS - New
13:45 GWMW11-D - dedicated tether. 36" x 1.9" HS - New w/ extra weights so HS / tether will sink in high WC
14:07 GWMW11-I - dedicated tether Deploy 36" x 1.9" HS
14:21 GWMW06 - WL only
14:43 MWSF10 - 1.9" x 18" HS deployed on dedicated tether
15:24 GWMW15D - New 1.9" x 36" HS, dedicated tether
15:40 GWMW15-I - Deploy new 1.9" x 36" HS dedicated tether
15:51 GWMW15-S - Deploy new 1.9" x 36" HS, dedicated tether
1615 - Leave site to hotel

Yael Moyer

Griggs-Walnut Y. Moyer I. Torres 11-15-22

- 0645 - Arrive onsite prep paperwork
- Attempt calibration of YSI Pro Plus - won't turn on - 3 sets of batteries. IT to stare for batteries. Keep unit warm.
- Calibrated YSI, tailgate Safety
- Josh w/ CLC onsite @ 0815
CLC runs @ 0900 - 1500 Tu & Th only
- 0820 CLC27 - grab sample - 2 containers
- No keys @ CLC for GWMW16-I & S cut locks w/ bolt cutters
- GWMW16-D - triple checked WL reading - 0857 - deploy New 2.9" x 12" HS on dedicated tether. ~~GWMW16-D Dup~~ 265
- GWMW16-S 09:19 deploy New 2.9" x 12" HS on dedicated tether
- Replaced w/ new locks - same as all the rest Don't need special key in future
Chuck (CLC) brought keys & locks
- 0936 CLC18 - grab sample - 2 plastic pumps Size 0900, pumps have/will on Tues & Thurs.
- 0954 - SW safety calls - set up now on Hadley
- 1006 - CLC26 - WL only - No longer connected for pumping

Griggs-Walnut V. Morgan, I. Torres 11-15-22 (Cont.)

10:38 - GWMW09-DI - deploy new 10" x 2.9" on dedicated tether

SW Safety hwy AFAD setup on Hadley w/ 1 attendant - 2 guys set up. System not working

10:56 - GWMW09-D2 - deploy new 36" x 19" HS on New 560' tether

11:24 - GWMW09-S - deploy New 10" x 2.9" HS on New 225' tether

11:54 Collect FBI - DI water 3 VOAs @ GWMW01 wells

12:06 Collect GWMW01-D - 3 VOAs

12:32 Collect GWMW01-I - 3 VOAs

12:34 collect GWMW01-I Dup. 3 VOAs

12:53 collect GWMW01-S - 3 VOAs

13:00 - Move to GWMW10-S wait for SWS traffic Setup. 13:31 - deploy new 10" x 2.9" HS w/ new tether - 255'

13:44 - deploy GWMW10-I HS new 2.9" x 6" w/ new tether 330', screened 320-330'

14:10 - deploy GWMW10-D HS 1.9" x 18" on new 380' tether

14:30 - collect MW5F2 - 3 VOAs (no more 36" sleeves)

15:00 - 15:45 - G. Herrmann, I. Torres & V. Morgan QA call to review SOPs, etc

(Cont.) 11-15-22

Griggs-Walnut V. Morgan I. Torres

16:00 - Collect GWMW08-S - 3 VOAs

16:02 Collect GWMW08-S_MS - 3 VOAs

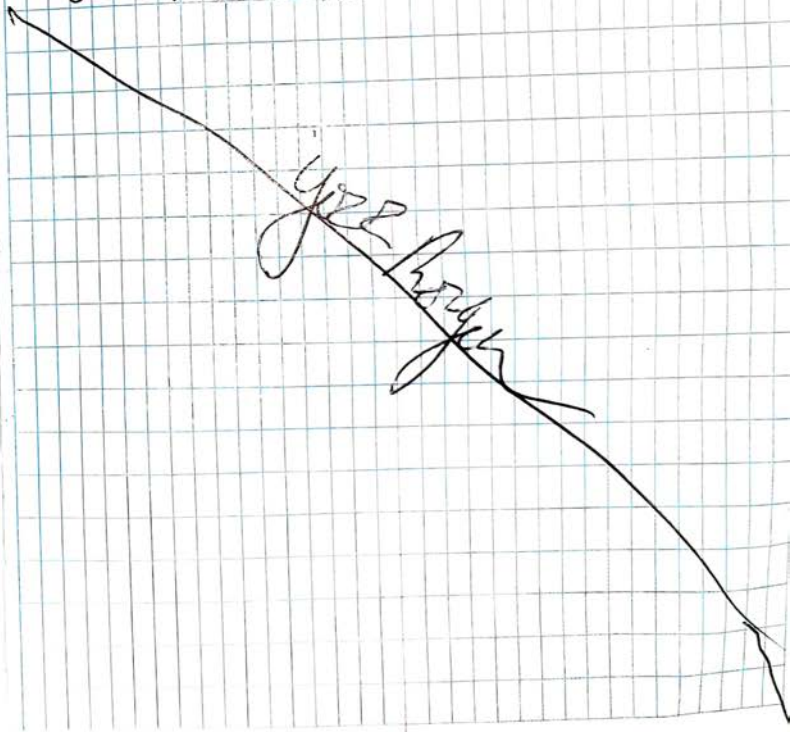
16:04 Collect GWMW08-S_MSD - 3 VOAs

16:23 Collect GWMW08-D - 3 VOAs

16:43 Collect MW5F5 - 3 VOAs

17:00 Collect NGMW02 - 3 VOAs

17:30 - Leave site - to store for ice & then to hotel



Griggs - Walnut Y. Morgan + I. Torres 11-16-22

- 0630 Weather 37° – 50° Pt Cldy, Calm
- 0630 - Check out of hotel, to store for ice - next @ GWMW16 wells
- Calibrate YSI - wouldn't start even w/ new batteries. Troubleshoot - OK
- Tailgate safety
- 0755 - Collect FB2
- Waiting for CLC's Josh to open
- 0812 - Collect GWMW16-D - 3 VOAs
- 0813 Collect GWMW16-D_Dup 3 VOAs
- 0820 Collect GWMW16-S 3 VOAs
- 0851 Collect MW5F9 3 VOAs
- 0923 Collect NGMW03 3 VOAs
- 0950 Collect MW5F10 3 VOAs
- 1020 Collect GWMW09-D1 3 VOAs
- 1021 Collect GWMW09-D1_Dup 3 VOAs
- 1033 Collect GWMW09-D2 3 VOAs
- 1051 Collect GWMW09-S 3 VOAs
- Southwest Safety providing traffic control @ GWMW09 + 10 wells - Robert + Omar
- 1214 Collect GWMW10-S - 3 VOAs
- 1230 - deploy new 19" x 2.9" HS on 380' tether @ GWMW10-I. Disposed of HS set yesterday at 330' because this was incorrect target depth

(Cont.)

Griggs-Walnut Y. Morgan + I. Torres 11-16-22

- 1255 - deploy new 18" x 1.9" HS @ GWMW10-D. No more 36" sleeves. Dispose of HS deployed 11-15-22 @ 380' depth because this is incorrect depth. New HS deployed @ 570' bgs for screened interval 560-570' - new tether + HS
- 1300 - Collect FB3 - 3 VOAs
- 13:40 - Collect GWMW10-I - 3 VOAs
- 13:41 - Collect GWMW10-I_MS - 3 VOAs
- 13:42 - Collect GWMW10-I_MSD - 3 VOAs
- 14:05 - Collect GWMW10-D 3 VOAs
- 14:25 - Collect GWMW11-S - 3 VOAs
- 14:35 Collect GWMW11-I - 3 VOAs
- 14:45 Collect GWMW11-D - 3 VOAs
- 15:25 Collect GWMW15-S - 3 VOAs
- 16:00 Collect GWMW15-I - 3 VOAs
- 16:20 Collect GWMW-15-D - 3 VOAs
- 11:13 Collected NGMW01 - 3 VOAs earlier today
- 1 bucket (5-gal) of purge water to go to WTP tomorrow via I. Torres for disposal
- DA labels, Complete Chains of Custody
- 18:30 Leave site

Yes

Attachment C-3

Laboratory Reports

DBS&A
a Geo-Logic Company

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 14, 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.: 2211B57

Dear Jason Raucci:

Hall Environmental Analysis Laboratory received 36 sample(s) on 11/18/2022 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: CLC 18
Project: Griggs Walnut
Collection Date: 11/15/2022 9:36:00 AM
Lab ID: 2211B57-001
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst: **bcv**	
Arsenic	0.0021	0.0010		mg/L	1	11/29/2022 2:50:27 PM	A92872
Uranium	0.024	0.0025		mg/L	5	12/2/2022 10:34:36 AM	A92963

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: CLC 27
Project: Griggs Walnut
Collection Date: 11/15/2022 8:20:00 AM
Lab ID: 2211B57-002
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS						Analyst: **bcv**	
Arsenic	0.0015	0.0010		mg/L	1	11/29/2022 2:53:08 PM	A92872
Uranium	0.022	0.00050		mg/L	1	11/29/2022 2:53:08 PM	A92872

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW01-S
Project: Griggs Walnut
Collection Date: 11/15/2022 12:53:00 PM
Lab ID: 2211B57-003
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
Toluene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
Ethylbenzene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
Naphthalene	ND	2.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
1-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
2-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
Acetone	ND	10		µg/L	1	11/23/2022 1:32:00 PM	R92823
Bromobenzene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
Bromodichloromethane	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
Bromoform	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
Bromomethane	ND	3.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
2-Butanone	ND	10		µg/L	1	11/23/2022 1:32:00 PM	R92823
Carbon disulfide	ND	10		µg/L	1	11/23/2022 1:32:00 PM	R92823
Carbon Tetrachloride	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
Chlorobenzene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
Chloroethane	ND	2.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
Chloroform	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
Chloromethane	ND	3.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
2-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
4-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
cis-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
Dibromochloromethane	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
Dibromomethane	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
1,1-Dichloroethane	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
1,1-Dichloroethene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
1,2-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
1,3-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
2,2-Dichloropropane	ND	2.0		µg/L	1	11/23/2022 1:32:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW01-S
Project: Griggs Walnut **Collection Date:** 11/15/2022 12:53:00 PM
Lab ID: 2211B57-003 **Matrix:** GROUNDWA **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
Hexachlorobutadiene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
2-Hexanone	ND	10		µg/L	1	11/23/2022 1:32:00 PM	R92823
Isopropylbenzene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
4-Isopropyltoluene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
4-Methyl-2-pentanone	ND	10		µg/L	1	11/23/2022 1:32:00 PM	R92823
Methylene Chloride	ND	3.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
n-Butylbenzene	ND	3.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
n-Propylbenzene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
sec-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
Styrene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
tert-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
Tetrachloroethene (PCE)	1.2	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
trans-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
Trichlorofluoromethane	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
Vinyl chloride	ND	1.0		µg/L	1	11/23/2022 1:32:00 PM	R92823
Xylenes, Total	ND	1.5		µg/L	1	11/23/2022 1:32:00 PM	R92823
Surr: 1,2-Dichloroethane-d4	87.9	70-130		%Rec	1	11/23/2022 1:32:00 PM	R92823
Surr: 4-Bromofluorobenzene	98.6	70-130		%Rec	1	11/23/2022 1:32:00 PM	R92823
Surr: Dibromofluoromethane	89.5	70-130		%Rec	1	11/23/2022 1:32:00 PM	R92823
Surr: Toluene-d8	96.4	70-130		%Rec	1	11/23/2022 1:32:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW01-I
Project: Griggs Walnut
Collection Date: 11/15/2022 12:32:00 PM
Lab ID: 2211B57-004
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
Toluene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
Ethylbenzene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
Naphthalene	ND	2.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
1-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
2-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
Acetone	ND	10		µg/L	1	11/23/2022 1:56:00 PM	R92823
Bromobenzene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
Bromodichloromethane	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
Bromoform	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
Bromomethane	ND	3.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
2-Butanone	ND	10		µg/L	1	11/23/2022 1:56:00 PM	R92823
Carbon disulfide	ND	10		µg/L	1	11/23/2022 1:56:00 PM	R92823
Carbon Tetrachloride	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
Chlorobenzene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
Chloroethane	ND	2.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
Chloroform	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
Chloromethane	ND	3.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
2-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
4-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
cis-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
Dibromochloromethane	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
Dibromomethane	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
1,1-Dichloroethane	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
1,1-Dichloroethene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
1,2-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
1,3-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
2,2-Dichloropropane	ND	2.0		µg/L	1	11/23/2022 1:56:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW01-I
Project: Griggs Walnut **Collection Date:** 11/15/2022 12:32:00 PM
Lab ID: 2211B57-004 **Matrix:** GROUNDWA **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
Hexachlorobutadiene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
2-Hexanone	ND	10		µg/L	1	11/23/2022 1:56:00 PM	R92823
Isopropylbenzene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
4-Isopropyltoluene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
4-Methyl-2-pentanone	ND	10		µg/L	1	11/23/2022 1:56:00 PM	R92823
Methylene Chloride	ND	3.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
n-Butylbenzene	ND	3.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
n-Propylbenzene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
sec-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
Styrene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
tert-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
Tetrachloroethene (PCE)	7.8	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
trans-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
Trichlorofluoromethane	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
Vinyl chloride	ND	1.0		µg/L	1	11/23/2022 1:56:00 PM	R92823
Xylenes, Total	ND	1.5		µg/L	1	11/23/2022 1:56:00 PM	R92823
Surr: 1,2-Dichloroethane-d4	88.8	70-130		%Rec	1	11/23/2022 1:56:00 PM	R92823
Surr: 4-Bromofluorobenzene	97.6	70-130		%Rec	1	11/23/2022 1:56:00 PM	R92823
Surr: Dibromofluoromethane	87.6	70-130		%Rec	1	11/23/2022 1:56:00 PM	R92823
Surr: Toluene-d8	95.9	70-130		%Rec	1	11/23/2022 1:56:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW01-I_Dup
Project: Griggs Walnut
Collection Date: 11/15/2022 12:34:00 PM
Lab ID: 2211B57-005
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
Toluene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
Ethylbenzene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
Naphthalene	ND	2.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
1-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
2-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
Acetone	ND	10		µg/L	1	11/23/2022 2:19:00 PM	R92823
Bromobenzene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
Bromodichloromethane	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
Bromoform	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
Bromomethane	ND	3.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
2-Butanone	ND	10		µg/L	1	11/23/2022 2:19:00 PM	R92823
Carbon disulfide	ND	10		µg/L	1	11/23/2022 2:19:00 PM	R92823
Carbon Tetrachloride	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
Chlorobenzene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
Chloroethane	ND	2.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
Chloroform	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
Chloromethane	ND	3.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
2-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
4-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
cis-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
Dibromochloromethane	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
Dibromomethane	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
1,1-Dichloroethane	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
1,1-Dichloroethene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
1,2-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
1,3-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
2,2-Dichloropropane	ND	2.0		µg/L	1	11/23/2022 2:19:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW01-I_Dup
Project: Griggs Walnut
Collection Date: 11/15/2022 12:34:00 PM
Lab ID: 2211B57-005
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
Hexachlorobutadiene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
2-Hexanone	ND	10		µg/L	1	11/23/2022 2:19:00 PM	R92823
Isopropylbenzene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
4-Isopropyltoluene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
4-Methyl-2-pentanone	ND	10		µg/L	1	11/23/2022 2:19:00 PM	R92823
Methylene Chloride	ND	3.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
n-Butylbenzene	ND	3.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
n-Propylbenzene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
sec-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
Styrene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
tert-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
Tetrachloroethene (PCE)	7.9	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
trans-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
Trichlorofluoromethane	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
Vinyl chloride	ND	1.0		µg/L	1	11/23/2022 2:19:00 PM	R92823
Xylenes, Total	ND	1.5		µg/L	1	11/23/2022 2:19:00 PM	R92823
Surr: 1,2-Dichloroethane-d4	88.5	70-130		%Rec	1	11/23/2022 2:19:00 PM	R92823
Surr: 4-Bromofluorobenzene	98.9	70-130		%Rec	1	11/23/2022 2:19:00 PM	R92823
Surr: Dibromofluoromethane	88.5	70-130		%Rec	1	11/23/2022 2:19:00 PM	R92823
Surr: Toluene-d8	95.4	70-130		%Rec	1	11/23/2022 2:19:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW01-D
Project: Griggs Walnut **Collection Date:** 11/15/2022 12:06:00 PM
Lab ID: 2211B57-006 **Matrix:** GROUNDWA **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	16	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
Toluene	1.8	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
Ethylbenzene	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
Naphthalene	ND	2.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
1-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
2-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
Acetone	ND	10		µg/L	1	11/23/2022 2:42:00 PM	R92823
Bromobenzene	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
Bromodichloromethane	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
Bromoform	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
Bromomethane	ND	3.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
2-Butanone	ND	10		µg/L	1	11/23/2022 2:42:00 PM	R92823
Carbon disulfide	ND	10		µg/L	1	11/23/2022 2:42:00 PM	R92823
Carbon Tetrachloride	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
Chlorobenzene	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
Chloroethane	ND	2.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
Chloroform	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
Chloromethane	ND	3.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
2-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
4-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
cis-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
Dibromochloromethane	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
Dibromomethane	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
1,1-Dichloroethane	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
1,1-Dichloroethene	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
1,2-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
1,3-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
2,2-Dichloropropane	ND	2.0		µg/L	1	11/23/2022 2:42:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW01-D
Project: Griggs Walnut **Collection Date:** 11/15/2022 12:06:00 PM
Lab ID: 2211B57-006 **Matrix:** GROUNDWA **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
Hexachlorobutadiene	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
2-Hexanone	ND	10		µg/L	1	11/23/2022 2:42:00 PM	R92823
Isopropylbenzene	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
4-Isopropyltoluene	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
4-Methyl-2-pentanone	ND	10		µg/L	1	11/23/2022 2:42:00 PM	R92823
Methylene Chloride	ND	3.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
n-Butylbenzene	ND	3.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
n-Propylbenzene	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
sec-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
Styrene	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
tert-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
trans-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
Trichlorofluoromethane	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
Vinyl chloride	ND	1.0		µg/L	1	11/23/2022 2:42:00 PM	R92823
Xylenes, Total	ND	1.5		µg/L	1	11/23/2022 2:42:00 PM	R92823
Surr: 1,2-Dichloroethane-d4	89.4	70-130		%Rec	1	11/23/2022 2:42:00 PM	R92823
Surr: 4-Bromofluorobenzene	96.9	70-130		%Rec	1	11/23/2022 2:42:00 PM	R92823
Surr: Dibromofluoromethane	90.9	70-130		%Rec	1	11/23/2022 2:42:00 PM	R92823
Surr: Toluene-d8	95.7	70-130		%Rec	1	11/23/2022 2:42:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW08-S
Project: Griggs Walnut **Collection Date:** 11/15/2022 4:00:00 PM
Lab ID: 2211B57-007 **Matrix:** GROUNDWA **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
Toluene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
Ethylbenzene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
Naphthalene	ND	2.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
1-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
2-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
Acetone	ND	10		µg/L	1	11/23/2022 3:05:00 PM	R92823
Bromobenzene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
Bromodichloromethane	2.1	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
Bromoform	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
Bromomethane	ND	3.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
2-Butanone	ND	10		µg/L	1	11/23/2022 3:05:00 PM	R92823
Carbon disulfide	ND	10		µg/L	1	11/23/2022 3:05:00 PM	R92823
Carbon Tetrachloride	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
Chlorobenzene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
Chloroethane	ND	2.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
Chloroform	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
Chloromethane	ND	3.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
2-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
4-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
cis-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
Dibromochloromethane	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
Dibromomethane	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
1,1-Dichloroethane	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
1,1-Dichloroethene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
1,2-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
1,3-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
2,2-Dichloropropane	ND	2.0		µg/L	1	11/23/2022 3:05:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW08-S
Project: Griggs Walnut
Collection Date: 11/15/2022 4:00:00 PM
Lab ID: 2211B57-007
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
Hexachlorobutadiene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
2-Hexanone	ND	10		µg/L	1	11/23/2022 3:05:00 PM	R92823
Isopropylbenzene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
4-Isopropyltoluene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
4-Methyl-2-pentanone	ND	10		µg/L	1	11/23/2022 3:05:00 PM	R92823
Methylene Chloride	ND	3.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
n-Butylbenzene	ND	3.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
n-Propylbenzene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
sec-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
Styrene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
tert-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
trans-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
Trichlorofluoromethane	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
Vinyl chloride	ND	1.0		µg/L	1	11/23/2022 3:05:00 PM	R92823
Xylenes, Total	ND	1.5		µg/L	1	11/23/2022 3:05:00 PM	R92823
Surr: 1,2-Dichloroethane-d4	89.0	70-130		%Rec	1	11/23/2022 3:05:00 PM	R92823
Surr: 4-Bromofluorobenzene	95.4	70-130		%Rec	1	11/23/2022 3:05:00 PM	R92823
Surr: Dibromofluoromethane	90.2	70-130		%Rec	1	11/23/2022 3:05:00 PM	R92823
Surr: Toluene-d8	93.4	70-130		%Rec	1	11/23/2022 3:05:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW08-D
Project: Griggs Walnut **Collection Date:** 11/15/2022 4:23:00 PM
Lab ID: 2211B57-008 **Matrix:** GROUNDWA **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	1.7	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
Toluene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
Ethylbenzene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
Naphthalene	ND	2.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
1-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
2-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
Acetone	ND	10		µg/L	1	11/23/2022 4:14:00 PM	R92823
Bromobenzene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
Bromodichloromethane	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
Bromoform	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
Bromomethane	ND	3.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
2-Butanone	ND	10		µg/L	1	11/23/2022 4:14:00 PM	R92823
Carbon disulfide	ND	10		µg/L	1	11/23/2022 4:14:00 PM	R92823
Carbon Tetrachloride	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
Chlorobenzene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
Chloroethane	ND	2.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
Chloroform	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
Chloromethane	ND	3.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
2-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
4-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
cis-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
Dibromochloromethane	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
Dibromomethane	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
1,1-Dichloroethane	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
1,1-Dichloroethene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
1,2-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
1,3-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
2,2-Dichloropropane	ND	2.0		µg/L	1	11/23/2022 4:14:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW08-D
Project: Griggs Walnut
Collection Date: 11/15/2022 4:23:00 PM
Lab ID: 2211B57-008
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
Hexachlorobutadiene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
2-Hexanone	ND	10		µg/L	1	11/23/2022 4:14:00 PM	R92823
Isopropylbenzene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
4-Isopropyltoluene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
4-Methyl-2-pentanone	ND	10		µg/L	1	11/23/2022 4:14:00 PM	R92823
Methylene Chloride	ND	3.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
n-Butylbenzene	ND	3.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
n-Propylbenzene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
sec-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
Styrene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
tert-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
trans-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
Trichlorofluoromethane	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
Vinyl chloride	ND	1.0		µg/L	1	11/23/2022 4:14:00 PM	R92823
Xylenes, Total	ND	1.5		µg/L	1	11/23/2022 4:14:00 PM	R92823
Surr: 1,2-Dichloroethane-d4	90.6	70-130		%Rec	1	11/23/2022 4:14:00 PM	R92823
Surr: 4-Bromofluorobenzene	96.9	70-130		%Rec	1	11/23/2022 4:14:00 PM	R92823
Surr: Dibromofluoromethane	90.9	70-130		%Rec	1	11/23/2022 4:14:00 PM	R92823
Surr: Toluene-d8	94.6	70-130		%Rec	1	11/23/2022 4:14:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW09-S
Project: Griggs Walnut
Collection Date: 11/16/2022 10:51:00 AM
Lab ID: 2211B57-009
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
Toluene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
Ethylbenzene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
Naphthalene	ND	2.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
1-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
2-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
Acetone	ND	10		µg/L	1	11/23/2022 4:37:00 PM	R92823
Bromobenzene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
Bromodichloromethane	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
Bromoform	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
Bromomethane	ND	3.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
2-Butanone	ND	10		µg/L	1	11/23/2022 4:37:00 PM	R92823
Carbon disulfide	ND	10		µg/L	1	11/23/2022 4:37:00 PM	R92823
Carbon Tetrachloride	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
Chlorobenzene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
Chloroethane	ND	2.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
Chloroform	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
Chloromethane	ND	3.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
2-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
4-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
cis-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
Dibromochloromethane	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
Dibromomethane	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
1,1-Dichloroethane	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
1,1-Dichloroethene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
1,2-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
1,3-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
2,2-Dichloropropane	ND	2.0		µg/L	1	11/23/2022 4:37:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW09-S
Project: Griggs Walnut **Collection Date:** 11/16/2022 10:51:00 AM
Lab ID: 2211B57-009 **Matrix:** GROUNDWA **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
Hexachlorobutadiene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
2-Hexanone	ND	10		µg/L	1	11/23/2022 4:37:00 PM	R92823
Isopropylbenzene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
4-Isopropyltoluene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
4-Methyl-2-pentanone	ND	10		µg/L	1	11/23/2022 4:37:00 PM	R92823
Methylene Chloride	ND	3.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
n-Butylbenzene	ND	3.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
n-Propylbenzene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
sec-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
Styrene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
tert-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
trans-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
Trichlorofluoromethane	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
Vinyl chloride	ND	1.0		µg/L	1	11/23/2022 4:37:00 PM	R92823
Xylenes, Total	ND	1.5		µg/L	1	11/23/2022 4:37:00 PM	R92823
Surr: 1,2-Dichloroethane-d4	89.8	70-130		%Rec	1	11/23/2022 4:37:00 PM	R92823
Surr: 4-Bromofluorobenzene	96.0	70-130		%Rec	1	11/23/2022 4:37:00 PM	R92823
Surr: Dibromofluoromethane	91.1	70-130		%Rec	1	11/23/2022 4:37:00 PM	R92823
Surr: Toluene-d8	93.3	70-130		%Rec	1	11/23/2022 4:37:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW09-D1
Project: Griggs Walnut
Collection Date: 11/16/2022 10:20:00 AM
Lab ID: 2211B57-010
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
Toluene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
Ethylbenzene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
Methyl tert-butyl ether (MTBE)	1.2	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
Naphthalene	ND	2.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
1-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
2-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
Acetone	ND	10		µg/L	1	11/23/2022 5:00:00 PM	R92823
Bromobenzene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
Bromodichloromethane	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
Bromoform	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
Bromomethane	ND	3.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
2-Butanone	ND	10		µg/L	1	11/23/2022 5:00:00 PM	R92823
Carbon disulfide	ND	10		µg/L	1	11/23/2022 5:00:00 PM	R92823
Carbon Tetrachloride	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
Chlorobenzene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
Chloroethane	ND	2.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
Chloroform	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
Chloromethane	ND	3.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
2-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
4-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
cis-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
Dibromochloromethane	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
Dibromomethane	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
1,1-Dichloroethane	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
1,1-Dichloroethene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
1,2-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
1,3-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
2,2-Dichloropropane	ND	2.0		µg/L	1	11/23/2022 5:00:00 PM	R92823

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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	Above Quantitation Range/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
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW09-D1
Project: Griggs Walnut
Collection Date: 11/16/2022 10:20:00 AM
Lab ID: 2211B57-010
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
Hexachlorobutadiene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
2-Hexanone	ND	10		µg/L	1	11/23/2022 5:00:00 PM	R92823
Isopropylbenzene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
4-Isopropyltoluene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
4-Methyl-2-pentanone	ND	10		µg/L	1	11/23/2022 5:00:00 PM	R92823
Methylene Chloride	ND	3.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
n-Butylbenzene	ND	3.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
n-Propylbenzene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
sec-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
Styrene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
tert-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
Tetrachloroethene (PCE)	5.4	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
trans-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
Trichlorofluoromethane	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
Vinyl chloride	ND	1.0		µg/L	1	11/23/2022 5:00:00 PM	R92823
Xylenes, Total	ND	1.5		µg/L	1	11/23/2022 5:00:00 PM	R92823
Surr: 1,2-Dichloroethane-d4	93.0	70-130		%Rec	1	11/23/2022 5:00:00 PM	R92823
Surr: 4-Bromofluorobenzene	95.8	70-130		%Rec	1	11/23/2022 5:00:00 PM	R92823
Surr: Dibromofluoromethane	94.4	70-130		%Rec	1	11/23/2022 5:00:00 PM	R92823
Surr: Toluene-d8	94.8	70-130		%Rec	1	11/23/2022 5:00:00 PM	R92823

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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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW09-D2
Project: Griggs Walnut
Collection Date: 11/16/2022 10:33:00 AM
Lab ID: 2211B57-011
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	1.5	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
Toluene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
Ethylbenzene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
Naphthalene	ND	2.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
1-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
2-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
Acetone	ND	10		µg/L	1	11/23/2022 5:23:00 PM	R92823
Bromobenzene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
Bromodichloromethane	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
Bromoform	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
Bromomethane	ND	3.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
2-Butanone	ND	10		µg/L	1	11/23/2022 5:23:00 PM	R92823
Carbon disulfide	ND	10		µg/L	1	11/23/2022 5:23:00 PM	R92823
Carbon Tetrachloride	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
Chlorobenzene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
Chloroethane	ND	2.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
Chloroform	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
Chloromethane	ND	3.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
2-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
4-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
cis-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
Dibromochloromethane	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
Dibromomethane	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
1,1-Dichloroethane	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
1,1-Dichloroethene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
1,2-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
1,3-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
2,2-Dichloropropane	ND	2.0		µg/L	1	11/23/2022 5:23:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW09-D2
Project: Griggs Walnut
Collection Date: 11/16/2022 10:33:00 AM
Lab ID: 2211B57-011
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
Hexachlorobutadiene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
2-Hexanone	ND	10		µg/L	1	11/23/2022 5:23:00 PM	R92823
Isopropylbenzene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
4-Isopropyltoluene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
4-Methyl-2-pentanone	ND	10		µg/L	1	11/23/2022 5:23:00 PM	R92823
Methylene Chloride	ND	3.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
n-Butylbenzene	ND	3.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
n-Propylbenzene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
sec-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
Styrene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
tert-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
Tetrachloroethene (PCE)	4.9	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
trans-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
Trichlorofluoromethane	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
Vinyl chloride	ND	1.0		µg/L	1	11/23/2022 5:23:00 PM	R92823
Xylenes, Total	ND	1.5		µg/L	1	11/23/2022 5:23:00 PM	R92823
Surr: 1,2-Dichloroethane-d4	91.0	70-130		%Rec	1	11/23/2022 5:23:00 PM	R92823
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	11/23/2022 5:23:00 PM	R92823
Surr: Dibromofluoromethane	92.6	70-130		%Rec	1	11/23/2022 5:23:00 PM	R92823
Surr: Toluene-d8	95.3	70-130		%Rec	1	11/23/2022 5:23:00 PM	R92823

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW10-S
Project: Griggs Walnut
Collection Date: 11/16/2022 12:14:00 PM
Lab ID: 2211B57-012
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
Toluene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
Ethylbenzene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
Naphthalene	ND	2.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
1-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
2-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
Acetone	ND	10		µg/L	1	11/23/2022 5:46:00 PM	R92823
Bromobenzene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
Bromodichloromethane	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
Bromoform	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
Bromomethane	ND	3.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
2-Butanone	ND	10		µg/L	1	11/23/2022 5:46:00 PM	R92823
Carbon disulfide	ND	10		µg/L	1	11/23/2022 5:46:00 PM	R92823
Carbon Tetrachloride	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
Chlorobenzene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
Chloroethane	ND	2.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
Chloroform	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
Chloromethane	ND	3.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
2-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
4-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
cis-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
Dibromochloromethane	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
Dibromomethane	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
1,1-Dichloroethane	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
1,1-Dichloroethene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
1,2-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
1,3-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
2,2-Dichloropropane	ND	2.0		µg/L	1	11/23/2022 5:46:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW10-S
Project: Griggs Walnut
Collection Date: 11/16/2022 12:14:00 PM
Lab ID: 2211B57-012
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
Hexachlorobutadiene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
2-Hexanone	ND	10		µg/L	1	11/23/2022 5:46:00 PM	R92823
Isopropylbenzene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
4-Isopropyltoluene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
4-Methyl-2-pentanone	ND	10		µg/L	1	11/23/2022 5:46:00 PM	R92823
Methylene Chloride	ND	3.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
n-Butylbenzene	ND	3.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
n-Propylbenzene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
sec-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
Styrene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
tert-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
Tetrachloroethene (PCE)	3.1	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
trans-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
Trichlorofluoromethane	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
Vinyl chloride	ND	1.0		µg/L	1	11/23/2022 5:46:00 PM	R92823
Xylenes, Total	ND	1.5		µg/L	1	11/23/2022 5:46:00 PM	R92823
Surr: 1,2-Dichloroethane-d4	90.3	70-130		%Rec	1	11/23/2022 5:46:00 PM	R92823
Surr: 4-Bromofluorobenzene	96.3	70-130		%Rec	1	11/23/2022 5:46:00 PM	R92823
Surr: Dibromofluoromethane	93.1	70-130		%Rec	1	11/23/2022 5:46:00 PM	R92823
Surr: Toluene-d8	94.7	70-130		%Rec	1	11/23/2022 5:46:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW10-I
Project: Griggs Walnut
Collection Date: 11/16/2022 1:40:00 PM
Lab ID: 2211B57-013
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
Toluene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
Ethylbenzene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
Naphthalene	ND	2.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
1-Methylnaphthalene	ND	4.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
2-Methylnaphthalene	ND	4.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
Acetone	ND	10		µg/L	1	11/29/2022 12:42:00 PM	R92881
Bromobenzene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
Bromodichloromethane	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
Bromoform	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
Bromomethane	ND	3.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
2-Butanone	ND	10		µg/L	1	11/29/2022 12:42:00 PM	R92881
Carbon disulfide	ND	10		µg/L	1	11/29/2022 12:42:00 PM	R92881
Carbon Tetrachloride	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
Chlorobenzene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
Chloroethane	ND	2.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
Chloroform	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
Chloromethane	ND	3.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
2-Chlorotoluene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
4-Chlorotoluene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
cis-1,2-DCE	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
Dibromochloromethane	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
Dibromomethane	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
1,1-Dichloroethane	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
1,1-Dichloroethene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
1,2-Dichloropropane	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
1,3-Dichloropropane	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
2,2-Dichloropropane	ND	2.0		µg/L	1	11/29/2022 12:42:00 PM	R92881

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW10-I
Project: Griggs Walnut **Collection Date:** 11/16/2022 1:40:00 PM
Lab ID: 2211B57-013 **Matrix:** GROUNDWA **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
Hexachlorobutadiene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
2-Hexanone	ND	10		µg/L	1	11/29/2022 12:42:00 PM	R92881
Isopropylbenzene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
4-Isopropyltoluene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
4-Methyl-2-pentanone	ND	10		µg/L	1	11/29/2022 12:42:00 PM	R92881
Methylene Chloride	ND	3.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
n-Butylbenzene	ND	3.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
n-Propylbenzene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
sec-Butylbenzene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
Styrene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
tert-Butylbenzene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
Tetrachloroethene (PCE)	33	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
trans-1,2-DCE	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
Trichlorofluoromethane	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
Vinyl chloride	ND	1.0		µg/L	1	11/29/2022 12:42:00 PM	R92881
Xylenes, Total	ND	1.5		µg/L	1	11/29/2022 12:42:00 PM	R92881
Surr: 1,2-Dichloroethane-d4	96.9	70-130		%Rec	1	11/29/2022 12:42:00 PM	R92881
Surr: 4-Bromofluorobenzene	94.7	70-130		%Rec	1	11/29/2022 12:42:00 PM	R92881
Surr: Dibromofluoromethane	97.8	70-130		%Rec	1	11/29/2022 12:42:00 PM	R92881
Surr: Toluene-d8	93.7	70-130		%Rec	1	11/29/2022 12:42:00 PM	R92881

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW10-D
Project: Griggs Walnut
Collection Date: 11/16/2022 2:05:00 PM
Lab ID: 2211B57-014
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	1.2	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
Toluene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
Ethylbenzene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
Naphthalene	ND	2.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
1-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
2-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
Acetone	ND	10		µg/L	1	11/23/2022 6:09:00 PM	R92823
Bromobenzene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
Bromodichloromethane	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
Bromoform	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
Bromomethane	ND	3.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
2-Butanone	ND	10		µg/L	1	11/23/2022 6:09:00 PM	R92823
Carbon disulfide	ND	10		µg/L	1	11/23/2022 6:09:00 PM	R92823
Carbon Tetrachloride	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
Chlorobenzene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
Chloroethane	ND	2.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
Chloroform	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
Chloromethane	ND	3.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
2-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
4-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
cis-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
Dibromochloromethane	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
Dibromomethane	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
1,1-Dichloroethane	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
1,1-Dichloroethene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
1,2-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
1,3-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
2,2-Dichloropropane	ND	2.0		µg/L	1	11/23/2022 6:09:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW10-D
Project: Griggs Walnut
Collection Date: 11/16/2022 2:05:00 PM
Lab ID: 2211B57-014
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
Hexachlorobutadiene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
2-Hexanone	ND	10		µg/L	1	11/23/2022 6:09:00 PM	R92823
Isopropylbenzene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
4-Isopropyltoluene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
4-Methyl-2-pentanone	ND	10		µg/L	1	11/23/2022 6:09:00 PM	R92823
Methylene Chloride	ND	3.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
n-Butylbenzene	ND	3.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
n-Propylbenzene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
sec-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
Styrene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
tert-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
Tetrachloroethene (PCE)	1.3	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
trans-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
Trichlorofluoromethane	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
Vinyl chloride	ND	1.0		µg/L	1	11/23/2022 6:09:00 PM	R92823
Xylenes, Total	ND	1.5		µg/L	1	11/23/2022 6:09:00 PM	R92823
Surr: 1,2-Dichloroethane-d4	92.2	70-130		%Rec	1	11/23/2022 6:09:00 PM	R92823
Surr: 4-Bromofluorobenzene	92.7	70-130		%Rec	1	11/23/2022 6:09:00 PM	R92823
Surr: Dibromofluoromethane	93.6	70-130		%Rec	1	11/23/2022 6:09:00 PM	R92823
Surr: Toluene-d8	94.1	70-130		%Rec	1	11/23/2022 6:09:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW11-S
Project: Griggs Walnut
Collection Date: 11/16/2022 2:25:00 PM
Lab ID: 2211B57-015
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
Toluene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
Ethylbenzene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
Naphthalene	ND	2.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
1-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
2-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
Acetone	ND	10		µg/L	1	11/23/2022 6:32:00 PM	R92823
Bromobenzene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
Bromodichloromethane	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
Bromoform	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
Bromomethane	ND	3.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
2-Butanone	ND	10		µg/L	1	11/23/2022 6:32:00 PM	R92823
Carbon disulfide	ND	10		µg/L	1	11/23/2022 6:32:00 PM	R92823
Carbon Tetrachloride	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
Chlorobenzene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
Chloroethane	ND	2.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
Chloroform	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
Chloromethane	ND	3.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
2-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
4-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
cis-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
Dibromochloromethane	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
Dibromomethane	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
1,1-Dichloroethane	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
1,1-Dichloroethene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
1,2-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
1,3-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
2,2-Dichloropropane	ND	2.0		µg/L	1	11/23/2022 6:32:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW11-S
Project: Griggs Walnut **Collection Date:** 11/16/2022 2:25:00 PM
Lab ID: 2211B57-015 **Matrix:** GROUNDWA **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
Hexachlorobutadiene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
2-Hexanone	ND	10		µg/L	1	11/23/2022 6:32:00 PM	R92823
Isopropylbenzene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
4-Isopropyltoluene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
4-Methyl-2-pentanone	ND	10		µg/L	1	11/23/2022 6:32:00 PM	R92823
Methylene Chloride	ND	3.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
n-Butylbenzene	ND	3.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
n-Propylbenzene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
sec-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
Styrene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
tert-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
trans-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
Trichlorofluoromethane	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
Vinyl chloride	ND	1.0		µg/L	1	11/23/2022 6:32:00 PM	R92823
Xylenes, Total	ND	1.5		µg/L	1	11/23/2022 6:32:00 PM	R92823
Surr: 1,2-Dichloroethane-d4	91.5	70-130		%Rec	1	11/23/2022 6:32:00 PM	R92823
Surr: 4-Bromofluorobenzene	96.4	70-130		%Rec	1	11/23/2022 6:32:00 PM	R92823
Surr: Dibromofluoromethane	92.3	70-130		%Rec	1	11/23/2022 6:32:00 PM	R92823
Surr: Toluene-d8	93.6	70-130		%Rec	1	11/23/2022 6:32:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW11-I
Project: Griggs Walnut
Collection Date: 11/16/2022 2:35:00 PM
Lab ID: 2211B57-016
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
Toluene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
Ethylbenzene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
Naphthalene	ND	2.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
1-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
2-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
Acetone	ND	10		µg/L	1	11/23/2022 6:55:00 PM	R92823
Bromobenzene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
Bromodichloromethane	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
Bromoform	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
Bromomethane	ND	3.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
2-Butanone	ND	10		µg/L	1	11/23/2022 6:55:00 PM	R92823
Carbon disulfide	ND	10		µg/L	1	11/23/2022 6:55:00 PM	R92823
Carbon Tetrachloride	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
Chlorobenzene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
Chloroethane	ND	2.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
Chloroform	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
Chloromethane	ND	3.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
2-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
4-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
cis-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
Dibromochloromethane	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
Dibromomethane	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
1,1-Dichloroethane	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
1,1-Dichloroethene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
1,2-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
1,3-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
2,2-Dichloropropane	ND	2.0		µg/L	1	11/23/2022 6:55:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW11-I
Project: Griggs Walnut
Collection Date: 11/16/2022 2:35:00 PM
Lab ID: 2211B57-016
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
Hexachlorobutadiene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
2-Hexanone	ND	10		µg/L	1	11/23/2022 6:55:00 PM	R92823
Isopropylbenzene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
4-Isopropyltoluene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
4-Methyl-2-pentanone	ND	10		µg/L	1	11/23/2022 6:55:00 PM	R92823
Methylene Chloride	ND	3.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
n-Butylbenzene	ND	3.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
n-Propylbenzene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
sec-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
Styrene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
tert-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
Tetrachloroethene (PCE)	1.9	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
trans-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
Trichlorofluoromethane	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
Vinyl chloride	ND	1.0		µg/L	1	11/23/2022 6:55:00 PM	R92823
Xylenes, Total	ND	1.5		µg/L	1	11/23/2022 6:55:00 PM	R92823
Surr: 1,2-Dichloroethane-d4	91.6	70-130		%Rec	1	11/23/2022 6:55:00 PM	R92823
Surr: 4-Bromofluorobenzene	96.0	70-130		%Rec	1	11/23/2022 6:55:00 PM	R92823
Surr: Dibromofluoromethane	93.7	70-130		%Rec	1	11/23/2022 6:55:00 PM	R92823
Surr: Toluene-d8	93.9	70-130		%Rec	1	11/23/2022 6:55:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW11-D
Project: Griggs Walnut **Collection Date:** 11/16/2022 2:45:00 PM
Lab ID: 2211B57-017 **Matrix:** GROUNDWA **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
Toluene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
Ethylbenzene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
Naphthalene	ND	2.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
1-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
2-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
Acetone	ND	10		µg/L	1	11/23/2022 7:18:00 PM	R92823
Bromobenzene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
Bromodichloromethane	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
Bromoform	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
Bromomethane	ND	3.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
2-Butanone	ND	10		µg/L	1	11/23/2022 7:18:00 PM	R92823
Carbon disulfide	ND	10		µg/L	1	11/23/2022 7:18:00 PM	R92823
Carbon Tetrachloride	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
Chlorobenzene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
Chloroethane	ND	2.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
Chloroform	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
Chloromethane	ND	3.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
2-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
4-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
cis-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
Dibromochloromethane	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
Dibromomethane	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
1,1-Dichloroethane	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
1,1-Dichloroethene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
1,2-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
1,3-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
2,2-Dichloropropane	ND	2.0		µg/L	1	11/23/2022 7:18:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW11-D
Project: Griggs Walnut **Collection Date:** 11/16/2022 2:45:00 PM
Lab ID: 2211B57-017 **Matrix:** GROUNDWA **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
Hexachlorobutadiene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
2-Hexanone	ND	10		µg/L	1	11/23/2022 7:18:00 PM	R92823
Isopropylbenzene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
4-Isopropyltoluene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
4-Methyl-2-pentanone	ND	10		µg/L	1	11/23/2022 7:18:00 PM	R92823
Methylene Chloride	ND	3.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
n-Butylbenzene	ND	3.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
n-Propylbenzene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
sec-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
Styrene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
tert-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
trans-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
Trichlorofluoromethane	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
Vinyl chloride	ND	1.0		µg/L	1	11/23/2022 7:18:00 PM	R92823
Xylenes, Total	ND	1.5		µg/L	1	11/23/2022 7:18:00 PM	R92823
Surr: 1,2-Dichloroethane-d4	91.1	70-130		%Rec	1	11/23/2022 7:18:00 PM	R92823
Surr: 4-Bromofluorobenzene	95.8	70-130		%Rec	1	11/23/2022 7:18:00 PM	R92823
Surr: Dibromofluoromethane	92.9	70-130		%Rec	1	11/23/2022 7:18:00 PM	R92823
Surr: Toluene-d8	94.3	70-130		%Rec	1	11/23/2022 7:18:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW15-S
Project: Griggs Walnut **Collection Date:** 11/16/2022 3:25:00 PM
Lab ID: 2211B57-018 **Matrix:** GROUNDWA **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
Toluene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
Ethylbenzene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
Naphthalene	ND	2.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
1-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
2-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
Acetone	ND	10		µg/L	1	11/23/2022 7:41:00 PM	R92823
Bromobenzene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
Bromodichloromethane	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
Bromoform	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
Bromomethane	ND	3.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
2-Butanone	ND	10		µg/L	1	11/23/2022 7:41:00 PM	R92823
Carbon disulfide	ND	10		µg/L	1	11/23/2022 7:41:00 PM	R92823
Carbon Tetrachloride	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
Chlorobenzene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
Chloroethane	ND	2.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
Chloroform	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
Chloromethane	ND	3.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
2-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
4-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
cis-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
Dibromochloromethane	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
Dibromomethane	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
1,1-Dichloroethane	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
1,1-Dichloroethene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
1,2-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
1,3-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
2,2-Dichloropropane	ND	2.0		µg/L	1	11/23/2022 7:41:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW15-S
Project: Griggs Walnut **Collection Date:** 11/16/2022 3:25:00 PM
Lab ID: 2211B57-018 **Matrix:** GROUNDWA **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
Hexachlorobutadiene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
2-Hexanone	ND	10		µg/L	1	11/23/2022 7:41:00 PM	R92823
Isopropylbenzene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
4-Isopropyltoluene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
4-Methyl-2-pentanone	ND	10		µg/L	1	11/23/2022 7:41:00 PM	R92823
Methylene Chloride	ND	3.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
n-Butylbenzene	ND	3.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
n-Propylbenzene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
sec-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
Styrene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
tert-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
trans-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
Trichlorofluoromethane	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
Vinyl chloride	ND	1.0		µg/L	1	11/23/2022 7:41:00 PM	R92823
Xylenes, Total	ND	1.5		µg/L	1	11/23/2022 7:41:00 PM	R92823
Surr: 1,2-Dichloroethane-d4	92.3	70-130		%Rec	1	11/23/2022 7:41:00 PM	R92823
Surr: 4-Bromofluorobenzene	93.1	70-130		%Rec	1	11/23/2022 7:41:00 PM	R92823
Surr: Dibromofluoromethane	92.5	70-130		%Rec	1	11/23/2022 7:41:00 PM	R92823
Surr: Toluene-d8	94.5	70-130		%Rec	1	11/23/2022 7:41:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW15-I
Project: Griggs Walnut
Collection Date: 11/16/2022 4:00:00 PM
Lab ID: 2211B57-019
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
Toluene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
Ethylbenzene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
Naphthalene	ND	2.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
1-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
2-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
Acetone	ND	10		µg/L	1	11/23/2022 8:04:00 PM	R92823
Bromobenzene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
Bromodichloromethane	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
Bromoform	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
Bromomethane	ND	3.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
2-Butanone	ND	10		µg/L	1	11/23/2022 8:04:00 PM	R92823
Carbon disulfide	ND	10		µg/L	1	11/23/2022 8:04:00 PM	R92823
Carbon Tetrachloride	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
Chlorobenzene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
Chloroethane	ND	2.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
Chloroform	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
Chloromethane	ND	3.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
2-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
4-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
cis-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
Dibromochloromethane	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
Dibromomethane	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
1,1-Dichloroethane	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
1,1-Dichloroethene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
1,2-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
1,3-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
2,2-Dichloropropane	ND	2.0		µg/L	1	11/23/2022 8:04:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW15-I
Project: Griggs Walnut **Collection Date:** 11/16/2022 4:00:00 PM
Lab ID: 2211B57-019 **Matrix:** GROUNDWA **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
Hexachlorobutadiene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
2-Hexanone	ND	10		µg/L	1	11/23/2022 8:04:00 PM	R92823
Isopropylbenzene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
4-Isopropyltoluene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
4-Methyl-2-pentanone	ND	10		µg/L	1	11/23/2022 8:04:00 PM	R92823
Methylene Chloride	ND	3.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
n-Butylbenzene	ND	3.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
n-Propylbenzene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
sec-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
Styrene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
tert-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
Tetrachloroethene (PCE)	21	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
trans-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
Trichlorofluoromethane	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
Vinyl chloride	ND	1.0		µg/L	1	11/23/2022 8:04:00 PM	R92823
Xylenes, Total	ND	1.5		µg/L	1	11/23/2022 8:04:00 PM	R92823
Surr: 1,2-Dichloroethane-d4	92.7	70-130		%Rec	1	11/23/2022 8:04:00 PM	R92823
Surr: 4-Bromofluorobenzene	95.7	70-130		%Rec	1	11/23/2022 8:04:00 PM	R92823
Surr: Dibromofluoromethane	92.0	70-130		%Rec	1	11/23/2022 8:04:00 PM	R92823
Surr: Toluene-d8	93.3	70-130		%Rec	1	11/23/2022 8:04:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW15-D
Project: Griggs Walnut **Collection Date:** 11/16/2022 4:20:00 PM
Lab ID: 2211B57-020 **Matrix:** GROUNDWA **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
Toluene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
Ethylbenzene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
Naphthalene	ND	2.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
1-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
2-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
Acetone	ND	10		µg/L	1	11/23/2022 8:27:00 PM	R92823
Bromobenzene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
Bromodichloromethane	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
Bromoform	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
Bromomethane	ND	3.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
2-Butanone	ND	10		µg/L	1	11/23/2022 8:27:00 PM	R92823
Carbon disulfide	ND	10		µg/L	1	11/23/2022 8:27:00 PM	R92823
Carbon Tetrachloride	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
Chlorobenzene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
Chloroethane	ND	2.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
Chloroform	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
Chloromethane	ND	3.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
2-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
4-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
cis-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
Dibromochloromethane	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
Dibromomethane	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
1,1-Dichloroethane	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
1,1-Dichloroethene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
1,2-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
1,3-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
2,2-Dichloropropane	ND	2.0		µg/L	1	11/23/2022 8:27:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW15-D
Project: Griggs Walnut
Collection Date: 11/16/2022 4:20:00 PM
Lab ID: 2211B57-020
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
Hexachlorobutadiene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
2-Hexanone	ND	10		µg/L	1	11/23/2022 8:27:00 PM	R92823
Isopropylbenzene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
4-Isopropyltoluene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
4-Methyl-2-pentanone	ND	10		µg/L	1	11/23/2022 8:27:00 PM	R92823
Methylene Chloride	ND	3.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
n-Butylbenzene	ND	3.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
n-Propylbenzene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
sec-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
Styrene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
tert-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
Tetrachloroethene (PCE)	1.4	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
trans-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
Trichlorofluoromethane	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
Vinyl chloride	ND	1.0		µg/L	1	11/23/2022 8:27:00 PM	R92823
Xylenes, Total	ND	1.5		µg/L	1	11/23/2022 8:27:00 PM	R92823
Surr: 1,2-Dichloroethane-d4	92.8	70-130		%Rec	1	11/23/2022 8:27:00 PM	R92823
Surr: 4-Bromofluorobenzene	95.1	70-130		%Rec	1	11/23/2022 8:27:00 PM	R92823
Surr: Dibromofluoromethane	93.8	70-130		%Rec	1	11/23/2022 8:27:00 PM	R92823
Surr: Toluene-d8	92.7	70-130		%Rec	1	11/23/2022 8:27:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW16-S
Project: Griggs Walnut
Collection Date: 11/16/2022 8:20:00 AM
Lab ID: 2211B57-021
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
Toluene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
Ethylbenzene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
Naphthalene	ND	2.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
1-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
2-Methylnaphthalene	ND	4.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
Acetone	ND	10		µg/L	1	11/23/2022 8:50:00 PM	R92823
Bromobenzene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
Bromodichloromethane	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
Bromoform	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
Bromomethane	ND	3.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
2-Butanone	ND	10		µg/L	1	11/23/2022 8:50:00 PM	R92823
Carbon disulfide	ND	10		µg/L	1	11/23/2022 8:50:00 PM	R92823
Carbon Tetrachloride	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
Chlorobenzene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
Chloroethane	ND	2.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
Chloroform	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
Chloromethane	ND	3.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
2-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
4-Chlorotoluene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
cis-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
Dibromochloromethane	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
Dibromomethane	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
1,1-Dichloroethane	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
1,1-Dichloroethene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
1,2-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
1,3-Dichloropropane	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
2,2-Dichloropropane	ND	2.0		µg/L	1	11/23/2022 8:50:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW16-S
Project: Griggs Walnut
Collection Date: 11/16/2022 8:20:00 AM
Lab ID: 2211B57-021
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
Hexachlorobutadiene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
2-Hexanone	ND	10		µg/L	1	11/23/2022 8:50:00 PM	R92823
Isopropylbenzene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
4-Isopropyltoluene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
4-Methyl-2-pentanone	ND	10		µg/L	1	11/23/2022 8:50:00 PM	R92823
Methylene Chloride	ND	3.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
n-Butylbenzene	ND	3.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
n-Propylbenzene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
sec-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
Styrene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
tert-Butylbenzene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
Tetrachloroethene (PCE)	6.5	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
trans-1,2-DCE	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
Trichlorofluoromethane	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
Vinyl chloride	ND	1.0		µg/L	1	11/23/2022 8:50:00 PM	R92823
Xylenes, Total	ND	1.5		µg/L	1	11/23/2022 8:50:00 PM	R92823
Surr: 1,2-Dichloroethane-d4	91.1	70-130		%Rec	1	11/23/2022 8:50:00 PM	R92823
Surr: 4-Bromofluorobenzene	96.8	70-130		%Rec	1	11/23/2022 8:50:00 PM	R92823
Surr: Dibromofluoromethane	92.6	70-130		%Rec	1	11/23/2022 8:50:00 PM	R92823
Surr: Toluene-d8	92.9	70-130		%Rec	1	11/23/2022 8:50:00 PM	R92823

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** GWMW16-D
Project: Griggs Walnut **Collection Date:** 11/16/2022 8:12:00 AM
Lab ID: 2211B57-022 **Matrix:** GROUNDWA **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
Toluene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
Ethylbenzene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
Naphthalene	ND	2.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
1-Methylnaphthalene	ND	4.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
2-Methylnaphthalene	ND	4.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
Acetone	ND	10		µg/L	1	11/29/2022 1:51:00 PM	R92881
Bromobenzene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
Bromodichloromethane	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
Bromoform	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
Bromomethane	ND	3.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
2-Butanone	ND	10		µg/L	1	11/29/2022 1:51:00 PM	R92881
Carbon disulfide	ND	10		µg/L	1	11/29/2022 1:51:00 PM	R92881
Carbon Tetrachloride	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
Chlorobenzene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
Chloroethane	ND	2.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
Chloroform	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
Chloromethane	ND	3.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
2-Chlorotoluene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
4-Chlorotoluene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
cis-1,2-DCE	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
Dibromochloromethane	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
Dibromomethane	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
1,1-Dichloroethane	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
1,1-Dichloroethene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
1,2-Dichloropropane	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
1,3-Dichloropropane	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
2,2-Dichloropropane	ND	2.0		µg/L	1	11/29/2022 1:51:00 PM	R92881

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW16-D
Project: Griggs Walnut
Collection Date: 11/16/2022 8:12:00 AM
Lab ID: 2211B57-022
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
Hexachlorobutadiene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
2-Hexanone	ND	10		µg/L	1	11/29/2022 1:51:00 PM	R92881
Isopropylbenzene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
4-Isopropyltoluene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
4-Methyl-2-pentanone	ND	10		µg/L	1	11/29/2022 1:51:00 PM	R92881
Methylene Chloride	ND	3.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
n-Butylbenzene	ND	3.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
n-Propylbenzene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
sec-Butylbenzene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
Styrene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
tert-Butylbenzene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
Tetrachloroethene (PCE)	24	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
trans-1,2-DCE	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
Trichloroethene (TCE)	1.1	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
Trichlorofluoromethane	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
Vinyl chloride	ND	1.0		µg/L	1	11/29/2022 1:51:00 PM	R92881
Xylenes, Total	ND	1.5		µg/L	1	11/29/2022 1:51:00 PM	R92881
Surr: 1,2-Dichloroethane-d4	99.4	70-130		%Rec	1	11/29/2022 1:51:00 PM	R92881
Surr: 4-Bromofluorobenzene	97.2	70-130		%Rec	1	11/29/2022 1:51:00 PM	R92881
Surr: Dibromofluoromethane	99.9	70-130		%Rec	1	11/29/2022 1:51:00 PM	R92881
Surr: Toluene-d8	92.6	70-130		%Rec	1	11/29/2022 1:51:00 PM	R92881

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW16-D_Dup
Project: Griggs Walnut
Collection Date: 11/16/2022 8:13:00 AM
Lab ID: 2211B57-023
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
Toluene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
Ethylbenzene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
Naphthalene	ND	2.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
1-Methylnaphthalene	ND	4.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
2-Methylnaphthalene	ND	4.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
Acetone	ND	10		µg/L	1	11/29/2022 2:14:00 PM	R92881
Bromobenzene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
Bromodichloromethane	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
Bromoform	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
Bromomethane	ND	3.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
2-Butanone	ND	10		µg/L	1	11/29/2022 2:14:00 PM	R92881
Carbon disulfide	ND	10		µg/L	1	11/29/2022 2:14:00 PM	R92881
Carbon Tetrachloride	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
Chlorobenzene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
Chloroethane	ND	2.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
Chloroform	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
Chloromethane	ND	3.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
2-Chlorotoluene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
4-Chlorotoluene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
cis-1,2-DCE	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
Dibromochloromethane	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
Dibromomethane	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
1,1-Dichloroethane	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
1,1-Dichloroethene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
1,2-Dichloropropane	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
1,3-Dichloropropane	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
2,2-Dichloropropane	ND	2.0		µg/L	1	11/29/2022 2:14:00 PM	R92881

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW16-D_Dup
Project: Griggs Walnut
Collection Date: 11/16/2022 8:13:00 AM
Lab ID: 2211B57-023
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
Hexachlorobutadiene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
2-Hexanone	ND	10		µg/L	1	11/29/2022 2:14:00 PM	R92881
Isopropylbenzene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
4-Isopropyltoluene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
4-Methyl-2-pentanone	ND	10		µg/L	1	11/29/2022 2:14:00 PM	R92881
Methylene Chloride	ND	3.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
n-Butylbenzene	ND	3.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
n-Propylbenzene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
sec-Butylbenzene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
Styrene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
tert-Butylbenzene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
Tetrachloroethene (PCE)	24	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
trans-1,2-DCE	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
Trichloroethene (TCE)	1.0	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
Trichlorofluoromethane	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
Vinyl chloride	ND	1.0		µg/L	1	11/29/2022 2:14:00 PM	R92881
Xylenes, Total	ND	1.5		µg/L	1	11/29/2022 2:14:00 PM	R92881
Surr: 1,2-Dichloroethane-d4	96.6	70-130		%Rec	1	11/29/2022 2:14:00 PM	R92881
Surr: 4-Bromofluorobenzene	93.6	70-130		%Rec	1	11/29/2022 2:14:00 PM	R92881
Surr: Dibromofluoromethane	99.1	70-130		%Rec	1	11/29/2022 2:14:00 PM	R92881
Surr: Toluene-d8	92.3	70-130		%Rec	1	11/29/2022 2:14:00 PM	R92881

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** MWSF2
Project: Griggs Walnut **Collection Date:** 11/15/2022 2:30:00 PM
Lab ID: 2211B57-024 **Matrix:** GROUNDWA **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
Toluene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
Ethylbenzene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
Naphthalene	ND	2.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
1-Methylnaphthalene	ND	4.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
2-Methylnaphthalene	ND	4.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
Acetone	ND	10		µg/L	1	11/29/2022 2:38:00 PM	R92881
Bromobenzene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
Bromodichloromethane	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
Bromoform	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
Bromomethane	ND	3.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
2-Butanone	ND	10		µg/L	1	11/29/2022 2:38:00 PM	R92881
Carbon disulfide	ND	10		µg/L	1	11/29/2022 2:38:00 PM	R92881
Carbon Tetrachloride	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
Chlorobenzene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
Chloroethane	ND	2.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
Chloroform	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
Chloromethane	ND	3.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
2-Chlorotoluene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
4-Chlorotoluene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
cis-1,2-DCE	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
Dibromochloromethane	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
Dibromomethane	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
1,1-Dichloroethane	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
1,1-Dichloroethene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
1,2-Dichloropropane	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
1,3-Dichloropropane	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
2,2-Dichloropropane	ND	2.0		µg/L	1	11/29/2022 2:38:00 PM	R92881

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** MWSF2
Project: Griggs Walnut **Collection Date:** 11/15/2022 2:30:00 PM
Lab ID: 2211B57-024 **Matrix:** GROUNDWA **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
Hexachlorobutadiene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
2-Hexanone	ND	10		µg/L	1	11/29/2022 2:38:00 PM	R92881
Isopropylbenzene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
4-Isopropyltoluene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
4-Methyl-2-pentanone	ND	10		µg/L	1	11/29/2022 2:38:00 PM	R92881
Methylene Chloride	ND	3.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
n-Butylbenzene	ND	3.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
n-Propylbenzene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
sec-Butylbenzene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
Styrene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
tert-Butylbenzene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
Tetrachloroethene (PCE)	1.8	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
trans-1,2-DCE	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
Trichlorofluoromethane	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
Vinyl chloride	ND	1.0		µg/L	1	11/29/2022 2:38:00 PM	R92881
Xylenes, Total	ND	1.5		µg/L	1	11/29/2022 2:38:00 PM	R92881
Surr: 1,2-Dichloroethane-d4	96.3	70-130		%Rec	1	11/29/2022 2:38:00 PM	R92881
Surr: 4-Bromofluorobenzene	95.0	70-130		%Rec	1	11/29/2022 2:38:00 PM	R92881
Surr: Dibromofluoromethane	98.3	70-130		%Rec	1	11/29/2022 2:38:00 PM	R92881
Surr: Toluene-d8	92.2	70-130		%Rec	1	11/29/2022 2:38:00 PM	R92881

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** MWSF5
Project: Griggs Walnut **Collection Date:** 11/15/2022 4:43:00 PM
Lab ID: 2211B57-025 **Matrix:** GROUNDWA **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
Toluene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
Ethylbenzene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
Naphthalene	ND	2.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
1-Methylnaphthalene	ND	4.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
2-Methylnaphthalene	ND	4.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
Acetone	ND	10		µg/L	1	11/29/2022 3:01:00 PM	R92881
Bromobenzene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
Bromodichloromethane	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
Bromoform	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
Bromomethane	ND	3.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
2-Butanone	ND	10		µg/L	1	11/29/2022 3:01:00 PM	R92881
Carbon disulfide	ND	10		µg/L	1	11/29/2022 3:01:00 PM	R92881
Carbon Tetrachloride	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
Chlorobenzene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
Chloroethane	ND	2.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
Chloroform	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
Chloromethane	ND	3.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
2-Chlorotoluene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
4-Chlorotoluene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
cis-1,2-DCE	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
Dibromochloromethane	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
Dibromomethane	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
1,1-Dichloroethane	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
1,1-Dichloroethene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
1,2-Dichloropropane	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
1,3-Dichloropropane	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
2,2-Dichloropropane	ND	2.0		µg/L	1	11/29/2022 3:01:00 PM	R92881

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: MWSF5
Project: Griggs Walnut
Collection Date: 11/15/2022 4:43:00 PM
Lab ID: 2211B57-025
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
Hexachlorobutadiene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
2-Hexanone	ND	10		µg/L	1	11/29/2022 3:01:00 PM	R92881
Isopropylbenzene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
4-Isopropyltoluene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
4-Methyl-2-pentanone	ND	10		µg/L	1	11/29/2022 3:01:00 PM	R92881
Methylene Chloride	ND	3.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
n-Butylbenzene	ND	3.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
n-Propylbenzene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
sec-Butylbenzene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
Styrene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
tert-Butylbenzene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
trans-1,2-DCE	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
Trichlorofluoromethane	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
Vinyl chloride	ND	1.0		µg/L	1	11/29/2022 3:01:00 PM	R92881
Xylenes, Total	ND	1.5		µg/L	1	11/29/2022 3:01:00 PM	R92881
Surr: 1,2-Dichloroethane-d4	96.7	70-130		%Rec	1	11/29/2022 3:01:00 PM	R92881
Surr: 4-Bromofluorobenzene	95.5	70-130		%Rec	1	11/29/2022 3:01:00 PM	R92881
Surr: Dibromofluoromethane	98.4	70-130		%Rec	1	11/29/2022 3:01:00 PM	R92881
Surr: Toluene-d8	93.6	70-130		%Rec	1	11/29/2022 3:01:00 PM	R92881

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: MWSF9
Project: Griggs Walnut
Collection Date: 11/16/2022 8:51:00 AM
Lab ID: 2211B57-026
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
Toluene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
Ethylbenzene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
Naphthalene	ND	2.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
1-Methylnaphthalene	ND	4.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
2-Methylnaphthalene	ND	4.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
Acetone	ND	10		µg/L	1	11/29/2022 3:24:00 PM	R92881
Bromobenzene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
Bromodichloromethane	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
Bromoform	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
Bromomethane	ND	3.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
2-Butanone	ND	10		µg/L	1	11/29/2022 3:24:00 PM	R92881
Carbon disulfide	ND	10		µg/L	1	11/29/2022 3:24:00 PM	R92881
Carbon Tetrachloride	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
Chlorobenzene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
Chloroethane	ND	2.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
Chloroform	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
Chloromethane	ND	3.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
2-Chlorotoluene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
4-Chlorotoluene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
cis-1,2-DCE	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
Dibromochloromethane	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
Dibromomethane	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
1,1-Dichloroethane	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
1,1-Dichloroethene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
1,2-Dichloropropane	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
1,3-Dichloropropane	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
2,2-Dichloropropane	ND	2.0		µg/L	1	11/29/2022 3:24:00 PM	R92881

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: MWSF9
Project: Griggs Walnut
Collection Date: 11/16/2022 8:51:00 AM
Lab ID: 2211B57-026
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
Hexachlorobutadiene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
2-Hexanone	ND	10		µg/L	1	11/29/2022 3:24:00 PM	R92881
Isopropylbenzene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
4-Isopropyltoluene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
4-Methyl-2-pentanone	ND	10		µg/L	1	11/29/2022 3:24:00 PM	R92881
Methylene Chloride	ND	3.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
n-Butylbenzene	ND	3.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
n-Propylbenzene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
sec-Butylbenzene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
Styrene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
tert-Butylbenzene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
trans-1,2-DCE	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
Trichlorofluoromethane	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
Vinyl chloride	ND	1.0		µg/L	1	11/29/2022 3:24:00 PM	R92881
Xylenes, Total	ND	1.5		µg/L	1	11/29/2022 3:24:00 PM	R92881
Surr: 1,2-Dichloroethane-d4	96.0	70-130		%Rec	1	11/29/2022 3:24:00 PM	R92881
Surr: 4-Bromofluorobenzene	93.9	70-130		%Rec	1	11/29/2022 3:24:00 PM	R92881
Surr: Dibromofluoromethane	98.7	70-130		%Rec	1	11/29/2022 3:24:00 PM	R92881
Surr: Toluene-d8	91.8	70-130		%Rec	1	11/29/2022 3:24:00 PM	R92881

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: MWSF10
Project: Griggs Walnut
Collection Date: 11/16/2022 9:50:00 AM
Lab ID: 2211B57-027
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
Toluene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
Ethylbenzene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
Naphthalene	ND	2.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
1-Methylnaphthalene	ND	4.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
2-Methylnaphthalene	ND	4.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
Acetone	ND	10		µg/L	1	11/29/2022 3:47:00 PM	R92881
Bromobenzene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
Bromodichloromethane	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
Bromoform	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
Bromomethane	ND	3.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
2-Butanone	ND	10		µg/L	1	11/29/2022 3:47:00 PM	R92881
Carbon disulfide	ND	10		µg/L	1	11/29/2022 3:47:00 PM	R92881
Carbon Tetrachloride	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
Chlorobenzene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
Chloroethane	ND	2.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
Chloroform	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
Chloromethane	ND	3.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
2-Chlorotoluene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
4-Chlorotoluene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
cis-1,2-DCE	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
Dibromochloromethane	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
Dibromomethane	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
1,1-Dichloroethane	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
1,1-Dichloroethene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
1,2-Dichloropropane	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
1,3-Dichloropropane	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
2,2-Dichloropropane	ND	2.0		µg/L	1	11/29/2022 3:47:00 PM	R92881

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: MWSF10
Project: Griggs Walnut
Collection Date: 11/16/2022 9:50:00 AM
Lab ID: 2211B57-027
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
Hexachlorobutadiene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
2-Hexanone	ND	10		µg/L	1	11/29/2022 3:47:00 PM	R92881
Isopropylbenzene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
4-Isopropyltoluene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
4-Methyl-2-pentanone	ND	10		µg/L	1	11/29/2022 3:47:00 PM	R92881
Methylene Chloride	ND	3.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
n-Butylbenzene	ND	3.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
n-Propylbenzene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
sec-Butylbenzene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
Styrene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
tert-Butylbenzene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
Tetrachloroethene (PCE)	12	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
trans-1,2-DCE	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
Trichlorofluoromethane	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
Vinyl chloride	ND	1.0		µg/L	1	11/29/2022 3:47:00 PM	R92881
Xylenes, Total	ND	1.5		µg/L	1	11/29/2022 3:47:00 PM	R92881
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	11/29/2022 3:47:00 PM	R92881
Surr: 4-Bromofluorobenzene	95.4	70-130		%Rec	1	11/29/2022 3:47:00 PM	R92881
Surr: Dibromofluoromethane	98.5	70-130		%Rec	1	11/29/2022 3:47:00 PM	R92881
Surr: Toluene-d8	94.1	70-130		%Rec	1	11/29/2022 3:47:00 PM	R92881

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** NGMW01
Project: Griggs Walnut **Collection Date:** 11/16/2022 11:13:00 AM
Lab ID: 2211B57-028 **Matrix:** GROUNDWA **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
Toluene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
Ethylbenzene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
Naphthalene	ND	2.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
1-Methylnaphthalene	ND	4.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
2-Methylnaphthalene	ND	4.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
Acetone	ND	10		µg/L	1	11/29/2022 4:10:00 PM	R92881
Bromobenzene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
Bromodichloromethane	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
Bromoform	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
Bromomethane	ND	3.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
2-Butanone	ND	10		µg/L	1	11/29/2022 4:10:00 PM	R92881
Carbon disulfide	ND	10		µg/L	1	11/29/2022 4:10:00 PM	R92881
Carbon Tetrachloride	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
Chlorobenzene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
Chloroethane	ND	2.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
Chloroform	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
Chloromethane	ND	3.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
2-Chlorotoluene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
4-Chlorotoluene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
cis-1,2-DCE	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
Dibromochloromethane	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
Dibromomethane	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
1,1-Dichloroethane	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
1,1-Dichloroethene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
1,2-Dichloropropane	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
1,3-Dichloropropane	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
2,2-Dichloropropane	ND	2.0		µg/L	1	11/29/2022 4:10:00 PM	R92881

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: NGMW01
Project: Griggs Walnut
Collection Date: 11/16/2022 11:13:00 AM
Lab ID: 2211B57-028
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
Hexachlorobutadiene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
2-Hexanone	ND	10		µg/L	1	11/29/2022 4:10:00 PM	R92881
Isopropylbenzene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
4-Isopropyltoluene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
4-Methyl-2-pentanone	ND	10		µg/L	1	11/29/2022 4:10:00 PM	R92881
Methylene Chloride	ND	3.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
n-Butylbenzene	ND	3.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
n-Propylbenzene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
sec-Butylbenzene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
Styrene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
tert-Butylbenzene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
trans-1,2-DCE	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
Trichlorofluoromethane	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
Vinyl chloride	ND	1.0		µg/L	1	11/29/2022 4:10:00 PM	R92881
Xylenes, Total	ND	1.5		µg/L	1	11/29/2022 4:10:00 PM	R92881
Surr: 1,2-Dichloroethane-d4	98.0	70-130		%Rec	1	11/29/2022 4:10:00 PM	R92881
Surr: 4-Bromofluorobenzene	95.6	70-130		%Rec	1	11/29/2022 4:10:00 PM	R92881
Surr: Dibromofluoromethane	96.9	70-130		%Rec	1	11/29/2022 4:10:00 PM	R92881
Surr: Toluene-d8	93.4	70-130		%Rec	1	11/29/2022 4:10:00 PM	R92881

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** NGMW02
Project: Griggs Walnut **Collection Date:** 11/15/2022 5:00:00 PM
Lab ID: 2211B57-029 **Matrix:** GROUNDWA **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
Toluene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
Ethylbenzene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
Naphthalene	ND	2.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
1-Methylnaphthalene	ND	4.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
2-Methylnaphthalene	ND	4.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
Acetone	ND	10		µg/L	1	11/29/2022 4:33:00 PM	R92881
Bromobenzene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
Bromodichloromethane	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
Bromoform	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
Bromomethane	ND	3.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
2-Butanone	ND	10		µg/L	1	11/29/2022 4:33:00 PM	R92881
Carbon disulfide	ND	10		µg/L	1	11/29/2022 4:33:00 PM	R92881
Carbon Tetrachloride	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
Chlorobenzene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
Chloroethane	ND	2.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
Chloroform	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
Chloromethane	ND	3.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
2-Chlorotoluene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
4-Chlorotoluene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
cis-1,2-DCE	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
Dibromochloromethane	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
Dibromomethane	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
1,1-Dichloroethane	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
1,1-Dichloroethene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
1,2-Dichloropropane	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
1,3-Dichloropropane	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
2,2-Dichloropropane	ND	2.0		µg/L	1	11/29/2022 4:33:00 PM	R92881

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** NGMW02
Project: Griggs Walnut **Collection Date:** 11/15/2022 5:00:00 PM
Lab ID: 2211B57-029 **Matrix:** GROUNDWA **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
Hexachlorobutadiene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
2-Hexanone	ND	10		µg/L	1	11/29/2022 4:33:00 PM	R92881
Isopropylbenzene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
4-Isopropyltoluene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
4-Methyl-2-pentanone	ND	10		µg/L	1	11/29/2022 4:33:00 PM	R92881
Methylene Chloride	ND	3.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
n-Butylbenzene	ND	3.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
n-Propylbenzene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
sec-Butylbenzene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
Styrene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
tert-Butylbenzene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
trans-1,2-DCE	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
Trichlorofluoromethane	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
Vinyl chloride	ND	1.0		µg/L	1	11/29/2022 4:33:00 PM	R92881
Xylenes, Total	ND	1.5		µg/L	1	11/29/2022 4:33:00 PM	R92881
Surr: 1,2-Dichloroethane-d4	97.4	70-130		%Rec	1	11/29/2022 4:33:00 PM	R92881
Surr: 4-Bromofluorobenzene	95.8	70-130		%Rec	1	11/29/2022 4:33:00 PM	R92881
Surr: Dibromofluoromethane	97.9	70-130		%Rec	1	11/29/2022 4:33:00 PM	R92881
Surr: Toluene-d8	94.3	70-130		%Rec	1	11/29/2022 4:33:00 PM	R92881

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** NGMW03
Project: Griggs Walnut **Collection Date:** 11/16/2022 9:23:00 AM
Lab ID: 2211B57-030 **Matrix:** GROUNDWA **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
Toluene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
Ethylbenzene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
Naphthalene	ND	2.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
1-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
2-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
Acetone	ND	10		µg/L	1	11/28/2022 3:42:00 PM	R92875
Bromobenzene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
Bromodichloromethane	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
Bromoform	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
Bromomethane	ND	3.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
2-Butanone	ND	10		µg/L	1	11/28/2022 3:42:00 PM	R92875
Carbon disulfide	ND	10		µg/L	1	11/28/2022 3:42:00 PM	R92875
Carbon Tetrachloride	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
Chlorobenzene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
Chloroethane	ND	2.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
Chloroform	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
Chloromethane	ND	3.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
2-Chlorotoluene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
4-Chlorotoluene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
cis-1,2-DCE	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
Dibromochloromethane	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
Dibromomethane	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
1,1-Dichloroethane	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
1,1-Dichloroethene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
1,2-Dichloropropane	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
1,3-Dichloropropane	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
2,2-Dichloropropane	ND	2.0		µg/L	1	11/28/2022 3:42:00 PM	R92875

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: NGMW03
Project: Griggs Walnut
Collection Date: 11/16/2022 9:23:00 AM
Lab ID: 2211B57-030
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
Hexachlorobutadiene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
2-Hexanone	ND	10		µg/L	1	11/28/2022 3:42:00 PM	R92875
Isopropylbenzene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
4-Isopropyltoluene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
4-Methyl-2-pentanone	ND	10		µg/L	1	11/28/2022 3:42:00 PM	R92875
Methylene Chloride	ND	3.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
n-Butylbenzene	ND	3.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
n-Propylbenzene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
sec-Butylbenzene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
Styrene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
tert-Butylbenzene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
trans-1,2-DCE	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
Trichlorofluoromethane	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
Vinyl chloride	ND	1.0		µg/L	1	11/28/2022 3:42:00 PM	R92875
Xylenes, Total	ND	1.5		µg/L	1	11/28/2022 3:42:00 PM	R92875
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	11/28/2022 3:42:00 PM	R92875
Surr: 4-Bromofluorobenzene	94.4	70-130		%Rec	1	11/28/2022 3:42:00 PM	R92875
Surr: Dibromofluoromethane	103	70-130		%Rec	1	11/28/2022 3:42:00 PM	R92875
Surr: Toluene-d8	92.7	70-130		%Rec	1	11/28/2022 3:42:00 PM	R92875

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: FB1
Project: Griggs Walnut
Collection Date: 11/15/2022 11:54:00 AM
Lab ID: 2211B57-031
Matrix: AQUEOUS
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
Toluene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
Ethylbenzene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
Naphthalene	ND	2.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
1-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
2-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
Acetone	ND	10		µg/L	1	11/28/2022 4:05:00 PM	R92875
Bromobenzene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
Bromodichloromethane	1.1	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
Bromoform	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
Bromomethane	ND	3.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
2-Butanone	ND	10		µg/L	1	11/28/2022 4:05:00 PM	R92875
Carbon disulfide	ND	10		µg/L	1	11/28/2022 4:05:00 PM	R92875
Carbon Tetrachloride	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
Chlorobenzene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
Chloroethane	ND	2.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
Chloroform	8.1	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
Chloromethane	ND	3.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
2-Chlorotoluene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
4-Chlorotoluene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
cis-1,2-DCE	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
Dibromochloromethane	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
Dibromomethane	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
1,1-Dichloroethane	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
1,1-Dichloroethene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
1,2-Dichloropropane	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
1,3-Dichloropropane	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
2,2-Dichloropropane	ND	2.0		µg/L	1	11/28/2022 4:05:00 PM	R92875

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: FB1
Project: Griggs Walnut
Collection Date: 11/15/2022 11:54:00 AM
Lab ID: 2211B57-031
Matrix: AQUEOUS
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
Hexachlorobutadiene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
2-Hexanone	ND	10		µg/L	1	11/28/2022 4:05:00 PM	R92875
Isopropylbenzene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
4-Isopropyltoluene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
4-Methyl-2-pentanone	ND	10		µg/L	1	11/28/2022 4:05:00 PM	R92875
Methylene Chloride	ND	3.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
n-Butylbenzene	ND	3.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
n-Propylbenzene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
sec-Butylbenzene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
Styrene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
tert-Butylbenzene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
trans-1,2-DCE	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
Trichlorofluoromethane	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
Vinyl chloride	ND	1.0		µg/L	1	11/28/2022 4:05:00 PM	R92875
Xylenes, Total	ND	1.5		µg/L	1	11/28/2022 4:05:00 PM	R92875
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	11/28/2022 4:05:00 PM	R92875
Surr: 4-Bromofluorobenzene	93.8	70-130		%Rec	1	11/28/2022 4:05:00 PM	R92875
Surr: Dibromofluoromethane	103	70-130		%Rec	1	11/28/2022 4:05:00 PM	R92875
Surr: Toluene-d8	93.2	70-130		%Rec	1	11/28/2022 4:05:00 PM	R92875

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: FB2
Project: Griggs Walnut
Collection Date: 11/16/2022 7:55:00 AM
Lab ID: 2211B57-032
Matrix: AQUEOUS
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
Toluene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
Ethylbenzene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
Naphthalene	ND	2.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
1-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
2-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
Acetone	ND	10		µg/L	1	11/28/2022 4:28:00 PM	R92875
Bromobenzene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
Bromodichloromethane	1.1	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
Bromoform	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
Bromomethane	ND	3.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
2-Butanone	ND	10		µg/L	1	11/28/2022 4:28:00 PM	R92875
Carbon disulfide	ND	10		µg/L	1	11/28/2022 4:28:00 PM	R92875
Carbon Tetrachloride	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
Chlorobenzene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
Chloroethane	ND	2.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
Chloroform	8.2	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
Chloromethane	ND	3.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
2-Chlorotoluene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
4-Chlorotoluene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
cis-1,2-DCE	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
Dibromochloromethane	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
Dibromomethane	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
1,1-Dichloroethane	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
1,1-Dichloroethene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
1,2-Dichloropropane	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
1,3-Dichloropropane	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
2,2-Dichloropropane	ND	2.0		µg/L	1	11/28/2022 4:28:00 PM	R92875

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: FB2
Project: Griggs Walnut
Collection Date: 11/16/2022 7:55:00 AM
Lab ID: 2211B57-032
Matrix: AQUEOUS
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
Hexachlorobutadiene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
2-Hexanone	ND	10		µg/L	1	11/28/2022 4:28:00 PM	R92875
Isopropylbenzene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
4-Isopropyltoluene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
4-Methyl-2-pentanone	ND	10		µg/L	1	11/28/2022 4:28:00 PM	R92875
Methylene Chloride	ND	3.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
n-Butylbenzene	ND	3.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
n-Propylbenzene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
sec-Butylbenzene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
Styrene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
tert-Butylbenzene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
trans-1,2-DCE	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
Trichlorofluoromethane	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
Vinyl chloride	ND	1.0		µg/L	1	11/28/2022 4:28:00 PM	R92875
Xylenes, Total	ND	1.5		µg/L	1	11/28/2022 4:28:00 PM	R92875
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	11/28/2022 4:28:00 PM	R92875
Surr: 4-Bromofluorobenzene	95.7	70-130		%Rec	1	11/28/2022 4:28:00 PM	R92875
Surr: Dibromofluoromethane	107	70-130		%Rec	1	11/28/2022 4:28:00 PM	R92875
Surr: Toluene-d8	94.2	70-130		%Rec	1	11/28/2022 4:28:00 PM	R92875

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: FB3
Project: Griggs Walnut
Collection Date: 11/16/2022 1:00:00 PM
Lab ID: 2211B57-033 **Matrix:** AQUEOUS **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
Toluene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
Ethylbenzene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
Naphthalene	ND	2.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
1-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
2-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
Acetone	ND	10		µg/L	1	11/28/2022 4:51:00 PM	R92875
Bromobenzene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
Bromodichloromethane	1.1	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
Bromoform	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
Bromomethane	ND	3.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
2-Butanone	ND	10		µg/L	1	11/28/2022 4:51:00 PM	R92875
Carbon disulfide	ND	10		µg/L	1	11/28/2022 4:51:00 PM	R92875
Carbon Tetrachloride	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
Chlorobenzene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
Chloroethane	ND	2.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
Chloroform	8.4	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
Chloromethane	ND	3.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
2-Chlorotoluene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
4-Chlorotoluene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
cis-1,2-DCE	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
Dibromochloromethane	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
Dibromomethane	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
1,1-Dichloroethane	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
1,1-Dichloroethene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
1,2-Dichloropropane	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
1,3-Dichloropropane	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
2,2-Dichloropropane	ND	2.0		µg/L	1	11/28/2022 4:51:00 PM	R92875

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: FB3
Project: Griggs Walnut
Collection Date: 11/16/2022 1:00:00 PM
Lab ID: 2211B57-033 **Matrix:** AQUEOUS **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
Hexachlorobutadiene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
2-Hexanone	ND	10		µg/L	1	11/28/2022 4:51:00 PM	R92875
Isopropylbenzene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
4-Isopropyltoluene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
4-Methyl-2-pentanone	ND	10		µg/L	1	11/28/2022 4:51:00 PM	R92875
Methylene Chloride	ND	3.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
n-Butylbenzene	ND	3.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
n-Propylbenzene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
sec-Butylbenzene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
Styrene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
tert-Butylbenzene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
trans-1,2-DCE	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
Trichlorofluoromethane	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
Vinyl chloride	ND	1.0		µg/L	1	11/28/2022 4:51:00 PM	R92875
Xylenes, Total	ND	1.5		µg/L	1	11/28/2022 4:51:00 PM	R92875
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	11/28/2022 4:51:00 PM	R92875
Surr: 4-Bromofluorobenzene	95.7	70-130		%Rec	1	11/28/2022 4:51:00 PM	R92875
Surr: Dibromofluoromethane	105	70-130		%Rec	1	11/28/2022 4:51:00 PM	R92875
Surr: Toluene-d8	92.8	70-130		%Rec	1	11/28/2022 4:51:00 PM	R92875

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** Trip Blank-1
Project: Griggs Walnut **Collection Date:**
Lab ID: 2211B57-034 **Matrix:** TRIP BLANK **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
Toluene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
Ethylbenzene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
Naphthalene	ND	2.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
1-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
2-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
Acetone	ND	10		µg/L	1	11/28/2022 5:15:00 PM	R92875
Bromobenzene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
Bromodichloromethane	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
Bromoform	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
Bromomethane	ND	3.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
2-Butanone	ND	10		µg/L	1	11/28/2022 5:15:00 PM	R92875
Carbon disulfide	ND	10		µg/L	1	11/28/2022 5:15:00 PM	R92875
Carbon Tetrachloride	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
Chlorobenzene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
Chloroethane	ND	2.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
Chloroform	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
Chloromethane	ND	3.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
2-Chlorotoluene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
4-Chlorotoluene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
cis-1,2-DCE	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
Dibromochloromethane	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
Dibromomethane	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
1,1-Dichloroethane	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
1,1-Dichloroethene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
1,2-Dichloropropane	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
1,3-Dichloropropane	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
2,2-Dichloropropane	ND	2.0		µg/L	1	11/28/2022 5:15:00 PM	R92875

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** Trip Blank-1
Project: Griggs Walnut **Collection Date:**
Lab ID: 2211B57-034 **Matrix:** TRIP BLANK **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
Hexachlorobutadiene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
2-Hexanone	ND	10		µg/L	1	11/28/2022 5:15:00 PM	R92875
Isopropylbenzene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
4-Isopropyltoluene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
4-Methyl-2-pentanone	ND	10		µg/L	1	11/28/2022 5:15:00 PM	R92875
Methylene Chloride	ND	3.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
n-Butylbenzene	ND	3.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
n-Propylbenzene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
sec-Butylbenzene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
Styrene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
tert-Butylbenzene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
trans-1,2-DCE	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
Trichlorofluoromethane	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
Vinyl chloride	ND	1.0		µg/L	1	11/28/2022 5:15:00 PM	R92875
Xylenes, Total	ND	1.5		µg/L	1	11/28/2022 5:15:00 PM	R92875
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	11/28/2022 5:15:00 PM	R92875
Surr: 4-Bromofluorobenzene	96.5	70-130		%Rec	1	11/28/2022 5:15:00 PM	R92875
Surr: Dibromofluoromethane	106	70-130		%Rec	1	11/28/2022 5:15:00 PM	R92875
Surr: Toluene-d8	91.8	70-130		%Rec	1	11/28/2022 5:15:00 PM	R92875

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** Trip Blank-2
Project: Griggs Walnut **Collection Date:**
Lab ID: 2211B57-035 **Matrix:** TRIP BLANK **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
Toluene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
Ethylbenzene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
Naphthalene	ND	2.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
1-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
2-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
Acetone	ND	10		µg/L	1	11/28/2022 5:38:00 PM	R92875
Bromobenzene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
Bromodichloromethane	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
Bromoform	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
Bromomethane	ND	3.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
2-Butanone	ND	10		µg/L	1	11/28/2022 5:38:00 PM	R92875
Carbon disulfide	ND	10		µg/L	1	11/28/2022 5:38:00 PM	R92875
Carbon Tetrachloride	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
Chlorobenzene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
Chloroethane	ND	2.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
Chloroform	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
Chloromethane	ND	3.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
2-Chlorotoluene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
4-Chlorotoluene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
cis-1,2-DCE	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
Dibromochloromethane	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
Dibromomethane	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
1,1-Dichloroethane	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
1,1-Dichloroethene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
1,2-Dichloropropane	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
1,3-Dichloropropane	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
2,2-Dichloropropane	ND	2.0		µg/L	1	11/28/2022 5:38:00 PM	R92875

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** Trip Blank-2
Project: Griggs Walnut **Collection Date:**
Lab ID: 2211B57-035 **Matrix:** TRIP BLANK **Received Date:** 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
Hexachlorobutadiene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
2-Hexanone	ND	10		µg/L	1	11/28/2022 5:38:00 PM	R92875
Isopropylbenzene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
4-Isopropyltoluene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
4-Methyl-2-pentanone	ND	10		µg/L	1	11/28/2022 5:38:00 PM	R92875
Methylene Chloride	ND	3.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
n-Butylbenzene	ND	3.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
n-Propylbenzene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
sec-Butylbenzene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
Styrene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
tert-Butylbenzene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
trans-1,2-DCE	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
Trichlorofluoromethane	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
Vinyl chloride	ND	1.0		µg/L	1	11/28/2022 5:38:00 PM	R92875
Xylenes, Total	ND	1.5		µg/L	1	11/28/2022 5:38:00 PM	R92875
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	11/28/2022 5:38:00 PM	R92875
Surr: 4-Bromofluorobenzene	92.9	70-130		%Rec	1	11/28/2022 5:38:00 PM	R92875
Surr: Dibromofluoromethane	106	70-130		%Rec	1	11/28/2022 5:38:00 PM	R92875
Surr: Toluene-d8	92.7	70-130		%Rec	1	11/28/2022 5:38:00 PM	R92875

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW09-D1_Dup
Project: Griggs Walnut
Collection Date: 11/16/2022 10:21:00 AM
Lab ID: 2211B57-036
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
Toluene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
Ethylbenzene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
Methyl tert-butyl ether (MTBE)	1.2	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
Naphthalene	ND	2.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
1-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
2-Methylnaphthalene	ND	4.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
Acetone	ND	10		µg/L	1	11/28/2022 6:01:00 PM	R92875
Bromobenzene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
Bromodichloromethane	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
Bromoform	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
Bromomethane	ND	3.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
2-Butanone	ND	10		µg/L	1	11/28/2022 6:01:00 PM	R92875
Carbon disulfide	ND	10		µg/L	1	11/28/2022 6:01:00 PM	R92875
Carbon Tetrachloride	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
Chlorobenzene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
Chloroethane	ND	2.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
Chloroform	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
Chloromethane	ND	3.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
2-Chlorotoluene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
4-Chlorotoluene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
cis-1,2-DCE	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
Dibromochloromethane	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
Dibromomethane	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
1,1-Dichloroethane	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
1,1-Dichloroethene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
1,2-Dichloropropane	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
1,3-Dichloropropane	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
2,2-Dichloropropane	ND	2.0		µg/L	1	11/28/2022 6:01:00 PM	R92875

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Client Sample ID: GWMW09-D1_Dup
Project: Griggs Walnut
Collection Date: 11/16/2022 10:21:00 AM
Lab ID: 2211B57-036
Matrix: GROUNDWA
Received Date: 11/18/2022 1:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
Hexachlorobutadiene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
2-Hexanone	ND	10		µg/L	1	11/28/2022 6:01:00 PM	R92875
Isopropylbenzene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
4-Isopropyltoluene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
4-Methyl-2-pentanone	ND	10		µg/L	1	11/28/2022 6:01:00 PM	R92875
Methylene Chloride	ND	3.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
n-Butylbenzene	ND	3.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
n-Propylbenzene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
sec-Butylbenzene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
Styrene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
tert-Butylbenzene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
Tetrachloroethene (PCE)	4.9	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
trans-1,2-DCE	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
Trichlorofluoromethane	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
Vinyl chloride	ND	1.0		µg/L	1	11/28/2022 6:01:00 PM	R92875
Xylenes, Total	ND	1.5		µg/L	1	11/28/2022 6:01:00 PM	R92875
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	11/28/2022 6:01:00 PM	R92875
Surr: 4-Bromofluorobenzene	93.8	70-130		%Rec	1	11/28/2022 6:01:00 PM	R92875
Surr: Dibromofluoromethane	103	70-130		%Rec	1	11/28/2022 6:01:00 PM	R92875
Surr: Toluene-d8	91.8	70-130		%Rec	1	11/28/2022 6:01:00 PM	R92875

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

ANALYTICAL SUMMARY REPORT

December 12, 2022

Hall Environmental
4901 Hawkins St NE Ste D
Albuquerque, NM 87109-4372

Work Order: H22110645

Project Name: Not Indicated

Energy Laboratories Inc Helena MT received the following 2 samples for Hall Environmental on 11/22/2022 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H22110645-001	2211B57-001B CLC 18	11/15/22 9:36	11/22/22	Groundwater	Arsenic Speciation, Total Metals pH check by the Laboratory FIRST
H22110645-002	2211B57-002B CLC 27	11/15/22 8:20	11/22/22	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: H22110645-001
Client Sample ID: 2211B57-001B CLC 18

Report Date: 12/12/22
Collection Date: 11/15/22 09:36
DateReceived: 11/22/22
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SPECIATED, TOTAL							
Arsenic-III	ND	ug/L		1		E200.8	12/08/22 12:54 / dck
Arsenic-V	2	ug/L		1		E200.8	12/08/22 12:54 / dck

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: H22110645-002
Client Sample ID: 2211B57-002B CLC 27

Report Date: 12/12/22
Collection Date: 11/15/22 08:20
DateReceived: 11/22/22
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SPECIATED, TOTAL							
Arsenic-III	ND	ug/L		1		E200.8	12/08/22 13:01 / dck
Arsenic-V	1	ug/L		1		E200.8	12/08/22 13:01 / dck

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:** H22110645 **Report Date:** 12/12/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS206-H_221207A	
Lab ID: ICV	2	Initial Calibration Verification Standard							12/07/22 20:49	
Arsenic-III		24.7	ug/L	1.0	99	90	110			
Arsenic-V		25.9	ug/L	1.0	104	90	110			
Lab ID: CCV	2	Continuing Calibration Verification Standard							12/08/22 08:43	
Arsenic-III		53.2	ug/L	1.0	106	90	110			
Arsenic-V		48.2	ug/L	1.0	96	90	110			
Lab ID: CCV	2	Continuing Calibration Verification Standard							12/08/22 12:39	
Arsenic-III		45.7	ug/L	1.0	91	90	110			
Arsenic-V		48.2	ug/L	1.0	96	90	110			
Method: E200.8										Batch: R180714
Lab ID: LRB	2	Method Blank				Run: ICPMS206-H_221207A			12/07/22 21:19	
Arsenic-III		ND	ug/L	0.06						
Arsenic-V		ND	ug/L	0.04						
Lab ID: LFB	2	Laboratory Fortified Blank				Run: ICPMS206-H_221207A			12/07/22 21:27	
Arsenic-III		49.2	ug/L	1.0	98	85	115			
Arsenic-V		48.9	ug/L	1.0	98	85	115			
Lab ID: H22110645-002AMS	2	Sample Matrix Spike				Run: ICPMS206-H_221207A			12/08/22 13:09	
Arsenic-III		251	ug/L	1.0	100	70	130			
Arsenic-V		252	ug/L	1.0	101	70	130			
Lab ID: H22110645-002AMSD	2	Sample Matrix Spike Duplicate				Run: ICPMS206-H_221207A			12/08/22 13:16	
Arsenic-III		240	ug/L	1.0	96	70	130	10	20	
Arsenic-V		241	ug/L	1.0	96	70	130	2.8	20	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

Work Order Receipt Checklist

Hall Environmental

H22110645

Login completed by: Wanda Johnson
Date Received: 11/22/2022

Reviewed by: tjones
Received by: rrs

Reviewed Date: 11/23/2022
Carrier name: FedEx

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:	1.1°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.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

Contact and Corrective Action Comments:

Samples received partially frozen. Client contacted regarding samples.
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 11/22/2022

HALL ENVIRONMENTAL ANALYSIS LABORATORY

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

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

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	2211B57-001B	CLC 18	500PL-HCL	Groundwater	11/15/2022 9:36:00 AM	1	Arsenic Speciation
2	2211B57-002B	CLC 27	500PL-HCL	Groundwater	11/15/2022 8:20:00 AM	1	Arsenic Speciation

H22110645

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:	Date: 11/18/2022	Time: 3:27 PM	Received By:	Date: 11/22/22	Time: 0945
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

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 1.1 °C NO TB Attempt to Cool ? BLUE ICE
Comments: NO SEAL FEDEX EXP

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211B57**

14-Dec-22

Client: Daniel B. Stephens & Assoc.

Project: Griggs Walnut

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**
Client ID: **PBW**	Batch ID: **A92872**	RunNo: **92872**
Prep Date:	Analysis Date: **11/29/2022**	SeqNo: **3343408** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Uranium	ND	0.00050								

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA 200.8: Metals**
Client ID: **BatchQC**	Batch ID: **A92872**	RunNo: **92872**
Prep Date:	Analysis Date: **11/29/2022**	SeqNo: **3343409** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0011	0.0010	0.001000	0	107	50	150			
Uranium	ND	0.00050	0.0005000	0	94.7	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**
Client ID: **LCSW**	Batch ID: **A92872**	RunNo: **92872**
Prep Date:	Analysis Date: **11/29/2022**	SeqNo: **3343410** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.9	85	115			
Uranium	0.011	0.00050	0.01250	0	90.3	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Metals**
Client ID: **PBW**	Batch ID: **A92963**	RunNo: **92963**
Prep Date:	Analysis Date: **12/2/2022**	SeqNo: **3347246** 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: **A92963**	RunNo: **92963**
Prep Date:	Analysis Date: **12/2/2022**	SeqNo: **3347248** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.00050	0.0005000	0	91.9	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Metals**
Client ID: **LCSW**	Batch ID: **A92963**	RunNo: **92963**
Prep Date:	Analysis Date: **12/2/2022**	SeqNo: **3347250** 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	87.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/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#: **2211B57**

14-Dec-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: **R92823**	RunNo: **92823**
Prep Date:	Analysis Date: **11/23/2022**	SeqNo: **3341459** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	92.7	70	130			
Toluene	21	1.0	20.00	0	103	70	130			
Chlorobenzene	22	1.0	20.00	0	109	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	89.4	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.5	70	130			
Surr: 1,2-Dichloroethane-d4	8.4		10.00		83.7	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	8.7		10.00		86.8	70	130			
Surr: Toluene-d8	9.8		10.00		97.7	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R92823**	RunNo: **92823**
Prep Date:	Analysis Date: **11/23/2022**	SeqNo: **3341460** 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 standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/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#: **2211B57**

14-Dec-22

Client: Daniel B. Stephens & Assoc.

Project: Griggs Walnut

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R92823**	RunNo: **92823**
Prep Date:	Analysis Date: **11/23/2022**	SeqNo: **3341460** 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211B57**

14-Dec-22

Client: Daniel B. Stephens & Assoc.

Project: Griggs Walnut

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R92823**	RunNo: **92823**
Prep Date:	Analysis Date: **11/23/2022**	SeqNo: **3341460** 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	8.5		10.00		85.3	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.4	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.1	70	130			
Surr: Toluene-d8	9.5		10.00		95.3	70	130			

Sample ID: **2211B57-007ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **GWMW08-S**	Batch ID: **R92823**	RunNo: **92823**
Prep Date:	Analysis Date: **11/23/2022**	SeqNo: **3341468** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	93.5	70	130			
Toluene	21	1.0	20.00	0.2000	103	70	130			
Chlorobenzene	22	1.0	20.00	0	108	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	91.2	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	92.8	70	130			
Surr: 1,2-Dichloroethane-d4	8.9		10.00		88.7	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.2	70	130			
Surr: Dibromofluoromethane	9.0		10.00		90.5	70	130			
Surr: Toluene-d8	9.6		10.00		95.7	70	130			

Sample ID: **2211B57-007amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **GWMW08-S**	Batch ID: **R92823**	RunNo: **92823**
Prep Date:	Analysis Date: **11/23/2022**	SeqNo: **3341469** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	91.2	70	130	2.47	20	
Toluene	20	1.0	20.00	0.2000	101	70	130	1.89	20	
Chlorobenzene	21	1.0	20.00	0	107	70	130	1.17	20	
1,1-Dichloroethene	17	1.0	20.00	0	86.0	70	130	5.78	20	
Trichloroethene (TCE)	18	1.0	20.00	0	88.4	70	130	4.87	20	
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.3	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.8		10.00		98.0	70	130	0	0	
Surr: Dibromofluoromethane	9.0		10.00		90.1	70	130	0	0	
Surr: Toluene-d8	9.5		10.00		95.0	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/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#: **2211B57**

14-Dec-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: **R92875**	RunNo: **92875**
Prep Date:	Analysis Date: **11/28/2022**	SeqNo: **3343631** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.3	70	130			
Toluene	21	1.0	20.00	0	106	70	130			
Chlorobenzene	22	1.0	20.00	0	110	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	95.5	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	96.5	70	130			
Surr: 1,2-Dichloroethane-d4	9.2		10.00		92.4	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.0	70	130			
Surr: Dibromofluoromethane	9.2		10.00		91.8	70	130			
Surr: Toluene-d8	9.6		10.00		95.6	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R92875**	RunNo: **92875**
Prep Date:	Analysis Date: **11/28/2022**	SeqNo: **3343632** 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 standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/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#: **2211B57**

14-Dec-22

Client: Daniel B. Stephens & Assoc.

Project: Griggs Walnut

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R92875**	RunNo: **92875**
Prep Date:	Analysis Date: **11/28/2022**	SeqNo: **3343632** 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211B57**

14-Dec-22

Client: Daniel B. Stephens & Assoc.

Project: Griggs Walnut

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R92875**	RunNo: **92875**
Prep Date:	Analysis Date: **11/28/2022**	SeqNo: **3343632** 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	9.1		10.00		91.5	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.7	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.0	70	130			
Surr: Toluene-d8	9.5		10.00		94.6	70	130			

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R92881**	RunNo: **92881**
Prep Date:	Analysis Date: **11/29/2022**	SeqNo: **3343782** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	21	1.0	20.00	0	106	70	130			
Chlorobenzene	22	1.0	20.00	0	111	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	106	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.2	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.5	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.3	70	130			
Surr: Toluene-d8	9.5		10.00		95.3	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R92881**	RunNo: **92881**
Prep Date:	Analysis Date: **11/29/2022**	SeqNo: **3343783** 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211B57**

14-Dec-22

Client: Daniel B. Stephens & Assoc.

Project: Griggs Walnut

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R92881**	RunNo: **92881**
Prep Date:	Analysis Date: **11/29/2022**	SeqNo: **3343783** 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211B57**

14-Dec-22

Client: Daniel B. Stephens & Assoc.

Project: Griggs Walnut

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R92881**	RunNo: **92881**
Prep Date:	Analysis Date: **11/29/2022**	SeqNo: **3343783** 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	9.9		10.00		99.4	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.9	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.3	70	130			
Surr: Toluene-d8	9.4		10.00		93.7	70	130			

Sample ID: **2211B57-013ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **GWMW10-I**	Batch ID: **R92881**	RunNo: **92881**
Prep Date:	Analysis Date: **11/29/2022**	SeqNo: **3343785** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130			
Toluene	21	1.0	20.00	0	107	70	130			
Chlorobenzene	22	1.0	20.00	0	112	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	108	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0.2480	103	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.9	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.6	70	130			
Surr: Dibromofluoromethane	9.7		10.00		97.0	70	130			
Surr: Toluene-d8	9.4		10.00		93.6	70	130			

Sample ID: **2211B57-013amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **GWMW10-I**	Batch ID: **R92881**	RunNo: **92881**
Prep Date:	Analysis Date: **11/29/2022**	SeqNo: **3343786** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130	5.15	20	
Toluene	20	1.0	20.00	0	102	70	130	4.62	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211B57**

14-Dec-22

Client: Daniel B. Stephens & Assoc.

Project: Griggs Walnut

Sample ID: **2211B57-013amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **GWMW10-I**	Batch ID: **R92881**	RunNo: **92881**
Prep Date:	Analysis Date: **11/29/2022**	SeqNo: **3343786** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlorobenzene	22	1.0	20.00	0	109	70	130	3.37	20	
1,1-Dichloroethene	21	1.0	20.00	0	103	70	130	4.82	20	
Trichloroethene (TCE)	20	1.0	20.00	0.2480	96.6	70	130	6.57	20	
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.7	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.9		10.00		99.3	70	130	0	0	
Surr: Dibromofluoromethane	9.7		10.00		97.4	70	130	0	0	
Surr: Toluene-d8	9.4		10.00		93.9	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/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: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Daniel B. Stephens & Assoc. Work Order Number: 2211B57 RcptNo: 1

Received By: Kasandra Jimena Garcia 11/18/2022 1:23:00 PM

Completed By: Sean Livingston 11/18/2022 2:50:30 PM

Reviewed By: KDG 11.21.22

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 ☑ Jn 11/21/22	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: Jn 11/21/22

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 0124 received broken Jn 11/21/22.

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.7	Good				
2	0.2	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 #: DB22.1354.00 Ph1 T1

Project Manager: Jason Raucci

Sampler: Y. Nyman, I. Torres

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(Including CF): 0.9-0.2=0.7 (°C) 0.4-0.2=0.2

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 Name	Container Type and #	Preservative Type	HEAL No. 2211357	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
11-6-22	0930	GW	CLC 18	2 plastic	HCl/HNO3	001											X	X
"	0820		CLC 27	"	"	002											X	X
11-15-22	1253		GWMW01-S	3 VOAs	HgCl2	003								X				
"	1230		GWMW01-I			004								X				
"	1234		GWMW01-I_Dup			005								X				
"	1206		GWMW01-D			006								X				
"	1600		GWMW08-S			007								X				
"	1602		GWMW08-S_MS											X				
"	1604		GWMW08-S_MSD											X				
"	1623		GWMW08-D			008								X				
11-16-22	1124	105 (VOA)	GWMW09-S			009								X				
11-16-22	1038		GWMW09-D1			010								X				

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
11/19/22	1322			CDO	11-18-22	13:23
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:
Page 1 of 4
2 Coolers - Delivered by hand by I. Torres

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

Cooler Temp (including CF): 0.9-0.2=0.7 (°C) 0.4-0.2=0.2

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

(Yin) Date	Time (Yin)	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)
~~11-16-22~~	~~1056~~	GW	GWMW09-D2	3 VOA	HgCl2	011								X		
11-16-22	1214		GWMW10-S			012								X		
	1340		GWMW10-I			013								X		
	1341		GWMW10-I-MS											X		
	1342		GWMW10-I-MSD											X		
	1405		GWMW10-D			014								X		
	1425		GWMW11-S			015								X		
	1435		GWMW11-I			016								X		
	1445		GWMW11-D			017								X		
	1525		GWMW15-S			018								X		
	1600		GWMW15-I			019								X		
	1620		GWMW15-D			020								X		

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
11/19/22	1322			COC	11-18-22	13:23
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. Rawcci

Sampler:
On Ice: ☑ Yes ☐ No
# of Coolers: 2
Cooler Temp(including CF): 0.9-0.2 = 0.7(°C)
0.4-0.2=0.2

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)
11-16-22	0820	GW	GWMW16-S	3VOA	HgCl2	021								X		
"	0812		GWMW16-D			022								X		
"	0813		GWMW16-D_Dup			023								X		
11-15-22	1430		MWSF2			024								X		
"	1643		MWSF5			025								X		
11-16-22	0851		MWSF9			026								X		
"	0950		MWSF10			027								X		
"	1113		NGMW01			028								X		
11-15-22	1700		NGMW02			029								X		
11-16-22	0923		NGMW03			030								X		
11-15-22	1154	DI	FB1			031								X		
11-16-22	0755	"	FB2			032								X		

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
11/19/22	1322			COO	11-18-22	13:23
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: 505-822-9400

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. Rucci

Sampler:

On Ice: ☑ Yes ☐ No

# of Coolers: 2

Cooler Temp (including CF): 0.9-0.2=0.7 (°C)
0.4-0.2=0.2

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)	Temp on Arrival
11-16-22	1300	DI	FB3	3 VOA	HgCl2	033								X			
Lab	—	—	Trip Blank	2 VOA	HgCl2	034								X			
Lab	—	—	Trip Blank	2 VOA	"	035								X			
11-16-22	1021	GW	GWMW09-D1_Dup	3 VOA	"	036								X			
Lab	—	—	Temp Blank	2 plastic	N/A											X	

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
11/19/22	1322			UPS	11-18-22	13:23
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: www.hallenvironmental.com

November 16, 2022

Luis Guerra

City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3604
FAX

RE: CLC Joint Superfund Project OrderNo.: 2211713

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 5 sample(s) on 11/11/2022 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 - 221110
Project: CLC Joint Superfund Project
Collection Date: 11/10/2022 9:05:00 AM
Lab ID: 2211713-001
Matrix: DRINKING W
Received Date: 11/11/2022 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Toluene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Ethylbenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Naphthalene	ND	2.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
2-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Acetone	ND	10		µg/L	1	11/14/2022 2:33:00 PM	R92552
Bromobenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Bromodichloromethane	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Bromoform	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Bromomethane	ND	3.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
2-Butanone	ND	10		µg/L	1	11/14/2022 2:33:00 PM	R92552
Carbon disulfide	ND	10		µg/L	1	11/14/2022 2:33:00 PM	R92552
Carbon Tetrachloride	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Chlorobenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Chloroethane	ND	2.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Chloroform	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Chloromethane	ND	3.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
2-Chlorotoluene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
4-Chlorotoluene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
cis-1,2-DCE	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Dibromochloromethane	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Dibromomethane	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,1-Dichloroethane	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,1-Dichloroethene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,2-Dichloropropane	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,3-Dichloropropane	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
2,2-Dichloropropane	ND	2.0		µg/L	1	11/14/2022 2:33:00 PM	R92552

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18 - 221110
Project: CLC Joint Superfund Project
Collection Date: 11/10/2022 9:05:00 AM
Lab ID: 2211713-001
Matrix: DRINKING W
Received Date: 11/11/2022 8:45:00 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	11/14/2022 2:33:00 PM	R92552
Hexachlorobutadiene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
2-Hexanone	ND	10		µg/L	1	11/14/2022 2:33:00 PM	R92552
Isopropylbenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
4-Isopropyltoluene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
4-Methyl-2-pentanone	ND	10		µg/L	1	11/14/2022 2:33:00 PM	R92552
Methylene Chloride	ND	3.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
n-Butylbenzene	ND	3.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
n-Propylbenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
sec-Butylbenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Styrene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
tert-Butylbenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Tetrachloroethene (PCE)	3.8	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
trans-1,2-DCE	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Trichlorofluoromethane	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Vinyl chloride	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Xylenes, Total	ND	1.5		µg/L	1	11/14/2022 2:33:00 PM	R92552
Surr: 1,2-Dichloroethane-d4	94.9	70-130		%Rec	1	11/14/2022 2:33:00 PM	R92552
Surr: 4-Bromofluorobenzene	94.2	70-130		%Rec	1	11/14/2022 2:33:00 PM	R92552
Surr: Dibromofluoromethane	97.3	70-130		%Rec	1	11/14/2022 2:33:00 PM	R92552
Surr: Toluene-d8	88.2	70-130		%Rec	1	11/14/2022 2:33:00 PM	R92552

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC I51 - 221110
Project: CLC Joint Superfund Project
Collection Date: 11/10/2022 9:29:00 AM
Lab ID: 2211713-002
Matrix: DRINKING W
Received Date: 11/11/2022 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Toluene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Ethylbenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Naphthalene	ND	2.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
2-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Acetone	ND	10		µg/L	1	11/14/2022 3:42:00 PM	R92552
Bromobenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Bromodichloromethane	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Bromoform	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Bromomethane	ND	3.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
2-Butanone	ND	10		µg/L	1	11/14/2022 3:42:00 PM	R92552
Carbon disulfide	ND	10		µg/L	1	11/14/2022 3:42:00 PM	R92552
Carbon Tetrachloride	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Chlorobenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Chloroethane	ND	2.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Chloroform	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Chloromethane	ND	3.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
2-Chlorotoluene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
4-Chlorotoluene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
cis-1,2-DCE	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Dibromochloromethane	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Dibromomethane	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,1-Dichloroethane	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,1-Dichloroethene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,2-Dichloropropane	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,3-Dichloropropane	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
2,2-Dichloropropane	ND	2.0		µg/L	1	11/14/2022 3:42:00 PM	R92552

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC I51 - 221110
Project: CLC Joint Superfund Project
Collection Date: 11/10/2022 9:29:00 AM
Lab ID: 2211713-002
Matrix: DRINKING W
Received Date: 11/11/2022 8:45:00 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	11/14/2022 3:42:00 PM	R92552
Hexachlorobutadiene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
2-Hexanone	ND	10		µg/L	1	11/14/2022 3:42:00 PM	R92552
Isopropylbenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
4-Isopropyltoluene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
4-Methyl-2-pentanone	ND	10		µg/L	1	11/14/2022 3:42:00 PM	R92552
Methylene Chloride	ND	3.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
n-Butylbenzene	ND	3.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
n-Propylbenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
sec-Butylbenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Styrene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
tert-Butylbenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Tetrachloroethene (PCE)	10	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
trans-1,2-DCE	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Trichlorofluoromethane	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Vinyl chloride	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Xylenes, Total	ND	1.5		µg/L	1	11/14/2022 3:42:00 PM	R92552
Surr: 1,2-Dichloroethane-d4	97.6	70-130		%Rec	1	11/14/2022 3:42:00 PM	R92552
Surr: 4-Bromofluorobenzene	94.8	70-130		%Rec	1	11/14/2022 3:42:00 PM	R92552
Surr: Dibromofluoromethane	99.8	70-130		%Rec	1	11/14/2022 3:42:00 PM	R92552
Surr: Toluene-d8	86.4	70-130		%Rec	1	11/14/2022 3:42:00 PM	R92552

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1 - 221110
Project: CLC Joint Superfund Project
Collection Date: 11/10/2022 9:31:00 AM
Lab ID: 2211713-003
Matrix: DRINKING W
Received Date: 11/11/2022 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Toluene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Ethylbenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Naphthalene	ND	2.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
2-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Acetone	ND	10		µg/L	1	11/14/2022 4:05:00 PM	R92552
Bromobenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Bromodichloromethane	1.4	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Bromoform	2.8	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Bromomethane	ND	3.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
2-Butanone	ND	10		µg/L	1	11/14/2022 4:05:00 PM	R92552
Carbon disulfide	ND	10		µg/L	1	11/14/2022 4:05:00 PM	R92552
Carbon Tetrachloride	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Chlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Chloroethane	ND	2.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Chloroform	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Chloromethane	ND	3.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
2-Chlorotoluene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
4-Chlorotoluene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
cis-1,2-DCE	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Dibromochloromethane	2.8	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Dibromomethane	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,1-Dichloroethane	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,1-Dichloroethene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,2-Dichloropropane	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,3-Dichloropropane	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
2,2-Dichloropropane	ND	2.0		µg/L	1	11/14/2022 4:05:00 PM	R92552

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1 - 221110
Project: CLC Joint Superfund Project
Collection Date: 11/10/2022 9:31:00 AM
Lab ID: 2211713-003
Matrix: DRINKING W
Received Date: 11/11/2022 8:45:00 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	11/14/2022 4:05:00 PM	R92552
Hexachlorobutadiene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
2-Hexanone	ND	10		µg/L	1	11/14/2022 4:05:00 PM	R92552
Isopropylbenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
4-Isopropyltoluene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
4-Methyl-2-pentanone	ND	10		µg/L	1	11/14/2022 4:05:00 PM	R92552
Methylene Chloride	ND	3.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
n-Butylbenzene	ND	3.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
n-Propylbenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
sec-Butylbenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Styrene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
tert-Butylbenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
trans-1,2-DCE	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Trichlorofluoromethane	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Vinyl chloride	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Xylenes, Total	ND	1.5		µg/L	1	11/14/2022 4:05:00 PM	R92552
Surr: 1,2-Dichloroethane-d4	97.2	70-130		%Rec	1	11/14/2022 4:05:00 PM	R92552
Surr: 4-Bromofluorobenzene	93.6	70-130		%Rec	1	11/14/2022 4:05:00 PM	R92552
Surr: Dibromofluoromethane	100	70-130		%Rec	1	11/14/2022 4:05:00 PM	R92552
Surr: Toluene-d8	88.5	70-130		%Rec	1	11/14/2022 4:05:00 PM	R92552

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1 - 221110 (DUP)
Project: CLC Joint Superfund Project
Collection Date: 11/10/2022 9:32:00 AM
Lab ID: 2211713-004
Matrix: DRINKING W
Received Date: 11/11/2022 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Toluene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Ethylbenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Naphthalene	ND	2.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
2-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Acetone	ND	10		µg/L	1	11/14/2022 4:28:00 PM	R92552
Bromobenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Bromodichloromethane	1.8	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Bromoform	2.7	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Bromomethane	ND	3.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
2-Butanone	ND	10		µg/L	1	11/14/2022 4:28:00 PM	R92552
Carbon disulfide	ND	10		µg/L	1	11/14/2022 4:28:00 PM	R92552
Carbon Tetrachloride	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Chlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Chloroethane	ND	2.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Chloroform	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Chloromethane	ND	3.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
2-Chlorotoluene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
4-Chlorotoluene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
cis-1,2-DCE	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Dibromochloromethane	3.0	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Dibromomethane	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,1-Dichloroethane	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,1-Dichloroethene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,2-Dichloropropane	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,3-Dichloropropane	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
2,2-Dichloropropane	ND	2.0		µg/L	1	11/14/2022 4:28:00 PM	R92552

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1 - 221110 (DUP)
Project: CLC Joint Superfund Project
Collection Date: 11/10/2022 9:32:00 AM
Lab ID: 2211713-004
Matrix: DRINKING W
Received Date: 11/11/2022 8:45:00 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	11/14/2022 4:28:00 PM	R92552
Hexachlorobutadiene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
2-Hexanone	ND	10		µg/L	1	11/14/2022 4:28:00 PM	R92552
Isopropylbenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
4-Isopropyltoluene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
4-Methyl-2-pentanone	ND	10		µg/L	1	11/14/2022 4:28:00 PM	R92552
Methylene Chloride	ND	3.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
n-Butylbenzene	ND	3.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
n-Propylbenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
sec-Butylbenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Styrene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
tert-Butylbenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
trans-1,2-DCE	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Trichlorofluoromethane	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Vinyl chloride	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Xylenes, Total	ND	1.5		µg/L	1	11/14/2022 4:28:00 PM	R92552
Surr: 1,2-Dichloroethane-d4	99.5	70-130		%Rec	1	11/14/2022 4:28:00 PM	R92552
Surr: 4-Bromofluorobenzene	93.4	70-130		%Rec	1	11/14/2022 4:28:00 PM	R92552
Surr: Dibromofluoromethane	98.8	70-130		%Rec	1	11/14/2022 4:28:00 PM	R92552
Surr: Toluene-d8	87.2	70-130		%Rec	1	11/14/2022 4:28:00 PM	R92552

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27 - 221110
Project: CLC Joint Superfund Project
Collection Date: 11/10/2022 9:39:00 AM
Lab ID: 2211713-005
Matrix: DRINKING W
Received Date: 11/11/2022 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Toluene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Ethylbenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Naphthalene	ND	2.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
2-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Acetone	ND	10		µg/L	1	11/14/2022 4:51:00 PM	R92552
Bromobenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Bromodichloromethane	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Bromoform	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Bromomethane	ND	3.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
2-Butanone	ND	10		µg/L	1	11/14/2022 4:51:00 PM	R92552
Carbon disulfide	ND	10		µg/L	1	11/14/2022 4:51:00 PM	R92552
Carbon Tetrachloride	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Chlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Chloroethane	ND	2.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Chloroform	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Chloromethane	ND	3.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
2-Chlorotoluene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
4-Chlorotoluene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
cis-1,2-DCE	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Dibromochloromethane	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Dibromomethane	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,1-Dichloroethane	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,1-Dichloroethene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,2-Dichloropropane	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,3-Dichloropropane	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
2,2-Dichloropropane	ND	2.0		µg/L	1	11/14/2022 4:51:00 PM	R92552

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27 - 221110
Project: CLC Joint Superfund Project
Collection Date: 11/10/2022 9:39:00 AM
Lab ID: 2211713-005 **Matrix:** DRINKING W **Received Date:** 11/11/2022 8:45:00 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	11/14/2022 4:51:00 PM	R92552
Hexachlorobutadiene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
2-Hexanone	ND	10		µg/L	1	11/14/2022 4:51:00 PM	R92552
Isopropylbenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
4-Isopropyltoluene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
4-Methyl-2-pentanone	ND	10		µg/L	1	11/14/2022 4:51:00 PM	R92552
Methylene Chloride	ND	3.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
n-Butylbenzene	ND	3.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
n-Propylbenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
sec-Butylbenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Styrene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
tert-Butylbenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Tetrachloroethene (PCE)	15	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
trans-1,2-DCE	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Trichlorofluoromethane	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Vinyl chloride	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Xylenes, Total	ND	1.5		µg/L	1	11/14/2022 4:51:00 PM	R92552
Surr: 1,2-Dichloroethane-d4	97.4	70-130		%Rec	1	11/14/2022 4:51:00 PM	R92552
Surr: 4-Bromofluorobenzene	93.9	70-130		%Rec	1	11/14/2022 4:51:00 PM	R92552
Surr: Dibromofluoromethane	101	70-130		%Rec	1	11/14/2022 4:51:00 PM	R92552
Surr: Toluene-d8	86.5	70-130		%Rec	1	11/14/2022 4:51:00 PM	R92552

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211713**

16-Nov-22

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: **R92552**	RunNo: **92552**
Prep Date:	Analysis Date: **11/14/2022**	SeqNo: **3327744** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	21	1.0	20.00	0	104	70	130			
Chlorobenzene	22	1.0	20.00	0	109	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	105	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.9	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.2	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.3	70	130			
Surr: Toluene-d8	9.0		10.00		89.5	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R92552**	RunNo: **92552**
Prep Date:	Analysis Date: **11/14/2022**	SeqNo: **3328840** 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 standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/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#: **2211713**
16-Nov-22

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: **R92552**	RunNo: **92552**
Prep Date:	Analysis Date: **11/14/2022**	SeqNo: **3328840** 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211713**

16-Nov-22

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: **R92552**	RunNo: **92552**
Prep Date:	Analysis Date: **11/14/2022**	SeqNo: **3328840** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.4	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.5	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.7	70	130			
Surr: Toluene-d8	8.8		10.00		88.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: City of Las Cruces | Work Order Number: 2211713 | RcptNo: 1

Received By: Juan Rojas 11/11/2022 8:45:00 AM

Completed By: Sean Livingston 11/11/2022 10:16:21 AM

Reviewed By: TMC 11/11/22

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: TMC 11/11/22

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	2.5	Good				

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
Sampler: Yadira Reyna
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp (Including CF): 2.5+0=2.5 (°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. 2211713	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)
11/10/22	0905	Drinking water	CLC 18-221110	3-40ml Vials	HgCl2	001								X		
"	0909	"	CLC 151-221110	"	"	002								X		
"	0931	"	CLC ESI-221110	"	"	003								X		
"	0932	"	CLC ESI-221110 (Dup)	"	"	004								X		
11/10/22	0939	Drinking water	CLC 27-221110	3-40ml Vials	HgCl2	005								X		

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
11/10/22	1500	Yadira Reyna		FedEx	11/11/22	8:45
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Send results to:
Luis Guerra: lguerra@las-cruces.org
Send invoice to: ~~CLC~~ 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
a Geo-Logic Company

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
January 2022

Date	Raw Water	Finished Water
1/1/2022	330,768	320,827
1/2/2022	330,768	321,044
1/3/2022	316,675	318,425
1/4/2022	335,117	338,096
1/5/2022	335,117	338,096
1/6/2022	335,663	337,283
1/7/2022	335,917	337,283
1/8/2022	325,772	307,497
1/9/2022	326,635	307,497
1/10/2022	326,868	311,903
1/11/2022	357,727	334,657
1/12/2022	357,727	334,657
1/13/2022	343,744	343,534
1/14/2022	343,744	343,534
1/15/2022	326,067	316,310
1/16/2022	320,664	316,509
1/17/2022	320,895	317,490
1/18/2022	348,948	323,846
1/19/2022	348,948	323,846
1/20/2022	348,946	324,562
1/21/2022	348,946	324,562
1/22/2022	313,633	314,913
1/23/2022	316,063	313,699
1/24/2022	316,063	313,891
1/25/2022	340,581	344,638
1/26/2022	340,581	344,638
1/27/2022	334,315	341,257
1/28/2022	334,315	341,257
1/29/2022	325,997	307,407
1/30/2022	324,312	307,407
1/31/2022	324,531	306,150
Totals:	**10,336,048**	**10,076,717**

Griggs/Walnut Treatment Facility
Well Runtime Hours
January 2022

	Well 18		Well 27	
Date	**Hours**	**Total Gallons**	**Hours**	**Total Gallons**
1/1/2022	0.0	0	24.0	317,827
1/2/2022	0.0	0	24.0	317,741
1/3/2022	0.0	0	24.0	317,378
1/4/2022	6.0	31,633	24.0	308,923
1/5/2022	0.0	0	24.0	306,599
1/6/2022	6.0	31,596	24.0	308,621
1/7/2022	0.0	0	24.0	308,893
1/8/2022	0.0	0	24.0	308,917
1/9/2022	0.0	0	24.0	308,393
1/10/2022	0.0	0	24.0	308,203
1/11/2022	6.0	31,610	24.0	308,050
1/12/2022	0.0	0	24.0	308,390
1/13/2022	6.0	31,575	24.0	308,918
1/14/2022	0.0	0	24.0	309,430
1/15/2022	0.0	0	24.0	309,570
1/16/2022	0.0	0	24.0	309,066
1/17/2022	0.0	0	24.0	309,241
1/18/2022	6.0	31,577	24.0	309,148
1/19/2022	0.0	0	24.0	308,952
1/20/2022	6.0	31,587	24.0	308,490
1/21/2022	0.0	0	24.0	308,393
1/22/2022	0.0	0	24.0	307,990
1/23/2022	0.0	0	24.0	307,588
1/24/2022	0.0	0	24.0	307,745
1/25/2022	6.0	31,645	24.0	307,874
1/26/2022	0.0	0	24.0	307,185
1/27/2022	6.0	31,610	24.0	307,292
1/28/2022	0.0	0	24.0	307,282
1/29/2022	0.0	0	24.0	307,535
1/30/2022	0.0	0	24.0	305,966
1/31/2022	0.0	0	24.0	304,877
Totals:	**48.0**	**252,835**	**744.0**	**9,580,472**

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
February 2022

Date	Raw Water	Finished Water
2/1/2022	346,749	340,266
2/2/2022	346,749	340,266
2/3/2022	333,170	339,766
2/4/2022	333,170	339,766
2/5/2022	324,191	303,942
2/6/2022	323,771	303,942
2/7/2022	323,983	304,928
2/8/2022	342,948	334,913
2/9/2022	321,507	292,598
2/10/2022	332,584	334,555
2/11/2022	321,384	300,125
2/12/2022	321,384	300,125
2/13/2022	321,443	300,577
2/14/2022	321,443	300,753
2/15/2022	340,755	336,008
2/16/2022	322,839	293,610
2/17/2022	332,092	334,154
2/18/2022	332,092	334,154
2/19/2022	321,019	301,149
2/20/2022	321,121	302,180
2/21/2022	321,121	302,180
2/22/2022	341,843	337,015
2/23/2022	341,843	337,015
2/24/2022	332,461	335,038
2/25/2022	332,461	335,038
2/26/2022	322,559	300,965
2/27/2022	322,947	300,965
2/28/2022	322,947	302,964
Totals:	**9,222,575**	**8,888,958**

Griggs/Walnut Treatment Facility
Well Runtime Hours
February 2022

	Well 18		Well 27	
Date	Hours	Total Gallons	Hours	Total Gallons
2/1/2022	6.0	31,634	24.0	304,916
2/2/2022	0.0	0	24.0	305,129
2/3/2022	6.0	31,629	24.0	305,129
2/4/2022	0.0	0	24.0	305,038
2/5/2022	0.0	0	24.0	305,299
2/6/2022	0.0	0	24.0	305,108
2/7/2022	0.0	0	24.0	304,988
2/8/2022	6.0	31,575	24.0	304,324
2/9/2022	0.0	0	24.0	304,564
2/10/2022	6.0	31,560	24.0	304,698
2/11/2022	0.0	0	24.0	304,159
2/12/2022	0.0	0	24.0	304,159
2/13/2022	0.0	0	24.0	304,053
2/14/2022	0.0	0	24.0	304,160
2/15/2022	6.0	31,601	24.0	304,390
2/16/2022	0.0	0	24.0	304,528
2/17/2022	6.0	31,551	24.0	304,363
2/18/2022	0.0	0	24.0	303,913
2/19/2022	0.0	0	24.0	303,913
2/20/2022	0.0	0	24.0	304,335
2/21/2022	0.0	0	24.0	305,092
2/22/2022	6.0	31,646	24.0	305,344
2/23/2022	0.0	0	24.0	305,089
2/24/2022	6.0	31,605	24.0	304,904
2/25/2022	0.0	0	24.0	304,349
2/26/2022	0.0	0	24.0	304,239
2/27/2022	0.0	0	24.0	304,049
2/28/2022	0.0	0	24.0	304,129
Totals:	**48.0**	**252,800**	**672.0**	**8,528,362**

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
March 2022

Date	Raw Water	Finished Water
3/1/2022	341,508	335,068
3/2/2022	341,508	335,068
3/3/2022	332,726	334,903
3/4/2022	332,726	334,903
3/5/2022	321,478	302,095
3/6/2022	322,180	303,480
3/7/2022	322,180	303,480
3/8/2022	340,326	336,560
3/9/2022	340,326	336,560
3/10/2022	332,560	335,370
3/11/2022	332,560	335,370
3/12/2022	322,614	302,448
3/13/2022	301,754	302,448
3/14/2022	314,574	309,744
3/15/2022	345,705	328,918
3/16/2022	299,744	300,154
3/17/2022	348,956	336,799
3/18/2022	309,194	295,378
3/19/2022	316,250	309,268
3/20/2022	307,004	298,357
3/21/2022	319,958	308,947
3/22/2022	344,797	328,693
3/23/2022	301,848	311,958
3/24/2022	354,290	330,116
3/25/2022	305,152	299,914
3/26/2022	321,471	306,037
3/27/2022	303,942	306,408
3/28/2022	327,353	304,426
3/29/2022	334,937	342,540
3/30/2022	328,604	301,391
3/31/2022	337,068	349,239
Totals:	**10,105,290**	**9,866,044**

Griggs/Walnut Treatment Facility
Well Runtime Hours
March 2022

	Well 18		Well 27	
Date	**Hours**	**Total Gallons**	**Hours**	**Total Gallons**
3/1/2022	6.0	31,553	24.0	303,987
3/2/2022	0.0	0	24.0	304,717
3/3/2022	6.0	31,490	24.0	304,717
3/4/2022	0.0	0	24.0	304,588
3/5/2022	0.0	0	24.0	304,553
3/6/2022	0.0	0	24.0	304,908
3/7/2022	0.0	0	24.0	304,908
3/8/2022	6.0	31,312	24.0	304,870
3/9/2022	0.0	0	24.0	305,794
3/10/2022	6.0	31,389	24.0	305,794
3/11/2022	0.0	0	24.0	304,817
3/12/2022	0.0	0	24.0	304,663
3/13/2022	0.0	0	24.0	304,527
3/14/2022	0.0	0	24.0	304,523
3/15/2022	6.0	31,342	24.0	303,866
3/16/2022	0.0	0	24.0	304,356
3/17/2022	6.0	31,319	24.0	304,912
3/18/2022	0.0	0	24.0	305,856
3/19/2022	0.0	0	24.0	305,687
3/20/2022	0.0	0	24.0	306,211
3/21/2022	0.0	0	24.0	306,362
3/22/2022	6.0	31,262	24.0	306,309
3/23/2022	0.0	0	24.0	306,283
3/24/2022	6.0	31,283	24.0	306,070
3/25/2022	0.0	0	24.0	306,190
3/26/2022	0.0	0	24.0	306,432
3/27/2022	0.0	0	24.0	308,662
3/28/2022	0.0	0	24.0	309,471
3/29/2022	6.0	31,206	24.0	310,283
3/30/2022	0.0	0	24.0	310,708
3/31/2022	6.0	31,237	24.0	310,446
Totals:	**60.0**	**313,393**	**744.0**	**9,485,469**

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
April 2022

Date	Raw Water	Finished Water
4/1/2022	327,439	298,571
4/2/2022	310,589	318,461
4/3/2022	319,951	294,760
4/4/2022	316,041	314,536
4/5/2022	349,055	334,555
4/6/2022	302,877	289,739
4/7/2022	354,742	355,614
4/8/2022	318,276	309,251
4/9/2022	332,412	312,513
4/10/2022	313,929	321,462
4/11/2022	324,663	301,845
4/12/2022	359,219	348,710
4/13/2022	310,114	313,380
4/14/2022	367,443	340,755
4/15/2022	307,879	317,958
4/16/2022	330,226	301,133
4/17/2022	322,248	321,605
4/18/2022	314,541	309,580
4/19/2022	355,456	329,896
4/20/2022	333,614	324,073
4/21/2022	242,038	228,590
4/22/2022	322,623	303,065
4/23/2022	331,072	325,091
4/24/2022	322,740	315,247
4/25/2022	337,184	312,529
4/26/2022	366,049	351,270
4/27/2022	320,579	321,188
4/28/2022	365,254	337,297
4/29/2022	336,493	322,564
4/30/2022	321,141	322,953
Totals:	**9,835,884**	**9,498,188**

Griggs/Walnut Treatment Facility
Well Runtime Hours
April 2022

	Well 18		Well 27	
Date	Hours	Total Gallons	Hours	Total Gallons
4/1/2022	0.0	0	24.0	310,160
4/2/2022	0.0	0	24.0	310,763
4/3/2022	0.0	0	24.0	310,736
4/4/2022	0.0	0	24.0	308,255
4/5/2022	6.0	31,177	24.0	306,429
4/6/2022	0.0	0	23.0	302,807
4/7/2022	6.0	31,078	24.0	316,823
4/8/2022	0.0	0	24.0	316,760
4/9/2022	0.0	0	24.0	316,655
4/10/2022	0.0	0	24.0	316,604
4/11/2022	0.0	0	0.0	426
4/12/2022	6.0	31,025	0.0	426
4/13/2022	0.0	0	14.0	186,419
4/14/2022	6.0	31,019	14.0	186,419
4/15/2022	0.0	0	14.0	186,419
4/16/2022	0.0	0	14.0	186,419
4/17/2022	0.0	0	14.0	186,419
4/18/2022	0.0	0	14.0	186,419
4/19/2022	6.0	30,989	24.0	314,947
4/20/2022	0.0	0	24.0	318,339
4/21/2022	0.0	1,766	17.0	227,448
4/22/2022	0.0	0	24.0	323,816
4/23/2022	0.0	0	24.0	323,746
4/24/2022	0.0	0	24.0	323,583
4/25/2022	0.0	0	24.0	323,253
4/26/2022	6.0	30,961	24.0	323,154
4/27/2022	0.0	0	24.0	323,442
4/28/2022	6.0	30,985	24.0	323,382
4/29/2022	0.0	0	24.0	323,508
4/30/2022	0.0	0	24.0	323,402
Totals:	**42.0**	**219,000**	**604.0**	**8,007,373**

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
May 2022

Date	Raw Water	Finished Water
5/1/2022	331,030	307,377
5/2/2022	335,708	320,688
5/3/2022	355,437	347,919
5/4/2022	322,605	310,832
5/5/2022	369,048	345,264
5/6/2022	318,790	320,405
5/7/2022	330,315	304,348
5/8/2022	333,434	320,797
5/9/2022	315,680	315,850
5/10/2022	364,019	336,553
5/11/2022	323,260	319,958
5/12/2022	353,204	340,031
5/13/2022	334,440	311,785
5/14/2022	322,675	320,683
5/15/2022	325,402	306,472
5/16/2022	328,774	312,836
5/17/2022	353,862	347,350
5/18/2022	322,192	307,784
5/19/2022	352,891	332,883
5/20/2022	320,050	321,556
5/21/2022	330,818	305,804
5/22/2022	335,927	321,592
5/23/2022	319,038	319,283
5/24/2022	366,469	338,449
5/25/2022	331,204	322,148
5/26/2022	356,118	349,086
5/27/2022	318,167	308,007
5/28/2022	335,772	317,374
5/29/2022	324,208	321,873
5/30/2022	326,748	310,275
5/31/2022	369,452	349,030
Totals:	**10,426,736**	**10,014,291**

Griggs/Walnut Treatment Facility
Well Runtime Hours
May 2022

	Well 18		Well 27	
Date	Hours	Total Gallons	Hours	Total Gallons
5/1/2022	0.0	0	24.0	323,395
5/2/2022	0.0	0	24.0	322,311
5/3/2022	6.0	30,935	24.0	321,458
5/4/2022	0.0	0	24.0	321,437
5/5/2022	6.0	30,963	24.0	320,780
5/6/2022	0.0	0	24.0	320,911
5/7/2022	0.0	0	24.0	320,651
5/8/2022	0.0	0	24.0	320,583
5/9/2022	0.0	0	24.0	320,459
5/10/2022	6.0	30,882	24.0	320,209
5/11/2022	0.0	0	24.0	320,237
5/12/2022	6.0	30,892	24.0	320,081
5/13/2022	0.0	0	24.0	320,041
5/14/2022	0.0	0	24.0	319,842
5/15/2022	0.0	0	24.0	320,174
5/16/2022	0.0	0	24.0	320,228
5/17/2022	6.0	30,833	24.0	319,814
5/18/2022	0.0	0	24.0	319,810
5/19/2022	6.0	30,702	23.0	307,075
5/20/2022	0.0	0	24.0	322,058
5/21/2022	0.0	0	24.0	322,506
5/22/2022	0.0	0	24.0	322,549
5/23/2022	0.0	0	24.0	322,556
5/24/2022	6.0	30,769	24.0	322,077
5/25/2022	0.0	0	24.0	321,585
5/26/2022	6.0	30,704	24.0	321,819
5/27/2022	0.0	0	24.0	321,738
5/28/2022	0.0	0	24.0	322,075
5/29/2022	0.0	0	24.0	322,403
5/30/2022	0.0	0	24.0	322,352
5/31/2022	6.0	30,745	24.0	322,201
Totals:	**54.0**	**277,426**	**743.0**	**9,945,414**

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
June 2022

Date	Raw Water	Finished Water
6/1/2022	314,123	316,367
6/2/2022	363,292	335,580
6/3/2022	310,825	312,689
6/4/2022	329,420	303,348
6/5/2022	315,945	317,988
6/6/2022	324,847	298,199
6/7/2022	353,343	345,690
6/8/2022	316,469	303,177
6/9/2022	360,608	342,613
6/10/2022	312,076	307,177
6/11/2022	320,493	297,913
6/12/2022	313,699	314,901
6/13/2022	327,584	301,552
6/14/2022	244,848	241,045
6/15/2022	319,225	319,737
6/16/2022	358,466	338,447
6/17/2022	332,824	323,995
6/18/2022	316,156	315,432
6/19/2022	335,474	316,713
6/20/2022	329,183	324,314
6/21/2022	355,484	349,541
6/22/2022	332,228	317,991
6/23/2022	356,724	349,328
6/24/2022	327,462	309,446
6/25/2022	327,515	316,037
6/26/2022	323,955	324,915
6/27/2022	319,049	309,400
6/28/2022	368,982	354,270
6/29/2022	319,721	321,055
6/30/2022	363,458	341,743
Totals:	**9,893,476**	**9,570,604**

Griggs/Walnut Treatment Facility
Well Runtime Hours
June 2022

	Well 18		Well 27	
Date	**Hours**	**Total Gallons**	**Hours**	**Total Gallons**
6/1/2022	0.0	0	24.0	318,044
6/2/2022	6.0	30,711	24.0	314,721
6/3/2022	0.0	0	24.0	314,620
6/4/2022	0.0	0	24.0	314,550
6/5/2022	0.0	0	24.0	314,459
6/6/2022	0.0	0	24.0	314,369
6/7/2022	6.0	30,766	24.0	314,181
6/8/2022	0.0	0	24.0	314,894
6/9/2022	6.0	30,719	24.0	315,251
6/10/2022	0.0	0	24.0	315,327
6/11/2022	0.0	0	24.0	315,288
6/12/2022	0.0	0	24.0	315,273
6/13/2022	0.0	0	24.0	315,709
6/14/2022	4.0	18,381	19.0	245,922
6/15/2022	0.0	0	24.0	322,647
6/16/2022	6.0	30,646	24.0	322,720
6/17/2022	0.0	0	24.0	321,810
6/18/2022	0.0	0	24.0	321,347
6/19/2022	0.0	0	24.0	321,482
6/20/2022	0.0	0	24.0	321,572
6/21/2022	6.0	30,625	24.0	321,377
6/22/2022	0.0	0	24.0	321,565
6/23/2022	6.0	30,679	24.0	321,733
6/24/2022	0.0	0	24.0	322,164
6/25/2022	0.0	0	24.0	322,288
6/26/2022	0.0	0	24.0	321,982
6/27/2022	0.0	0	24.0	322,194
6/28/2022	6.0	30,671	24.0	321,885
6/29/2022	0.0	0	24.0	321,961
6/30/2022	6.0	30,718	24.0	321,771
Totals:	**52.0**	**263,915**	**715.0**	**9,493,104**

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
July 2022

Date	Raw Water	Finished Water
7/1/2022	331,213	324,239
7/2/2022	315,332	310,360
7/3/2022	314,550	302,784
7/4/2022	319,188	320,106
7/5/2022	359,205	338,250
7/6/2022	324,899	321,204
7/7/2022	347,507	341,382
7/8/2022	332,481	311,935
7/9/2022	320,208	320,976
7/10/2022	313,013	302,206
7/11/2022	330,271	322,031
7/12/2022	348,751	346,572
7/13/2022	325,087	304,676
7/14/2022	330,323	328,530
7/15/2022	314,728	308,096
7/16/2022	329,797	313,839
7/17/2022	315,571	317,299
7/18/2022	326,997	305,877
7/19/2022	355,918	350,771
7/20/2022	315,904	304,237
7/21/2022	333,867	328,515
7/22/2022	313,638	308,158
7/23/2022	323,483	306,982
7/24/2022	315,395	316,915
7/25/2022	316,551	301,413
7/26/2022	355,875	351,225
7/27/2022	310,374	305,897
7/28/2022	360,429	349,562
7/29/2022	312,957	307,381
7/30/2022	330,911	314,904
7/31/2022	300,886	301,698
Totals:	**10,145,307**	**9,888,019**

Griggs/Walnut Treatment Facility
Well Runtime Hours
July 2022

	Well 18		Well 27	
Date	**Hours**	**Total Gallons**	**Hours**	**Total Gallons**
7/1/2022	0.0	0	24.0	319,991
7/2/2022	0.0	0	24.0	318,253
7/3/2022	0.0	0	24.0	317,792
7/4/2022	0.0	0	24.0	317,944
7/5/2022	6.0	30,732	24.0	317,421
7/6/2022	0.0	0	24.0	317,668
7/7/2022	6.0	30,688	24.0	317,325
7/8/2022	0.0	0	24.0	316,952
7/9/2022	0.0	0	24.0	317,233
7/10/2022	0.0	0	24.0	317,218
7/11/2022	0.0	0	24.0	317,334
7/12/2022	6.0	30,639	24.0	317,034
7/13/2022	0.0	0	24.0	317,059
7/14/2022	6.0	30,552	24.0	316,748
7/15/2022	0.0	0	24.0	316,886
7/16/2022	0.0	0	24.0	317,052
7/17/2022	0.0	0	24.0	317,059
7/18/2022	0.0	0	24.0	316,137
7/19/2022	6.0	30,516	24.0	315,912
7/20/2022	0.0	0	24.0	316,141
7/21/2022	6.0	30,525	24.0	316,272
7/22/2022	0.0	0	24.0	316,350
7/23/2022	0.0	0	24.0	316,473
7/24/2022	0.0	0	24.0	316,133
7/25/2022	0.0	0	24.0	316,249
7/26/2022	6.0	30,514	24.0	316,380
7/27/2022	0.0	0	24.0	316,191
7/28/2022	6.0	30,526	24.0	315,614
7/29/2022	0.0	0	24.0	315,751
7/30/2022	0.0	0	24.0	315,718
7/31/2022	0.0	0	24.0	305,309
Totals:	**48.0**	**244,692**	**744.0**	**9,811,596**

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
August 2022

Date	Raw Water	Finished Water
8/1/2022	317,585	308,864
8/2/2022	344,248	322,847
8/3/2022	303,268	299,263
8/4/2022	338,973	322,914
8/5/2022	296,418	296,383
8/6/2022	316,213	303,052
8/7/2022	302,245	288,978
8/8/2022	302,550	304,446
8/9/2022	340,468	329,636
8/10/2022	307,518	286,922
8/11/2022	326,957	325,921
8/12/2022	308,825	297,633
8/13/2022	302,266	285,154
8/14/2022	300,337	298,683
8/15/2022	300,857	283,051
8/16/2022	317,634	318,738
8/17/2022	299,795	299,755
8/18/2022	329,012	318,478
8/19/2022	304,312	283,841
8/20/2022	287,327	277,895
8/21/2022	289,767	290,896
8/22/2022	301,558	286,209
8/23/2022	322,547	312,501
8/24/2022	291,753	274,609
8/25/2022	277,557	247,781
8/26/2022	278,492	241,808
8/27/2022	299,105	247,564
8/28/2022	292,878	232,143
8/29/2022	282,942	234,320
8/30/2022	321,933	268,660
8/31/2022	289,697	251,070
Totals:	**9,495,035**	**8,940,015**

Griggs/Walnut Treatment Facility
Well Runtime Hours
August 2022

	Well 18		Well 27	
Date	**Hours**	**Total Gallons**	**Hours**	**Total Gallons**
8/1/2022	1.0	3,110	24.0	302,509
8/2/2022	6.0	30,554	24.0	302,345
8/3/2022	0.0	0	24.0	298,031
8/4/2022	6.0	30,476	24.0	301,517
8/5/2022	0.0	0	24.0	301,159
8/6/2022	0.0	0	24.0	301,170
8/7/2022	0.0	0	24.0	301,076
8/8/2022	0.0	0	24.0	300,397
8/9/2022	6.0	30,524	24.0	298,801
8/10/2022	0.0	0	24.0	298,675
8/11/2022	6.0	30,523	24.0	297,982
8/12/2022	0.0	0	24.0	295,208
8/13/2022	0.0	0	24.0	295,120
8/14/2022	0.0	0	24.0	295,004
8/15/2022	0.0	0	24.0	294,719
8/16/2022	6.0	30,372	24.0	294,343
8/17/2022	0.0	0	24.0	293,813
8/18/2022	6.0	30,460	24.0	290,856
8/19/2022	0.0	0	24.0	289,482
8/20/2022	0.0	0	24.0	287,847
8/21/2022	0.0	0	24.0	287,671
8/22/2022	0.0	0	24.0	286,851
8/23/2022	6.0	30,430	24.0	285,442
8/24/2022	0.0	0	24.0	285,306
8/25/2022	3.0	17,507	21.0	251,129
8/26/2022	0.0	0	24.0	284,996
8/27/2022	0.0	0	24.0	284,666
8/28/2022	0.0	0	24.0	284,515
8/29/2022	0.0	0	24.0	284,346
8/30/2022	6.0	30,845	24.0	283,859
8/31/2022	0.0	0	24.0	283,395
Totals:	**52.0**	**264,800**	**741.0**	**9,042,227**

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
September 2022

Date	Raw Water	Finished Water
9/1/2022	320,232	277,380
9/2/2022	297,314	256,099
9/3/2022	285,223	251,617
9/4/2022	277,737	252,944
9/5/2022	288,232	256,489
9/6/2022	311,583	280,676
9/7/2022	288,806	258,794
9/8/2022	309,560	291,864
9/9/2022	277,564	256,222
9/10/2022	270,707	256,167
9/11/2022	282,037	265,023
9/12/2022	297,326	262,699
9/13/2022	329,727	302,104
9/14/2022	290,773	285,879
9/15/2022	325,446	318,177
9/16/2022	306,728	283,936
9/17/2022	296,036	270,131
9/18/2022	288,505	278,546
9/19/2022	304,447	283,587
9/20/2022	327,232	309,457
9/21/2022	294,625	270,614
9/22/2022	322,867	306,091
9/23/2022	285,923	279,112
9/24/2022	298,599	285,694
9/25/2022	297,014	271,440
9/26/2022	284,095	271,690
9/27/2022	320,695	304,396
9/28/2022	277,551	274,366
9/29/2022	320,504	294,929
9/30/2022	276,852	273,988
Totals:	**8,953,939**	**8,330,111**

Griggs/Walnut Treatment Facility
Well Runtime Hours
September 2022

	Well 18		Well 27	
Date	**Hours**	**Total Gallons**	**Hours**	**Total Gallons**
9/1/2022	6.0	30,745	24.0	282,803
9/2/2022	0.0	0	24.0	282,866
9/3/2022	0.0	0	24.0	281,951
9/4/2022	0.0	0	24.0	279,239
9/5/2022	0.0	0	24.0	277,727
9/6/2022	6.0	30,528	24.0	276,065
9/7/2022	0.0	0	24.0	275,505
9/8/2022	6.0	30,690	24.0	274,444
9/9/2022	0.0	0	24.0	268,220
9/10/2022	0.0	0	24.0	272,197
9/11/2022	0.0	0	24.0	278,869
9/12/2022	0.0	0	23.0	280,641
9/13/2022	6.0	30,667	24.0	293,418
9/14/2022	0.0	0	24.0	292,986
9/15/2022	6.0	30,670	24.0	292,179
9/16/2022	0.0	0	24.0	291,881
9/17/2022	0.0	0	24.0	291,199
9/18/2022	0.0	0	24.0	290,958
9/19/2022	0.0	0	24.0	290,517
9/20/2022	6.0	30,716	24.0	288,952
9/21/2022	0.0	0	24.0	288,215
9/22/2022	6.0	30,756	24.0	287,681
9/23/2022	0.0	0	24.0	287,436
9/24/2022	0.0	0	24.0	287,137
9/25/2022	0.0	0	24.0	286,976
9/26/2022	0.0	0	24.0	285,205
9/27/2022	6.0	30,719	24.0	281,649
9/28/2022	0.0	0	24.0	279,126
9/29/2022	6.0	30,706	24.0	277,779
9/30/2022	0.0	0	24.0	277,472
Totals:	**54.0**	**276,197**	**719.0**	**8,501,292**

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
October 2022

Date	Raw Water	Finished Water
10/1/2022	285,826	271,253
10/2/2022	281,394	257,066
10/3/2022	264,313	256,207
10/4/2022	312,100	296,223
10/5/2022	267,030	254,184
10/6/2022	311,805	295,390
10/7/2022	264,106	251,407
10/8/2022	263,836	261,591
10/9/2022	276,150	262,092
10/10/2022	272,812	251,144
10/11/2022	297,334	291,542
10/12/2022	268,344	248,135
10/13/2022	298,946	288,825
10/14/2022	262,247	247,271
10/15/2022	258,129	257,489
10/16/2022	270,211	255,703
10/17/2022	263,881	243,344
10/18/2022	291,612	285,440
10/19/2022	258,042	240,788
10/20/2022	227,913	183,240
10/21/2022	191,007	183,128
10/22/2022	186,177	183,592
10/23/2022	203,358	196,271
10/24/2022	189,558	181,397
10/25/2022	243,903	239,063
10/26/2022	252,926	244,678
10/27/2022	294,724	279,247
10/28/2022	261,803	257,400
10/29/2022	246,073	233,472
10/30/2022	238,695	237,068
10/31/2022	244,205	240,487
Totals:	**8,048,459**	**7,674,140**

Griggs/Walnut Treatment Facility
Well Runtime Hours
October 2022

	Well 18		Well 27	
Date	**Hours**	**Total Gallons**	**Hours**	**Total Gallons**
10/1/2022	0.0	0	24.0	272,475
10/2/2022	0.0	0	24.0	270,998
10/3/2022	0.0	0	24.0	270,147
10/4/2022	6.0	30,800	24.0	268,980
10/5/2022	0.0	0	24.0	268,620
10/6/2022	6.0	30,838	24.0	267,580
10/7/2022	0.0	0	24.0	266,261
10/8/2022	0.0	0	24.0	264,442
10/9/2022	0.0	0	24.0	263,811
10/10/2022	0.0	0	24.0	263,448
10/11/2022	6.0	30,926	24.0	262,679
10/12/2022	0.0	0	24.0	262,083
10/13/2022	6.0	30,923	24.0	260,973
10/14/2022	0.0	0	24.0	260,377
10/15/2022	0.0	0	24.0	259,643
10/16/2022	0.0	0	24.0	257,419
10/17/2022	0.0	0	24.0	256,014
10/18/2022	6.0	30,836	24.0	255,258
10/19/2022	0.0	0	24.0	254,930
10/20/2022	4.0	18,232	18.0	186,976
10/21/2022	0.0	0	18.0	188,091
10/22/2022	0.0	0	18.0	183,929
10/23/2022	0.0	0	19.0	198,435
10/24/2022	0.0	0	18.0	185,007
10/25/2022	5.0	24,761	21.0	219,514
10/26/2022	0.0	0	24.0	243,880
10/27/2022	9.0	44,520	24.0	243,203
10/28/2022	3.0	14,592	24.0	242,121
10/29/2022	0.0	0	24.0	241,521
10/30/2022	0.0	0	24.0	240,963
10/31/2022	0.0	0	24.0	240,033
Totals:	**51.0**	**256,428**	**712.0**	**7,619,810**

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
November 2022

Date	Raw Water	Finished Water
11/1/2022	271,874	254,559
11/2/2022	239,604	233,233
11/3/2022	273,625	265,101
11/4/2022	238,814	237,360
11/5/2022	241,705	237,345
11/6/2022	257,783	240,286
11/7/2022	257,783	240,286
11/8/2022	274,308	262,572
11/9/2022	274,308	262,572
11/10/2022	279,993	261,838
11/11/2022	279,993	261,838
11/12/2022	241,310	236,286
11/13/2022	241,310	236,286
11/14/2022	240,701	228,469
11/15/2022	264,065	264,443
11/16/2022	264,065	264,443
11/17/2022	258,570	252,821
11/18/2022	258,570	252,821
11/19/2022	236,336	227,882
11/20/2022	236,336	227,882
11/21/2022	229,776	227,547
11/22/2022	256,892	247,381
11/23/2022	256,892	247,381
11/24/2022	260,068	252,626
11/25/2022	260,068	252,626
11/26/2022	233,058	223,818
11/27/2022	233,058	223,818
11/28/2022	227,921	225,821
11/29/2022	258,156	250,625
11/30/2022	258,156	250,625
Totals:	**7,605,097**	**7,350,589**

Griggs/Walnut Treatment Facility
Well Runtime Hours
November 2022

	Well 18		Well 27	
Date	**Hours**	**Total Gallons**	**Hours**	**Total Gallons**
11/1/2022	4.0	20,062	24.0	239,872
11/2/2022	0.0	0	24.0	239,418
11/3/2022	6.0	30,518	24.0	238,972
11/4/2022	0.0	0	24.0	238,813
11/5/2022	0.0	0	24.0	237,748
11/6/2022	0.0	0	25.0	248,588
11/7/2022	0.0	0	25.0	248,588
11/8/2022	6.0	30,953	24.0	237,540
11/9/2022	0.0	0	24.0	236,709
11/10/2022	6.0	30,987	24.0	236,699
11/11/2022	0.0	0	24.0	236,378
11/12/2022	0.0	0	24.0	235,916
11/13/2022	0.0	0	24.0	234,707
11/14/2022	0.0	0	24.0	232,667
11/15/2022	6.0	31,004	24.0	232,644
11/16/2022	0.0	0	24.0	229,094
11/17/2022	6.0	31,041	24.0	227,193
11/18/2022	0.0	0	24.0	226,919
11/19/2022	0.0	0	24.0	226,971
11/20/2022	0.0	0	24.0	226,548
11/21/2022	0.0	0	24.0	226,377
11/22/2022	6.0	31,064	24.0	225,058
11/23/2022	0.0	0	24.0	224,183
11/24/2022	6.0	31,046	24.0	223,886
11/25/2022	0.0	0	24.0	223,215
11/26/2022	0.0	0	24.0	223,096
11/27/2022	0.0	0	24.0	222,959
11/28/2022	0.0	0	24.0	222,714
11/29/2022	6.0	30,994	24.0	223,009
11/30/2022	0.0	0	24.0	222,354
Totals:	**52.0**	**267,670**	**722.0**	**6,948,834**

Griggs/Walnut Treatment Facility
Raw and Finished Water Daily Gallons
December 2022

Date	Raw Water	Finished Water
12/1/2022	256,778	252,063
12/2/2022	256,778	252,063
12/3/2022	230,003	220,700
12/4/2022	230,003	220,700
12/5/2022	224,731	212,478
12/6/2022	250,289	242,832
12/7/2022	250,289	242,832
12/8/2022	235,160	223,887
12/9/2022	235,160	223,887
12/10/2022	202,337	195,147
12/11/2022	200,850	194,733
12/12/2022	199,169	197,012
12/13/2022	228,990	217,655
12/14/2022	228,990	217,655
12/15/2022	225,050	218,219
12/16/2022	225,050	218,219
12/17/2022	191,700	189,063
12/18/2022	186,114	189,063
12/19/2022	184,446	187,721
12/20/2022	225,542	209,541
12/21/2022	226,058	210,986
12/22/2022	222,983	215,998
12/23/2022	222,983	215,998
12/24/2022	187,988	189,849
12/25/2022	187,988	189,849
12/26/2022	190,610	189,248
12/27/2022	223,729	209,364
12/28/2022	223,729	210,050
12/29/2022	223,324	216,944
12/30/2022	223,324	216,944
12/31/2022	193,140	187,354
Totals:	**6,793,287**	**6,578,056**

Griggs/Walnut Treatment Facility
Well Runtime Hours
December 2022

	Well 18		Well 27	
Date	Hours	Total Gallons	Hours	Total Gallons
12/1/2022	6.0	30,974	24.0	222,664
12/2/2022	0.0	0	24.0	221,554
12/3/2022	0.0	0	24.0	221,554
12/4/2022	0.0	0	24.0	219,630
12/5/2022	0.0	0	24.0	217,956
12/6/2022	6.0	30,933	24.0	216,264
12/7/2022	0.0	0	24.0	215,028
12/8/2022	6.0	30,941	24.0	208,085
12/9/2022	0.0	0	24.0	198,175
12/10/2022	0.0	0	24.0	198,319
12/11/2022	0.0	0	24.0	198,319
12/12/2022	0.0	0	24.0	198,229
12/13/2022	6.0	31,018	24.0	198,361
12/14/2022	0.0	0	24.0	189,826
12/15/2022	6.0	31,007	24.0	187,220
12/16/2022	0.0	0	24.0	187,220
12/17/2022	0.0	0	24.0	186,622
12/18/2022	0.0	0	24.0	185,900
12/19/2022	0.0	0	24.0	185,491
12/20/2022	6.0	30,982	24.0	184,158
12/21/2022	0.0	0	24.0	184,035
12/22/2022	6.0	30,985	24.0	184,167
12/23/2022	0.0	0	24.0	183,977
12/24/2022	0.0	0	24.0	184,109
12/25/2022	0.0	0	24.0	184,712
12/26/2022	0.0	0	24.0	184,313
12/27/2022	6.0	31,015	24.0	184,910
12/28/2022	0.0	0	24.0	184,910
12/29/2022	6.0	31,031	24.0	184,619
12/30/2022	0.0	0	24.0	184,268
12/31/2022	0.0	0	24.0	184,268
Totals:	**54.0**	**278,888**	**744.0**	**6,068,860**

Appendix E

Laboratory Reports for Remediation System Sampling

DBS&A
a Geo-Logic Company

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 07, 2022

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.: 2201B09

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 5 sample(s) on 1/28/2022 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: CLC18-220127
Project: CLC Joint Superfund Project Monthly An
Collection Date: 1/27/2022 8:12:00 AM
Lab ID: 2201B09-001
Matrix: DRINKING W
Received Date: 1/28/2022 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
Toluene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
Ethylbenzene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
Naphthalene	ND	2.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
1-Methylnaphthalene	ND	4.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
2-Methylnaphthalene	ND	4.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
Acetone	ND	10		µg/L	1	2/2/2022 11:25:17 PM	R85595
Bromobenzene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
Bromodichloromethane	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
Bromoform	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
Bromomethane	ND	3.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
2-Butanone	ND	10		µg/L	1	2/2/2022 11:25:17 PM	R85595
Carbon disulfide	ND	10		µg/L	1	2/2/2022 11:25:17 PM	R85595
Carbon Tetrachloride	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
Chlorobenzene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
Chloroethane	ND	2.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
Chloroform	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
Chloromethane	ND	3.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
2-Chlorotoluene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
4-Chlorotoluene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
cis-1,2-DCE	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
Dibromochloromethane	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
Dibromomethane	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
1,1-Dichloroethane	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
1,1-Dichloroethene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
1,2-Dichloropropane	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
1,3-Dichloropropane	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
2,2-Dichloropropane	ND	2.0		µg/L	1	2/2/2022 11:25:17 PM	R85595

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 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, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC18-220127
Project: CLC Joint Superfund Project Monthly An
Collection Date: 1/27/2022 8:12:00 AM
Lab ID: 2201B09-001
Matrix: DRINKING W
Received Date: 1/28/2022 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
Hexachlorobutadiene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
2-Hexanone	ND	10		µg/L	1	2/2/2022 11:25:17 PM	R85595
Isopropylbenzene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
4-Isopropyltoluene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
4-Methyl-2-pentanone	ND	10		µg/L	1	2/2/2022 11:25:17 PM	R85595
Methylene Chloride	ND	3.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
n-Butylbenzene	ND	3.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
n-Propylbenzene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
sec-Butylbenzene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
Styrene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
tert-Butylbenzene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
Tetrachloroethene (PCE)	4.3	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
trans-1,2-DCE	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
Trichlorofluoromethane	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
Vinyl chloride	ND	1.0		µg/L	1	2/2/2022 11:25:17 PM	R85595
Xylenes, Total	ND	1.5		µg/L	1	2/2/2022 11:25:17 PM	R85595
Surr: 1,2-Dichloroethane-d4	94.2	70-130		%Rec	1	2/2/2022 11:25:17 PM	R85595
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	2/2/2022 11:25:17 PM	R85595
Surr: Dibromofluoromethane	98.0	70-130		%Rec	1	2/2/2022 11:25:17 PM	R85595
Surr: Toluene-d8	98.3	70-130		%Rec	1	2/2/2022 11:25:17 PM	R85595

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC27-220127
Project: CLC Joint Superfund Project Monthly An
Collection Date: 1/27/2022 8:38:00 AM
Lab ID: 2201B09-002
Matrix: DRINKING W
Received Date: 1/28/2022 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
Toluene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
Ethylbenzene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
Naphthalene	ND	2.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
1-Methylnaphthalene	ND	4.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
2-Methylnaphthalene	ND	4.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
Acetone	ND	10		µg/L	1	2/3/2022 12:45:54 AM	R85595
Bromobenzene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
Bromodichloromethane	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
Bromoform	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
Bromomethane	ND	3.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
2-Butanone	ND	10		µg/L	1	2/3/2022 12:45:54 AM	R85595
Carbon disulfide	ND	10		µg/L	1	2/3/2022 12:45:54 AM	R85595
Carbon Tetrachloride	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
Chlorobenzene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
Chloroethane	ND	2.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
Chloroform	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
Chloromethane	ND	3.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
2-Chlorotoluene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
4-Chlorotoluene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
cis-1,2-DCE	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
Dibromochloromethane	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
Dibromomethane	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
1,1-Dichloroethane	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
1,1-Dichloroethene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
1,2-Dichloropropane	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
1,3-Dichloropropane	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
2,2-Dichloropropane	ND	2.0		µg/L	1	2/3/2022 12:45:54 AM	R85595

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 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, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC27-220127
Project: CLC Joint Superfund Project Monthly An
Collection Date: 1/27/2022 8:38:00 AM
Lab ID: 2201B09-002
Matrix: DRINKING W
Received Date: 1/28/2022 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
Hexachlorobutadiene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
2-Hexanone	ND	10		µg/L	1	2/3/2022 12:45:54 AM	R85595
Isopropylbenzene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
4-Isopropyltoluene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
4-Methyl-2-pentanone	ND	10		µg/L	1	2/3/2022 12:45:54 AM	R85595
Methylene Chloride	ND	3.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
n-Butylbenzene	ND	3.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
n-Propylbenzene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
sec-Butylbenzene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
Styrene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
tert-Butylbenzene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
Tetrachloroethene (PCE)	16	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
trans-1,2-DCE	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
Trichlorofluoromethane	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
Vinyl chloride	ND	1.0		µg/L	1	2/3/2022 12:45:54 AM	R85595
Xylenes, Total	ND	1.5		µg/L	1	2/3/2022 12:45:54 AM	R85595
Surr: 1,2-Dichloroethane-d4	97.5	70-130		%Rec	1	2/3/2022 12:45:54 AM	R85595
Surr: 4-Bromofluorobenzene	99.6	70-130		%Rec	1	2/3/2022 12:45:54 AM	R85595
Surr: Dibromofluoromethane	99.8	70-130		%Rec	1	2/3/2022 12:45:54 AM	R85595
Surr: Toluene-d8	95.9	70-130		%Rec	1	2/3/2022 12:45:54 AM	R85595

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLCIS1-220127
Project: CLC Joint Superfund Project Monthly An
Collection Date: 1/27/2022 8:17:00 AM
Lab ID: 2201B09-003
Matrix: DRINKING W
Received Date: 1/28/2022 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
Toluene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
Ethylbenzene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
Naphthalene	ND	2.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
1-Methylnaphthalene	ND	4.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
2-Methylnaphthalene	ND	4.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
Acetone	ND	10		µg/L	1	2/3/2022 1:12:40 AM	R85595
Bromobenzene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
Bromodichloromethane	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
Bromoform	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
Bromomethane	ND	3.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
2-Butanone	ND	10		µg/L	1	2/3/2022 1:12:40 AM	R85595
Carbon disulfide	ND	10		µg/L	1	2/3/2022 1:12:40 AM	R85595
Carbon Tetrachloride	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
Chlorobenzene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
Chloroethane	ND	2.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
Chloroform	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
Chloromethane	ND	3.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
2-Chlorotoluene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
4-Chlorotoluene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
cis-1,2-DCE	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
Dibromochloromethane	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
Dibromomethane	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
1,1-Dichloroethane	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
1,1-Dichloroethene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
1,2-Dichloropropane	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
1,3-Dichloropropane	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
2,2-Dichloropropane	ND	2.0		µg/L	1	2/3/2022 1:12:40 AM	R85595

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 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, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLCIS1-220127
Project: CLC Joint Superfund Project Monthly An
Collection Date: 1/27/2022 8:17:00 AM
Lab ID: 2201B09-003
Matrix: DRINKING W
Received Date: 1/28/2022 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
Hexachlorobutadiene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
2-Hexanone	ND	10		µg/L	1	2/3/2022 1:12:40 AM	R85595
Isopropylbenzene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
4-Isopropyltoluene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
4-Methyl-2-pentanone	ND	10		µg/L	1	2/3/2022 1:12:40 AM	R85595
Methylene Chloride	ND	3.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
n-Butylbenzene	ND	3.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
n-Propylbenzene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
sec-Butylbenzene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
Styrene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
tert-Butylbenzene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
Tetrachloroethene (PCE)	11	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
trans-1,2-DCE	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
Trichlorofluoromethane	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
Vinyl chloride	ND	1.0		µg/L	1	2/3/2022 1:12:40 AM	R85595
Xylenes, Total	ND	1.5		µg/L	1	2/3/2022 1:12:40 AM	R85595
Surr: 1,2-Dichloroethane-d4	94.2	70-130		%Rec	1	2/3/2022 1:12:40 AM	R85595
Surr: 4-Bromofluorobenzene	98.7	70-130		%Rec	1	2/3/2022 1:12:40 AM	R85595
Surr: Dibromofluoromethane	96.6	70-130		%Rec	1	2/3/2022 1:12:40 AM	R85595
Surr: Toluene-d8	98.9	70-130		%Rec	1	2/3/2022 1:12:40 AM	R85595

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLCIS1-220127 Dup
Project: CLC Joint Superfund Project Monthly An
Collection Date: 1/27/2022 8:19:00 AM
Lab ID: 2201B09-004
Matrix: DRINKING W
Received Date: 1/28/2022 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
Toluene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
Ethylbenzene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
Naphthalene	ND	2.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
1-Methylnaphthalene	ND	4.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
2-Methylnaphthalene	ND	4.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
Acetone	ND	10		µg/L	1	2/3/2022 1:39:37 AM	R85595
Bromobenzene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
Bromodichloromethane	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
Bromoform	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
Bromomethane	ND	3.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
2-Butanone	ND	10		µg/L	1	2/3/2022 1:39:37 AM	R85595
Carbon disulfide	ND	10		µg/L	1	2/3/2022 1:39:37 AM	R85595
Carbon Tetrachloride	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
Chlorobenzene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
Chloroethane	ND	2.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
Chloroform	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
Chloromethane	ND	3.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
2-Chlorotoluene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
4-Chlorotoluene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
cis-1,2-DCE	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
Dibromochloromethane	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
Dibromomethane	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
1,1-Dichloroethane	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
1,1-Dichloroethene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
1,2-Dichloropropane	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
1,3-Dichloropropane	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
2,2-Dichloropropane	ND	2.0		µg/L	1	2/3/2022 1:39:37 AM	R85595

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 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, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLCIS1-220127 Dup
Project: CLC Joint Superfund Project Monthly An
Collection Date: 1/27/2022 8:19:00 AM
Lab ID: 2201B09-004
Matrix: DRINKING W
Received Date: 1/28/2022 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
Hexachlorobutadiene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
2-Hexanone	ND	10		µg/L	1	2/3/2022 1:39:37 AM	R85595
Isopropylbenzene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
4-Isopropyltoluene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
4-Methyl-2-pentanone	ND	10		µg/L	1	2/3/2022 1:39:37 AM	R85595
Methylene Chloride	ND	3.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
n-Butylbenzene	ND	3.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
n-Propylbenzene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
sec-Butylbenzene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
Styrene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
tert-Butylbenzene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
Tetrachloroethene (PCE)	11	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
trans-1,2-DCE	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
Trichlorofluoromethane	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
Vinyl chloride	ND	1.0		µg/L	1	2/3/2022 1:39:37 AM	R85595
Xylenes, Total	ND	1.5		µg/L	1	2/3/2022 1:39:37 AM	R85595
Surr: 1,2-Dichloroethane-d4	96.9	70-130		%Rec	1	2/3/2022 1:39:37 AM	R85595
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	2/3/2022 1:39:37 AM	R85595
Surr: Dibromofluoromethane	101	70-130		%Rec	1	2/3/2022 1:39:37 AM	R85595
Surr: Toluene-d8	99.3	70-130		%Rec	1	2/3/2022 1:39:37 AM	R85595

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 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, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLCES1-220127
Project: CLC Joint Superfund Project Monthly An
Collection Date: 1/27/2022 8:23:00 AM
Lab ID: 2201B09-005
Matrix: DRINKING W
Received Date: 1/28/2022 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
Toluene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
Ethylbenzene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
Naphthalene	ND	2.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
1-Methylnaphthalene	ND	4.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
2-Methylnaphthalene	ND	4.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
Acetone	ND	10		µg/L	1	2/3/2022 2:06:29 AM	R85595
Bromobenzene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
Bromodichloromethane	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
Bromoform	6.5	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
Bromomethane	ND	3.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
2-Butanone	ND	10		µg/L	1	2/3/2022 2:06:29 AM	R85595
Carbon disulfide	ND	10		µg/L	1	2/3/2022 2:06:29 AM	R85595
Carbon Tetrachloride	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
Chlorobenzene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
Chloroethane	ND	2.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
Chloroform	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
Chloromethane	ND	3.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
2-Chlorotoluene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
4-Chlorotoluene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
cis-1,2-DCE	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
Dibromochloromethane	2.7	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
Dibromomethane	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
1,1-Dichloroethane	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
1,1-Dichloroethene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
1,2-Dichloropropane	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
1,3-Dichloropropane	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
2,2-Dichloropropane	ND	2.0		µg/L	1	2/3/2022 2:06:29 AM	R85595

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLCES1-220127
Project: CLC Joint Superfund Project Monthly An
Collection Date: 1/27/2022 8:23:00 AM
Lab ID: 2201B09-005
Matrix: DRINKING W
Received Date: 1/28/2022 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
Hexachlorobutadiene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
2-Hexanone	ND	10		µg/L	1	2/3/2022 2:06:29 AM	R85595
Isopropylbenzene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
4-Isopropyltoluene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
4-Methyl-2-pentanone	ND	10		µg/L	1	2/3/2022 2:06:29 AM	R85595
Methylene Chloride	ND	3.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
n-Butylbenzene	ND	3.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
n-Propylbenzene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
sec-Butylbenzene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
Styrene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
tert-Butylbenzene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
trans-1,2-DCE	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
Trichlorofluoromethane	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
Vinyl chloride	ND	1.0		µg/L	1	2/3/2022 2:06:29 AM	R85595
Xylenes, Total	ND	1.5		µg/L	1	2/3/2022 2:06:29 AM	R85595
Surr: 1,2-Dichloroethane-d4	95.9	70-130		%Rec	1	2/3/2022 2:06:29 AM	R85595
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	2/3/2022 2:06:29 AM	R85595
Surr: Dibromofluoromethane	101	70-130		%Rec	1	2/3/2022 2:06:29 AM	R85595
Surr: Toluene-d8	98.7	70-130		%Rec	1	2/3/2022 2:06:29 AM	R85595

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2201B09**

07-Feb-22

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: **R85595**	RunNo: **85595**
Prep Date:	Analysis Date: **2/2/2022**	SeqNo: **3013085** 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	20	1.0	20.00	0	98.3	70	130			
Chlorobenzene	19	1.0	20.00	0	94.8	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	94.9	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.6	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.9	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.4	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: **R85595**	RunNo: **85595**
Prep Date:	Analysis Date: **2/2/2022**	SeqNo: **3013093** 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#: **2201B09**

07-Feb-22

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: **R85595**	RunNo: **85595**
Prep Date:	Analysis Date: **2/2/2022**	SeqNo: **3013093** 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	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#: **2201B09**

07-Feb-22

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: **R85595**	RunNo: **85595**
Prep Date:	Analysis Date: **2/2/2022**	SeqNo: **3013093** 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	9.9		10.00		99.4	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.7		10.00		97.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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

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: 2201B09 RcptNo: 1

Received By: Sean Livingston 1/28/2022 9:40:00 AM Sean Livingston
Completed By: Sean Livingston 1/28/2022 10:03:33 AM Sean Livingston
Reviewed By: JO 1/28/22

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 1/28/22

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	1.7	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 Bayna
On Ice: ☑ Yes ☐ No
# of Coolers: 1
Cooler Temp (including CF): 1.7 +0 = 1.7 (°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. 2201809	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)
1/27/22	0812	Drinking Water	CLC I8-220127	3-40ml Vials	HgCl2	001								X		
	0838		CLC 27-220127			002								X		
	0817		CLC IS1-220127			003								X		
	0819		CLC IS1-220127 DUP			004								X		
1/27/22	0823	Drinking Water	CLC ES1-220127	3-40ml Vials	HgCl2	005								X		

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
1/20/22	1500	Yadira Bayna	SCR	Fedex	1/28/22	9:40
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

March 07, 2022

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.: 2202C65

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 3 sample(s) on 2/25/2022 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: AS1-220224
Project: CLC Joint Superfund Project Monthly An
Collection Date: 2/24/2022 8:21:00 AM
Lab ID: 2202C65-001 **Matrix:** AIR
Received Date: 2/25/2022 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
Toluene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
Ethylbenzene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
Naphthalene	ND	0.20		µg/L	1	3/3/2022 3:06:00 PM	R86211
1-Methylnaphthalene	ND	0.40		µg/L	1	3/3/2022 3:06:00 PM	R86211
2-Methylnaphthalene	ND	0.40		µg/L	1	3/3/2022 3:06:00 PM	R86211
Acetone	ND	1.0		µg/L	1	3/3/2022 3:06:00 PM	R86211
Bromobenzene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
Bromodichloromethane	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
Bromoform	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
Bromomethane	ND	0.20		µg/L	1	3/3/2022 3:06:00 PM	R86211
2-Butanone	ND	1.0		µg/L	1	3/3/2022 3:06:00 PM	R86211
Carbon disulfide	ND	1.0		µg/L	1	3/3/2022 3:06:00 PM	R86211
Carbon tetrachloride	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
Chlorobenzene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
Chloroethane	ND	0.20		µg/L	1	3/3/2022 3:06:00 PM	R86211
Chloroform	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
Chloromethane	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
2-Chlorotoluene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
4-Chlorotoluene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
cis-1,2-DCE	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	3/3/2022 3:06:00 PM	R86211
Dibromochloromethane	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
Dibromomethane	ND	0.20		µg/L	1	3/3/2022 3:06:00 PM	R86211
1,2-Dichlorobenzene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
1,3-Dichlorobenzene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
1,4-Dichlorobenzene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
Dichlorodifluoromethane	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
1,1-Dichloroethane	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
1,1-Dichloroethene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
1,2-Dichloropropane	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
1,3-Dichloropropane	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
2,2-Dichloropropane	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: AS1-220224
Project: CLC Joint Superfund Project Monthly An
Collection Date: 2/24/2022 8:21:00 AM
Lab ID: 2202C65-001 **Matrix:** AIR
Received Date: 2/25/2022 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
Hexachlorobutadiene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
2-Hexanone	ND	1.0		µg/L	1	3/3/2022 3:06:00 PM	R86211
Isopropylbenzene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
4-Isopropyltoluene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
4-Methyl-2-pentanone	ND	1.0		µg/L	1	3/3/2022 3:06:00 PM	R86211
Methylene chloride	ND	0.30		µg/L	1	3/3/2022 3:06:00 PM	R86211
n-Butylbenzene	ND	0.30		µg/L	1	3/3/2022 3:06:00 PM	R86211
n-Propylbenzene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
sec-Butylbenzene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
Styrene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
tert-Butylbenzene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
Tetrachloroethene (PCE)	0.13	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
trans-1,2-DCE	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
1,1,1-Trichloroethane	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
1,1,2-Trichloroethane	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
Trichloroethene (TCE)	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
Trichlorofluoromethane	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
1,2,3-Trichloropropane	ND	0.20		µg/L	1	3/3/2022 3:06:00 PM	R86211
Vinyl chloride	ND	0.10		µg/L	1	3/3/2022 3:06:00 PM	R86211
Xylenes, Total	ND	0.15		µg/L	1	3/3/2022 3:06:00 PM	R86211
Surr: Dibromofluoromethane	96.8	70-130		%Rec	1	3/3/2022 3:06:00 PM	R86211
Surr: 1,2-Dichloroethane-d4	91.9	70-130		%Rec	1	3/3/2022 3:06:00 PM	R86211
Surr: Toluene-d8	95.2	70-130		%Rec	1	3/3/2022 3:06:00 PM	R86211
Surr: 4-Bromofluorobenzene	99.7	70-130		%Rec	1	3/3/2022 3:06:00 PM	R86211

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: AS1-220224 Dup
Project: CLC Joint Superfund Project Monthly An
Collection Date: 2/24/2022 8:22:00 AM
Lab ID: 2202C65-002 **Matrix:** AIR
Received Date: 2/25/2022 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
Toluene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
Ethylbenzene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
Naphthalene	ND	0.20		µg/L	1	3/3/2022 3:52:00 PM	R86211
1-Methylnaphthalene	ND	0.40		µg/L	1	3/3/2022 3:52:00 PM	R86211
2-Methylnaphthalene	ND	0.40		µg/L	1	3/3/2022 3:52:00 PM	R86211
Acetone	ND	1.0		µg/L	1	3/3/2022 3:52:00 PM	R86211
Bromobenzene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
Bromodichloromethane	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
Bromoform	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
Bromomethane	ND	0.20		µg/L	1	3/3/2022 3:52:00 PM	R86211
2-Butanone	ND	1.0		µg/L	1	3/3/2022 3:52:00 PM	R86211
Carbon disulfide	ND	1.0		µg/L	1	3/3/2022 3:52:00 PM	R86211
Carbon tetrachloride	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
Chlorobenzene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
Chloroethane	ND	0.20		µg/L	1	3/3/2022 3:52:00 PM	R86211
Chloroform	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
Chloromethane	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
2-Chlorotoluene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
4-Chlorotoluene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
cis-1,2-DCE	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	3/3/2022 3:52:00 PM	R86211
Dibromochloromethane	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
Dibromomethane	ND	0.20		µg/L	1	3/3/2022 3:52:00 PM	R86211
1,2-Dichlorobenzene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
1,3-Dichlorobenzene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
1,4-Dichlorobenzene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
Dichlorodifluoromethane	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
1,1-Dichloroethane	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
1,1-Dichloroethene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
1,2-Dichloropropane	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
1,3-Dichloropropane	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
2,2-Dichloropropane	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211

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 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, Inc.

CLIENT: City of Las Cruces
Client Sample ID: AS1-220224 Dup
Project: CLC Joint Superfund Project Monthly An
Collection Date: 2/24/2022 8:22:00 AM
Lab ID: 2202C65-002 **Matrix:** AIR
Received Date: 2/25/2022 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
Hexachlorobutadiene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
2-Hexanone	ND	1.0		µg/L	1	3/3/2022 3:52:00 PM	R86211
Isopropylbenzene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
4-Isopropyltoluene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
4-Methyl-2-pentanone	ND	1.0		µg/L	1	3/3/2022 3:52:00 PM	R86211
Methylene chloride	ND	0.30		µg/L	1	3/3/2022 3:52:00 PM	R86211
n-Butylbenzene	ND	0.30		µg/L	1	3/3/2022 3:52:00 PM	R86211
n-Propylbenzene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
sec-Butylbenzene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
Styrene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
tert-Butylbenzene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
Tetrachloroethene (PCE)	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
trans-1,2-DCE	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
1,1,1-Trichloroethane	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
1,1,2-Trichloroethane	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
Trichloroethene (TCE)	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
Trichlorofluoromethane	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
1,2,3-Trichloropropane	ND	0.20		µg/L	1	3/3/2022 3:52:00 PM	R86211
Vinyl chloride	ND	0.10		µg/L	1	3/3/2022 3:52:00 PM	R86211
Xylenes, Total	ND	0.15		µg/L	1	3/3/2022 3:52:00 PM	R86211
Surr: Dibromofluoromethane	101	70-130		%Rec	1	3/3/2022 3:52:00 PM	R86211
Surr: 1,2-Dichloroethane-d4	93.8	70-130		%Rec	1	3/3/2022 3:52:00 PM	R86211
Surr: Toluene-d8	94.3	70-130		%Rec	1	3/3/2022 3:52:00 PM	R86211
Surr: 4-Bromofluorobenzene	98.8	70-130		%Rec	1	3/3/2022 3:52:00 PM	R86211

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: AS2-220224
Project: CLC Joint Superfund Project Monthly An
Collection Date: 2/24/2022 8:24:00 AM
Lab ID: 2202C65-003 **Matrix:** AIR
Received Date: 2/25/2022 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
Toluene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
Ethylbenzene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
Naphthalene	ND	0.20		µg/L	1	3/3/2022 4:16:00 PM	R86211
1-Methylnaphthalene	ND	0.40		µg/L	1	3/3/2022 4:16:00 PM	R86211
2-Methylnaphthalene	ND	0.40		µg/L	1	3/3/2022 4:16:00 PM	R86211
Acetone	ND	1.0		µg/L	1	3/3/2022 4:16:00 PM	R86211
Bromobenzene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
Bromodichloromethane	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
Bromoform	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
Bromomethane	ND	0.20		µg/L	1	3/3/2022 4:16:00 PM	R86211
2-Butanone	ND	1.0		µg/L	1	3/3/2022 4:16:00 PM	R86211
Carbon disulfide	ND	1.0		µg/L	1	3/3/2022 4:16:00 PM	R86211
Carbon tetrachloride	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
Chlorobenzene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
Chloroethane	ND	0.20		µg/L	1	3/3/2022 4:16:00 PM	R86211
Chloroform	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
Chloromethane	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
2-Chlorotoluene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
4-Chlorotoluene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
cis-1,2-DCE	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	3/3/2022 4:16:00 PM	R86211
Dibromochloromethane	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
Dibromomethane	ND	0.20		µg/L	1	3/3/2022 4:16:00 PM	R86211
1,2-Dichlorobenzene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
1,3-Dichlorobenzene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
1,4-Dichlorobenzene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
Dichlorodifluoromethane	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
1,1-Dichloroethane	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
1,1-Dichloroethene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
1,2-Dichloropropane	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
1,3-Dichloropropane	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
2,2-Dichloropropane	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211

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 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, Inc.

CLIENT: City of Las Cruces
Client Sample ID: AS2-220224
Project: CLC Joint Superfund Project Monthly An
Collection Date: 2/24/2022 8:24:00 AM
Lab ID: 2202C65-003 **Matrix:** AIR
Received Date: 2/25/2022 1:19:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
Hexachlorobutadiene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
2-Hexanone	ND	1.0		µg/L	1	3/3/2022 4:16:00 PM	R86211
Isopropylbenzene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
4-Isopropyltoluene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
4-Methyl-2-pentanone	ND	1.0		µg/L	1	3/3/2022 4:16:00 PM	R86211
Methylene chloride	ND	0.30		µg/L	1	3/3/2022 4:16:00 PM	R86211
n-Butylbenzene	ND	0.30		µg/L	1	3/3/2022 4:16:00 PM	R86211
n-Propylbenzene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
sec-Butylbenzene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
Styrene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
tert-Butylbenzene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
Tetrachloroethene (PCE)	0.16	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
trans-1,2-DCE	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
1,1,1-Trichloroethane	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
1,1,2-Trichloroethane	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
Trichloroethene (TCE)	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
Trichlorofluoromethane	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
1,2,3-Trichloropropane	ND	0.20		µg/L	1	3/3/2022 4:16:00 PM	R86211
Vinyl chloride	ND	0.10		µg/L	1	3/3/2022 4:16:00 PM	R86211
Xylenes, Total	ND	0.15		µg/L	1	3/3/2022 4:16:00 PM	R86211
Surr: Dibromofluoromethane	98.2	70-130		%Rec	1	3/3/2022 4:16:00 PM	R86211
Surr: 1,2-Dichloroethane-d4	87.5	70-130		%Rec	1	3/3/2022 4:16:00 PM	R86211
Surr: Toluene-d8	95.4	70-130		%Rec	1	3/3/2022 4:16:00 PM	R86211
Surr: 4-Bromofluorobenzene	98.7	70-130		%Rec	1	3/3/2022 4:16:00 PM	R86211

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

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: 2202C65 | RcptNo: 1

Received By: **Cheyenne Cason** 2/25/2022 1:19:00 PM

Completed By: **Sean Livingston** 2/25/2022 1:38:05 PM

Reviewed By: 2/25/22

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: 2/25/22

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: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush
Project Name: Joint Superfund Project Monthly Analysis
Project #: ALC JSP Griggs Walnut
Project Manager: Luis Guerra (575) 528-3609
Sampler: Yadira Reyna
On Ice: ☐ Yes ☒ No
# of Coolers: 1A
Cooler Temp (including CF): NA (°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. 2202605	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)
2/24/22	~~0821~~ 0824	AIR	LAS1-220224	Tedlar Bag	NONE	001								X		
2/24/22	0822	AIR	LAS1-220224 DUP	Tedlar Bag	NONE	002								X		
2/24/22	0824	AIR	LAS2-220224	Tedlar Bag	NONE	003								X		

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
2/24/22	1400	Yadira Reyna	Cee Sailey		2/25/22	1319
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 ALC 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 04, 2022

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.: 2202C68

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 2/25/2022 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 18-220224
Project: Joint Superfund Project Monthly Analysi
Collection Date: 2/24/2022 8:06:00 AM
Lab ID: 2202C68-001
Matrix: DRINKING W
Received Date: 2/25/2022 1:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
Toluene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
Ethylbenzene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
Naphthalene	ND	2.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
1-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
2-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
Acetone	ND	10		µg/L	1	3/1/2022 4:37:00 PM	R86159
Bromobenzene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
Bromodichloromethane	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
Bromoform	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
Bromomethane	ND	3.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
2-Butanone	ND	10		µg/L	1	3/1/2022 4:37:00 PM	R86159
Carbon disulfide	ND	10		µg/L	1	3/1/2022 4:37:00 PM	R86159
Carbon Tetrachloride	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
Chlorobenzene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
Chloroethane	ND	2.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
Chloroform	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
Chloromethane	ND	3.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
2-Chlorotoluene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
4-Chlorotoluene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
cis-1,2-DCE	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
Dibromochloromethane	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
Dibromomethane	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
1,1-Dichloroethane	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
1,1-Dichloroethene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
1,2-Dichloropropane	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
1,3-Dichloropropane	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
2,2-Dichloropropane	ND	2.0		µg/L	1	3/1/2022 4:37:00 PM	R86159

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 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, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-220224
Project: Joint Superfund Project Monthly Analysi
Collection Date: 2/24/2022 8:06:00 AM
Lab ID: 2202C68-001
Matrix: DRINKING W
Received Date: 2/25/2022 1:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
Hexachlorobutadiene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
2-Hexanone	ND	10		µg/L	1	3/1/2022 4:37:00 PM	R86159
Isopropylbenzene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
4-Isopropyltoluene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
4-Methyl-2-pentanone	ND	10		µg/L	1	3/1/2022 4:37:00 PM	R86159
Methylene Chloride	ND	3.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
n-Butylbenzene	ND	3.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
n-Propylbenzene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
sec-Butylbenzene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
Styrene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
tert-Butylbenzene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
Tetrachloroethene (PCE)	4.4	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
trans-1,2-DCE	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
Trichlorofluoromethane	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
Vinyl chloride	ND	1.0		µg/L	1	3/1/2022 4:37:00 PM	R86159
Xylenes, Total	ND	1.5		µg/L	1	3/1/2022 4:37:00 PM	R86159
Surr: 1,2-Dichloroethane-d4	98.1	70-130		%Rec	1	3/1/2022 4:37:00 PM	R86159
Surr: 4-Bromofluorobenzene	95.6	70-130		%Rec	1	3/1/2022 4:37:00 PM	R86159
Surr: Dibromofluoromethane	101	70-130		%Rec	1	3/1/2022 4:37:00 PM	R86159
Surr: Toluene-d8	95.6	70-130		%Rec	1	3/1/2022 4:37:00 PM	R86159

Refer to the QC Summary report and sample login checklist for flagged QC data 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
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-220224
Project: Joint Superfund Project Monthly Analysi
Collection Date: 2/24/2022 8:34:00 AM
Lab ID: 2202C68-002
Matrix: DRINKING W
Received Date: 2/25/2022 1:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
Toluene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
Ethylbenzene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
Naphthalene	ND	2.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
1-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
2-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
Acetone	ND	10		µg/L	1	3/1/2022 5:47:00 PM	R86159
Bromobenzene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
Bromodichloromethane	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
Bromoform	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
Bromomethane	ND	3.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
2-Butanone	ND	10		µg/L	1	3/1/2022 5:47:00 PM	R86159
Carbon disulfide	ND	10		µg/L	1	3/1/2022 5:47:00 PM	R86159
Carbon Tetrachloride	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
Chlorobenzene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
Chloroethane	ND	2.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
Chloroform	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
Chloromethane	ND	3.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
2-Chlorotoluene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
4-Chlorotoluene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
cis-1,2-DCE	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
Dibromochloromethane	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
Dibromomethane	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
1,1-Dichloroethane	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
1,1-Dichloroethene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
1,2-Dichloropropane	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
1,3-Dichloropropane	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
2,2-Dichloropropane	ND	2.0		µg/L	1	3/1/2022 5:47:00 PM	R86159

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	Estimated value
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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
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Hexachlorobutadiene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
2-Hexanone	ND	10		µg/L	1	3/1/2022 5:47:00 PM	R86159
Isopropylbenzene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
4-Isopropyltoluene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
4-Methyl-2-pentanone	ND	10		µg/L	1	3/1/2022 5:47:00 PM	R86159
Methylene Chloride	ND	3.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
n-Butylbenzene	ND	3.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
n-Propylbenzene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
sec-Butylbenzene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
Styrene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
tert-Butylbenzene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
Tetrachloroethene (PCE)	15	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
trans-1,2-DCE	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
Trichlorofluoromethane	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
Vinyl chloride	ND	1.0		µg/L	1	3/1/2022 5:47:00 PM	R86159
Xylenes, Total	ND	1.5		µg/L	1	3/1/2022 5:47:00 PM	R86159
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	3/1/2022 5:47:00 PM	R86159
Surr: 4-Bromofluorobenzene	95.5	70-130		%Rec	1	3/1/2022 5:47:00 PM	R86159
Surr: Dibromofluoromethane	103	70-130		%Rec	1	3/1/2022 5:47:00 PM	R86159
Surr: Toluene-d8	96.2	70-130		%Rec	1	3/1/2022 5:47:00 PM	R86159

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	Estimated value
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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 interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-220224
Project: Joint Superfund Project Monthly Analysi
Collection Date: 2/24/2022 8:10:00 AM
Lab ID: 2202C68-003
Matrix: DRINKING W
Received Date: 2/25/2022 1:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
Toluene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
Ethylbenzene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
Naphthalene	ND	2.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
1-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
2-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
Acetone	ND	10		µg/L	1	3/1/2022 6:10:00 PM	R86159
Bromobenzene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
Bromodichloromethane	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
Bromoform	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
Bromomethane	ND	3.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
2-Butanone	ND	10		µg/L	1	3/1/2022 6:10:00 PM	R86159
Carbon disulfide	ND	10		µg/L	1	3/1/2022 6:10:00 PM	R86159
Carbon Tetrachloride	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
Chlorobenzene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
Chloroethane	ND	2.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
Chloroform	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
Chloromethane	ND	3.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
2-Chlorotoluene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
4-Chlorotoluene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
cis-1,2-DCE	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
Dibromochloromethane	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
Dibromomethane	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
1,1-Dichloroethane	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
1,1-Dichloroethene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
1,2-Dichloropropane	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
1,3-Dichloropropane	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
2,2-Dichloropropane	ND	2.0		µg/L	1	3/1/2022 6:10:00 PM	R86159

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC IS1-220224
Project: Joint Superfund Project Monthly Analysi
Collection Date: 2/24/2022 8:10:00 AM
Lab ID: 2202C68-003
Matrix: DRINKING W
Received Date: 2/25/2022 1:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
Hexachlorobutadiene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
2-Hexanone	ND	10		µg/L	1	3/1/2022 6:10:00 PM	R86159
Isopropylbenzene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
4-Isopropyltoluene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
4-Methyl-2-pentanone	ND	10		µg/L	1	3/1/2022 6:10:00 PM	R86159
Methylene Chloride	ND	3.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
n-Butylbenzene	ND	3.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
n-Propylbenzene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
sec-Butylbenzene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
Styrene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
tert-Butylbenzene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
Tetrachloroethene (PCE)	11	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
trans-1,2-DCE	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
Trichlorofluoromethane	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
Vinyl chloride	ND	1.0		µg/L	1	3/1/2022 6:10:00 PM	R86159
Xylenes, Total	ND	1.5		µg/L	1	3/1/2022 6:10:00 PM	R86159
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	3/1/2022 6:10:00 PM	R86159
Surr: 4-Bromofluorobenzene	96.8	70-130		%Rec	1	3/1/2022 6:10:00 PM	R86159
Surr: Dibromofluoromethane	104	70-130		%Rec	1	3/1/2022 6:10:00 PM	R86159
Surr: Toluene-d8	96.4	70-130		%Rec	1	3/1/2022 6:10:00 PM	R86159

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC C1-220224
Project: Joint Superfund Project Monthly Analysi
Collection Date: 2/24/2022 8:11:00 AM
Lab ID: 2202C68-004
Matrix: DRINKING W
Received Date: 2/25/2022 1:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
Toluene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
Ethylbenzene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
Naphthalene	ND	2.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
1-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
2-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
Acetone	ND	10		µg/L	1	3/1/2022 6:34:00 PM	R86159
Bromobenzene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
Bromodichloromethane	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
Bromoform	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
Bromomethane	ND	3.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
2-Butanone	ND	10		µg/L	1	3/1/2022 6:34:00 PM	R86159
Carbon disulfide	ND	10		µg/L	1	3/1/2022 6:34:00 PM	R86159
Carbon Tetrachloride	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
Chlorobenzene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
Chloroethane	ND	2.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
Chloroform	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
Chloromethane	ND	3.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
2-Chlorotoluene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
4-Chlorotoluene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
cis-1,2-DCE	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
Dibromochloromethane	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
Dibromomethane	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
1,1-Dichloroethane	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
1,1-Dichloroethene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
1,2-Dichloropropane	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
1,3-Dichloropropane	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
2,2-Dichloropropane	ND	2.0		µg/L	1	3/1/2022 6:34:00 PM	R86159

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC C1-220224
Project: Joint Superfund Project Monthly Analysi
Collection Date: 2/24/2022 8:11:00 AM
Lab ID: 2202C68-004
Matrix: DRINKING W
Received Date: 2/25/2022 1:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
Hexachlorobutadiene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
2-Hexanone	ND	10		µg/L	1	3/1/2022 6:34:00 PM	R86159
Isopropylbenzene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
4-Isopropyltoluene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
4-Methyl-2-pentanone	ND	10		µg/L	1	3/1/2022 6:34:00 PM	R86159
Methylene Chloride	ND	3.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
n-Butylbenzene	ND	3.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
n-Propylbenzene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
sec-Butylbenzene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
Styrene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
tert-Butylbenzene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
trans-1,2-DCE	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
Trichlorofluoromethane	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
Vinyl chloride	ND	1.0		µg/L	1	3/1/2022 6:34:00 PM	R86159
Xylenes, Total	ND	1.5		µg/L	1	3/1/2022 6:34:00 PM	R86159
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	3/1/2022 6:34:00 PM	R86159
Surr: 4-Bromofluorobenzene	95.3	70-130		%Rec	1	3/1/2022 6:34:00 PM	R86159
Surr: Dibromofluoromethane	105	70-130		%Rec	1	3/1/2022 6:34:00 PM	R86159
Surr: Toluene-d8	96.2	70-130		%Rec	1	3/1/2022 6:34:00 PM	R86159

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC C1-220224 DUP
Project: Joint Superfund Project Monthly Analysi
Collection Date: 2/24/2022 8:11:00 AM
Lab ID: 2202C68-005
Matrix: DRINKING W
Received Date: 2/25/2022 1:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
Toluene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
Ethylbenzene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
Naphthalene	ND	2.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
1-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
2-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
Acetone	ND	10		µg/L	1	3/1/2022 6:57:00 PM	R86159
Bromobenzene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
Bromodichloromethane	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
Bromoform	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
Bromomethane	ND	3.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
2-Butanone	ND	10		µg/L	1	3/1/2022 6:57:00 PM	R86159
Carbon disulfide	ND	10		µg/L	1	3/1/2022 6:57:00 PM	R86159
Carbon Tetrachloride	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
Chlorobenzene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
Chloroethane	ND	2.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
Chloroform	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
Chloromethane	ND	3.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
2-Chlorotoluene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
4-Chlorotoluene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
cis-1,2-DCE	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
Dibromochloromethane	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
Dibromomethane	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
1,1-Dichloroethane	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
1,1-Dichloroethene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
1,2-Dichloropropane	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
1,3-Dichloropropane	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
2,2-Dichloropropane	ND	2.0		µg/L	1	3/1/2022 6:57:00 PM	R86159

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC C1-220224 DUP
Project: Joint Superfund Project Monthly Analysi
Collection Date: 2/24/2022 8:11:00 AM
Lab ID: 2202C68-005
Matrix: DRINKING W
Received Date: 2/25/2022 1:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
Hexachlorobutadiene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
2-Hexanone	ND	10		µg/L	1	3/1/2022 6:57:00 PM	R86159
Isopropylbenzene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
4-Isopropyltoluene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
4-Methyl-2-pentanone	ND	10		µg/L	1	3/1/2022 6:57:00 PM	R86159
Methylene Chloride	ND	3.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
n-Butylbenzene	ND	3.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
n-Propylbenzene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
sec-Butylbenzene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
Styrene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
tert-Butylbenzene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
trans-1,2-DCE	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
Trichlorofluoromethane	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
Vinyl chloride	ND	1.0		µg/L	1	3/1/2022 6:57:00 PM	R86159
Xylenes, Total	ND	1.5		µg/L	1	3/1/2022 6:57:00 PM	R86159
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	3/1/2022 6:57:00 PM	R86159
Surr: 4-Bromofluorobenzene	96.4	70-130		%Rec	1	3/1/2022 6:57:00 PM	R86159
Surr: Dibromofluoromethane	105	70-130		%Rec	1	3/1/2022 6:57:00 PM	R86159
Surr: Toluene-d8	96.0	70-130		%Rec	1	3/1/2022 6:57:00 PM	R86159

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC C2-220224
Project: Joint Superfund Project Monthly Analysi
Collection Date: 2/24/2022 8:14:00 AM
Lab ID: 2202C68-006
Matrix: DRINKING W
Received Date: 2/25/2022 1:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
Toluene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
Ethylbenzene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
Naphthalene	ND	2.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
1-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
2-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
Acetone	ND	10		µg/L	1	3/1/2022 7:20:00 PM	R86159
Bromobenzene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
Bromodichloromethane	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
Bromoform	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
Bromomethane	ND	3.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
2-Butanone	ND	10		µg/L	1	3/1/2022 7:20:00 PM	R86159
Carbon disulfide	ND	10		µg/L	1	3/1/2022 7:20:00 PM	R86159
Carbon Tetrachloride	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
Chlorobenzene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
Chloroethane	ND	2.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
Chloroform	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
Chloromethane	ND	3.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
2-Chlorotoluene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
4-Chlorotoluene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
cis-1,2-DCE	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
Dibromochloromethane	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
Dibromomethane	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
1,1-Dichloroethane	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
1,1-Dichloroethene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
1,2-Dichloropropane	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
1,3-Dichloropropane	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
2,2-Dichloropropane	ND	2.0		µg/L	1	3/1/2022 7:20:00 PM	R86159

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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
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EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
Hexachlorobutadiene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
2-Hexanone	ND	10		µg/L	1	3/1/2022 7:20:00 PM	R86159
Isopropylbenzene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
4-Isopropyltoluene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
4-Methyl-2-pentanone	ND	10		µg/L	1	3/1/2022 7:20:00 PM	R86159
Methylene Chloride	ND	3.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
n-Butylbenzene	ND	3.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
n-Propylbenzene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
sec-Butylbenzene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
Styrene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
tert-Butylbenzene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
trans-1,2-DCE	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
Trichlorofluoromethane	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
Vinyl chloride	ND	1.0		µg/L	1	3/1/2022 7:20:00 PM	R86159
Xylenes, Total	ND	1.5		µg/L	1	3/1/2022 7:20:00 PM	R86159
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	3/1/2022 7:20:00 PM	R86159
Surr: 4-Bromofluorobenzene	94.5	70-130		%Rec	1	3/1/2022 7:20:00 PM	R86159
Surr: Dibromofluoromethane	106	70-130		%Rec	1	3/1/2022 7:20:00 PM	R86159
Surr: Toluene-d8	95.5	70-130		%Rec	1	3/1/2022 7:20:00 PM	R86159

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
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Benzene	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
Toluene	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
Ethylbenzene	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
Naphthalene	ND	2.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
1-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
2-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
Acetone	ND	10		µg/L	1	3/1/2022 7:44:00 PM	R86159
Bromobenzene	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
Bromodichloromethane	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
Bromoform	6.1	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
Bromomethane	ND	3.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
2-Butanone	ND	10		µg/L	1	3/1/2022 7:44:00 PM	R86159
Carbon disulfide	ND	10		µg/L	1	3/1/2022 7:44:00 PM	R86159
Carbon Tetrachloride	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
Chlorobenzene	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
Chloroethane	ND	2.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
Chloroform	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
Chloromethane	ND	3.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
2-Chlorotoluene	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
4-Chlorotoluene	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
cis-1,2-DCE	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
Dibromochloromethane	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
Dibromomethane	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
1,1-Dichloroethane	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
1,1-Dichloroethene	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
1,2-Dichloropropane	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
1,3-Dichloropropane	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
2,2-Dichloropropane	ND	2.0		µg/L	1	3/1/2022 7:44:00 PM	R86159

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Qualifiers:

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D	Sample Diluted Due to Matrix
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PQL	Practical Quanitative Limit
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EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
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Hexachlorobutadiene	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
2-Hexanone	ND	10		µg/L	1	3/1/2022 7:44:00 PM	R86159
Isopropylbenzene	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
4-Isopropyltoluene	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
4-Methyl-2-pentanone	ND	10		µg/L	1	3/1/2022 7:44:00 PM	R86159
Methylene Chloride	ND	3.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
n-Butylbenzene	ND	3.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
n-Propylbenzene	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
sec-Butylbenzene	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
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tert-Butylbenzene	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
trans-1,2-DCE	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
Trichlorofluoromethane	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
Vinyl chloride	ND	1.0		µg/L	1	3/1/2022 7:44:00 PM	R86159
Xylenes, Total	ND	1.5		µg/L	1	3/1/2022 7:44:00 PM	R86159
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	3/1/2022 7:44:00 PM	R86159
Surr: 4-Bromofluorobenzene	95.2	70-130		%Rec	1	3/1/2022 7:44:00 PM	R86159
Surr: Dibromofluoromethane	107	70-130		%Rec	1	3/1/2022 7:44:00 PM	R86159
Surr: Toluene-d8	96.4	70-130		%Rec	1	3/1/2022 7:44:00 PM	R86159

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2202C68**

04-Mar-22

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: **R86159**	RunNo: **86159**
Prep Date:	Analysis Date: **3/1/2022**	SeqNo: **3036733** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.7	70	130			
Toluene	21	1.0	20.00	0	103	70	130			
Chlorobenzene	21	1.0	20.00	0	106	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	89.3	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	95.7	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.4	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.6	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.3	70	130			
Surr: Toluene-d8	9.8		10.00		98.2	70	130			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R86159**	RunNo: **86159**
Prep Date:	Analysis Date: **3/1/2022**	SeqNo: **3036736** 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#: **2202C68**
04-Mar-22

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: **R86159**	RunNo: **86159**
Prep Date:	Analysis Date: **3/1/2022**	SeqNo: **3036736** 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#: **2202C68**

04-Mar-22

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: **R86159**	RunNo: **86159**
Prep Date:	Analysis Date: **3/1/2022**	SeqNo: **3036736** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.7	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.2	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.7		10.00		97.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical 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: City of Las Cruces Work Order Number: 2202C68 RcptNo: 1

Received By: Juan Rojas 2/25/2022 1:15:00 PM

Completed By: Sean Livingston 2/25/2022 1:51:28 PM

Reviewed By: KPA 2/25/22

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: SGL 2/25/22

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	0.6	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): 0.7-0.1=0.6 (°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. 2202C69	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)
2/24/22	0806	Drinking Water	CLC 18-220224	3-40ml VOAs	$HgCl_2$	001								X		
	0834		CLC 27-220224			002								X		
	0810		CLCIS1-220224			003								X		
	0811		CLCC1-220224			004								X		
	0811		CLC C1-220224 DUP			005								X		
	0814		CLC C2-220224			006								X		
2/24/22	0817	Drinking Water	CLC ES1-220224	3-40ml VOAs	$HgCl_2$	007								X		

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
2/24/22	1400	Yadira Reyna		FedEx	2/25/22	13:15
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: www.hallenvironmental.com

April 15, 2022

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.: 2204020

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 5 sample(s) on 4/1/2022 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 18-220331
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/31/2022 8:07:00 AM
Lab ID: 2204020-001
Matrix: DRINKING W
Received Date: 4/1/2022 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
Toluene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
Ethylbenzene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
Naphthalene	ND	2.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
1-Methylnaphthalene	ND	4.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
2-Methylnaphthalene	ND	4.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
Acetone	ND	10		µg/L	1	4/8/2022 1:15:53 PM	R87130
Bromobenzene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
Bromodichloromethane	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
Bromoform	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
Bromomethane	ND	3.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
2-Butanone	ND	10		µg/L	1	4/8/2022 1:15:53 PM	R87130
Carbon disulfide	ND	10		µg/L	1	4/8/2022 1:15:53 PM	R87130
Carbon Tetrachloride	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
Chlorobenzene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
Chloroethane	ND	2.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
Chloroform	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
Chloromethane	ND	3.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
2-Chlorotoluene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
4-Chlorotoluene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
cis-1,2-DCE	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
Dibromochloromethane	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
Dibromomethane	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
1,1-Dichloroethane	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
1,1-Dichloroethene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
1,2-Dichloropropane	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
1,3-Dichloropropane	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
2,2-Dichloropropane	ND	2.0		µg/L	1	4/8/2022 1:15:53 PM	R87130

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 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, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-220331
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/31/2022 8:07:00 AM
Lab ID: 2204020-001
Matrix: DRINKING W
Received Date: 4/1/2022 8:50:00 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	4/8/2022 1:15:53 PM	R87130
Hexachlorobutadiene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
2-Hexanone	ND	10		µg/L	1	4/8/2022 1:15:53 PM	R87130
Isopropylbenzene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
4-Isopropyltoluene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
4-Methyl-2-pentanone	ND	10		µg/L	1	4/8/2022 1:15:53 PM	R87130
Methylene Chloride	ND	3.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
n-Butylbenzene	ND	3.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
n-Propylbenzene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
sec-Butylbenzene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
Styrene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
tert-Butylbenzene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
Tetrachloroethene (PCE)	3.9	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
trans-1,2-DCE	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
Trichlorofluoromethane	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
Vinyl chloride	ND	1.0		µg/L	1	4/8/2022 1:15:53 PM	R87130
Xylenes, Total	ND	1.5		µg/L	1	4/8/2022 1:15:53 PM	R87130
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	4/8/2022 1:15:53 PM	R87130
Surr: 4-Bromofluorobenzene	98.1	70-130		%Rec	1	4/8/2022 1:15:53 PM	R87130
Surr: Dibromofluoromethane	108	70-130		%Rec	1	4/8/2022 1:15:53 PM	R87130
Surr: Toluene-d8	101	70-130		%Rec	1	4/8/2022 1:15:53 PM	R87130

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC 18-220331 (Dup)
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/31/2022 8:08:00 AM
Lab ID: 2204020-002
Matrix: DRINKING W
Received Date: 4/1/2022 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
Toluene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
Ethylbenzene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
Naphthalene	ND	2.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
1-Methylnaphthalene	ND	4.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
2-Methylnaphthalene	ND	4.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
Acetone	ND	10		µg/L	1	4/8/2022 2:41:52 PM	R87130
Bromobenzene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
Bromodichloromethane	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
Bromoform	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
Bromomethane	ND	3.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
2-Butanone	ND	10		µg/L	1	4/8/2022 2:41:52 PM	R87130
Carbon disulfide	ND	10		µg/L	1	4/8/2022 2:41:52 PM	R87130
Carbon Tetrachloride	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
Chlorobenzene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
Chloroethane	ND	2.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
Chloroform	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
Chloromethane	ND	3.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
2-Chlorotoluene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
4-Chlorotoluene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
cis-1,2-DCE	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
Dibromochloromethane	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
Dibromomethane	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
1,1-Dichloroethane	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
1,1-Dichloroethene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
1,2-Dichloropropane	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
1,3-Dichloropropane	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
2,2-Dichloropropane	ND	2.0		µg/L	1	4/8/2022 2:41:52 PM	R87130

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC 18-220331 (Dup)
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/31/2022 8:08:00 AM
Lab ID: 2204020-002 **Matrix:** DRINKING W **Received Date:** 4/1/2022 8:50:00 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	4/8/2022 2:41:52 PM	R87130
Hexachlorobutadiene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
2-Hexanone	ND	10		µg/L	1	4/8/2022 2:41:52 PM	R87130
Isopropylbenzene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
4-Isopropyltoluene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
4-Methyl-2-pentanone	ND	10		µg/L	1	4/8/2022 2:41:52 PM	R87130
Methylene Chloride	ND	3.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
n-Butylbenzene	ND	3.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
n-Propylbenzene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
sec-Butylbenzene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
Styrene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
tert-Butylbenzene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
Tetrachloroethene (PCE)	3.7	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
trans-1,2-DCE	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
Trichlorofluoromethane	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
Vinyl chloride	ND	1.0		µg/L	1	4/8/2022 2:41:52 PM	R87130
Xylenes, Total	ND	1.5		µg/L	1	4/8/2022 2:41:52 PM	R87130
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	4/8/2022 2:41:52 PM	R87130
Surr: 4-Bromofluorobenzene	98.1	70-130		%Rec	1	4/8/2022 2:41:52 PM	R87130
Surr: Dibromofluoromethane	109	70-130		%Rec	1	4/8/2022 2:41:52 PM	R87130
Surr: Toluene-d8	101	70-130		%Rec	1	4/8/2022 2:41:52 PM	R87130

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces **Client Sample ID:** CLC 27-220331
Project: Joint Superfund Project Monthly Analysi **Collection Date:** 3/31/2022 7:33:00 AM
Lab ID: 2204020-003 **Matrix:** DRINKING W **Received Date:** 4/1/2022 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
Toluene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
Ethylbenzene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
Naphthalene	ND	2.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
1-Methylnaphthalene	ND	4.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
2-Methylnaphthalene	ND	4.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
Acetone	ND	10		µg/L	1	4/8/2022 3:10:27 PM	R87130
Bromobenzene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
Bromodichloromethane	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
Bromoform	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
Bromomethane	ND	3.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
2-Butanone	ND	10		µg/L	1	4/8/2022 3:10:27 PM	R87130
Carbon disulfide	ND	10		µg/L	1	4/8/2022 3:10:27 PM	R87130
Carbon Tetrachloride	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
Chlorobenzene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
Chloroethane	ND	2.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
Chloroform	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
Chloromethane	ND	3.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
2-Chlorotoluene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
4-Chlorotoluene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
cis-1,2-DCE	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
Dibromochloromethane	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
Dibromomethane	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
1,1-Dichloroethane	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
1,1-Dichloroethene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
1,2-Dichloropropane	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
1,3-Dichloropropane	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
2,2-Dichloropropane	ND	2.0		µg/L	1	4/8/2022 3:10:27 PM	R87130

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC 27-220331
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/31/2022 7:33:00 AM
Lab ID: 2204020-003
Matrix: DRINKING W
Received Date: 4/1/2022 8:50:00 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	4/8/2022 3:10:27 PM	R87130
Hexachlorobutadiene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
2-Hexanone	ND	10		µg/L	1	4/8/2022 3:10:27 PM	R87130
Isopropylbenzene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
4-Isopropyltoluene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
4-Methyl-2-pentanone	ND	10		µg/L	1	4/8/2022 3:10:27 PM	R87130
Methylene Chloride	ND	3.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
n-Butylbenzene	ND	3.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
n-Propylbenzene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
sec-Butylbenzene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
Styrene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
tert-Butylbenzene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
Tetrachloroethene (PCE)	14	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
trans-1,2-DCE	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
Trichlorofluoromethane	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
Vinyl chloride	ND	1.0		µg/L	1	4/8/2022 3:10:27 PM	R87130
Xylenes, Total	ND	1.5		µg/L	1	4/8/2022 3:10:27 PM	R87130
Surr: 1,2-Dichloroethane-d4	112	70-130		%Rec	1	4/8/2022 3:10:27 PM	R87130
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	4/8/2022 3:10:27 PM	R87130
Surr: Dibromofluoromethane	110	70-130		%Rec	1	4/8/2022 3:10:27 PM	R87130
Surr: Toluene-d8	101	70-130		%Rec	1	4/8/2022 3:10:27 PM	R87130

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces **Client Sample ID:** CLC IS1-220331
Project: Joint Superfund Project Monthly Analysi **Collection Date:** 3/31/2022 8:14:00 AM
Lab ID: 2204020-004 **Matrix:** DRINKING W **Received Date:** 4/1/2022 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
Toluene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
Ethylbenzene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
Naphthalene	ND	2.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
1-Methylnaphthalene	ND	4.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
2-Methylnaphthalene	ND	4.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
Acetone	ND	10		µg/L	1	4/8/2022 3:38:57 PM	R87130
Bromobenzene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
Bromodichloromethane	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
Bromoform	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
Bromomethane	ND	3.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
2-Butanone	ND	10		µg/L	1	4/8/2022 3:38:57 PM	R87130
Carbon disulfide	ND	10		µg/L	1	4/8/2022 3:38:57 PM	R87130
Carbon Tetrachloride	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
Chlorobenzene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
Chloroethane	ND	2.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
Chloroform	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
Chloromethane	ND	3.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
2-Chlorotoluene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
4-Chlorotoluene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
cis-1,2-DCE	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
Dibromochloromethane	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
Dibromomethane	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
1,1-Dichloroethane	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
1,1-Dichloroethene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
1,2-Dichloropropane	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
1,3-Dichloropropane	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
2,2-Dichloropropane	ND	2.0		µg/L	1	4/8/2022 3:38:57 PM	R87130

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC IS1-220331
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/31/2022 8:14:00 AM
Lab ID: 2204020-004
Matrix: DRINKING W
Received Date: 4/1/2022 8:50:00 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	4/8/2022 3:38:57 PM	R87130
Hexachlorobutadiene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
2-Hexanone	ND	10		µg/L	1	4/8/2022 3:38:57 PM	R87130
Isopropylbenzene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
4-Isopropyltoluene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
4-Methyl-2-pentanone	ND	10		µg/L	1	4/8/2022 3:38:57 PM	R87130
Methylene Chloride	ND	3.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
n-Butylbenzene	ND	3.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
n-Propylbenzene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
sec-Butylbenzene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
Styrene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
tert-Butylbenzene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
Tetrachloroethene (PCE)	11	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
trans-1,2-DCE	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
Trichlorofluoromethane	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
Vinyl chloride	ND	1.0		µg/L	1	4/8/2022 3:38:57 PM	R87130
Xylenes, Total	ND	1.5		µg/L	1	4/8/2022 3:38:57 PM	R87130
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	4/8/2022 3:38:57 PM	R87130
Surr: 4-Bromofluorobenzene	98.8	70-130		%Rec	1	4/8/2022 3:38:57 PM	R87130
Surr: Dibromofluoromethane	109	70-130		%Rec	1	4/8/2022 3:38:57 PM	R87130
Surr: Toluene-d8	102	70-130		%Rec	1	4/8/2022 3:38:57 PM	R87130

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	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: City of Las Cruces
Client Sample ID: CLC ES1-220331
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/31/2022 8:16:00 AM
Lab ID: 2204020-005
Matrix: DRINKING W
Received Date: 4/1/2022 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JR**	
Benzene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
Toluene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
Ethylbenzene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
Naphthalene	ND	2.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
1-Methylnaphthalene	ND	4.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
2-Methylnaphthalene	ND	4.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
Acetone	ND	10		µg/L	1	4/8/2022 4:07:33 PM	R87130
Bromobenzene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
Bromodichloromethane	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
Bromoform	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
Bromomethane	ND	3.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
2-Butanone	ND	10		µg/L	1	4/8/2022 4:07:33 PM	R87130
Carbon disulfide	ND	10		µg/L	1	4/8/2022 4:07:33 PM	R87130
Carbon Tetrachloride	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
Chlorobenzene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
Chloroethane	ND	2.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
Chloroform	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
Chloromethane	ND	3.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
2-Chlorotoluene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
4-Chlorotoluene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
cis-1,2-DCE	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
Dibromochloromethane	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
Dibromomethane	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
1,1-Dichloroethane	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
1,1-Dichloroethene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
1,2-Dichloropropane	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
1,3-Dichloropropane	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
2,2-Dichloropropane	ND	2.0		µg/L	1	4/8/2022 4:07:33 PM	R87130

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 interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-220331
Project: Joint Superfund Project Monthly Analysi
Collection Date: 3/31/2022 8:16:00 AM
Lab ID: 2204020-005
Matrix: DRINKING W
Received Date: 4/1/2022 8:50:00 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	4/8/2022 4:07:33 PM	R87130
Hexachlorobutadiene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
2-Hexanone	ND	10		µg/L	1	4/8/2022 4:07:33 PM	R87130
Isopropylbenzene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
4-Isopropyltoluene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
4-Methyl-2-pentanone	ND	10		µg/L	1	4/8/2022 4:07:33 PM	R87130
Methylene Chloride	ND	3.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
n-Butylbenzene	ND	3.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
n-Propylbenzene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
sec-Butylbenzene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
Styrene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
tert-Butylbenzene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
trans-1,2-DCE	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
Trichlorofluoromethane	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
Vinyl chloride	ND	1.0		µg/L	1	4/8/2022 4:07:33 PM	R87130
Xylenes, Total	ND	1.5		µg/L	1	4/8/2022 4:07:33 PM	R87130
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	4/8/2022 4:07:33 PM	R87130
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	4/8/2022 4:07:33 PM	R87130
Surr: Dibromofluoromethane	109	70-130		%Rec	1	4/8/2022 4:07:33 PM	R87130
Surr: Toluene-d8	102	70-130		%Rec	1	4/8/2022 4:07:33 PM	R87130

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2204020**

15-Apr-22

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: **R87130**	RunNo: **87130**
Prep Date:	Analysis Date: **4/8/2022**	SeqNo: **3080523** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	115	70	130			
Toluene	20	1.0	20.00	0	97.6	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	112	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	106	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.7	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	9.9		10.00		99.1	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R87130**	RunNo: **87130**
Prep Date:	Analysis Date: **4/8/2022**	SeqNo: **3080547** 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#: **2204020**
15-Apr-22

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: **R87130**	RunNo: **87130**
Prep Date:	Analysis Date: **4/8/2022**	SeqNo: **3080547** 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	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#: **2204020**
15-Apr-22

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: **R87130**	RunNo: **87130**
Prep Date:	Analysis Date: ***4/8/2022***	SeqNo: **3080547** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.2	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	10		10.00		100	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: www.hallenvironmental.com

Sample Log-In Check List

Client Name: City of Las Cruces | Work Order Number: 2204020 | RcptNo: 1

Received By: Juan Rojas 4/1/2022 8:50:00 AM

Completed By: Sean Livingston 4/1/2022 9:51:03 AM

Reviewed By: JN 4/1/22

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: TMC 4/1/22

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	1.7	Good				

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)

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): 18-0.1-1.7 (°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. 2204020	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)
3/31/22	0807	Drinking water	CLC 18-220331	3-40mL Vials	HCl	001								X		
	0808		CLC 18-220331 (Dup)			002								X		
	0733		CLC 27-220331		HCl	003								X		
	0814		CLC ISI-220331		~~HC~~ HgCl2	004								X		
3/31/22	0816	Drinking water	CLC ESI-220331	3-40mL Vials	HgCl2	005								X		

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
3/31/22	1400			FedEx	3/31/22	8:30
Date	Time	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Send results to:
luisguerra: 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: www.hallenvironmental.com

May 05, 2022

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.: 2204D07

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 5 sample(s) on 4/29/2022 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 18-220428
Project: Joint Superfund Project Monthly Analysi
Collection Date: 4/28/2022 8:10:00 AM
Lab ID: 2204D07-001
Matrix: DRINKING W
Received Date: 4/29/2022 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
Toluene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
Ethylbenzene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
Naphthalene	ND	2.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
1-Methylnaphthalene	ND	4.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
2-Methylnaphthalene	ND	4.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
Acetone	ND	10		µg/L	1	5/3/2022 6:30:00 PM	R87680
Bromobenzene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
Bromodichloromethane	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
Bromoform	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
Bromomethane	ND	3.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
2-Butanone	ND	10		µg/L	1	5/3/2022 6:30:00 PM	R87680
Carbon disulfide	ND	10		µg/L	1	5/3/2022 6:30:00 PM	R87680
Carbon Tetrachloride	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
Chlorobenzene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
Chloroethane	ND	2.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
Chloroform	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
Chloromethane	ND	3.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
2-Chlorotoluene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
4-Chlorotoluene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
cis-1,2-DCE	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
Dibromochloromethane	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
Dibromomethane	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
1,1-Dichloroethane	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
1,1-Dichloroethene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
1,2-Dichloropropane	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
1,3-Dichloropropane	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
2,2-Dichloropropane	ND	2.0		µg/L	1	5/3/2022 6:30:00 PM	R87680

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC 18-220428
Project: Joint Superfund Project Monthly Analysi
Collection Date: 4/28/2022 8:10:00 AM
Lab ID: 2204D07-001
Matrix: DRINKING W
Received Date: 4/29/2022 8:55:00 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	5/3/2022 6:30:00 PM	R87680
Hexachlorobutadiene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
2-Hexanone	ND	10		µg/L	1	5/3/2022 6:30:00 PM	R87680
Isopropylbenzene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
4-Isopropyltoluene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
4-Methyl-2-pentanone	ND	10		µg/L	1	5/3/2022 6:30:00 PM	R87680
Methylene Chloride	ND	3.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
n-Butylbenzene	ND	3.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
n-Propylbenzene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
sec-Butylbenzene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
Styrene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
tert-Butylbenzene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
Tetrachloroethene (PCE)	4.0	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
trans-1,2-DCE	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
Trichlorofluoromethane	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
Vinyl chloride	ND	1.0		µg/L	1	5/3/2022 6:30:00 PM	R87680
Xylenes, Total	ND	1.5		µg/L	1	5/3/2022 6:30:00 PM	R87680
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	5/3/2022 6:30:00 PM	R87680
Surr: 4-Bromofluorobenzene	97.5	70-130		%Rec	1	5/3/2022 6:30:00 PM	R87680
Surr: Dibromofluoromethane	101	70-130		%Rec	1	5/3/2022 6:30:00 PM	R87680
Surr: Toluene-d8	95.9	70-130		%Rec	1	5/3/2022 6:30:00 PM	R87680

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC 27-220428 (Dup)
Project: Joint Superfund Project Monthly Analysi
Collection Date: 4/28/2022 8:29:00 AM
Lab ID: 2204D07-002 **Matrix:** DRINKING W **Received Date:** 4/29/2022 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
Toluene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
Ethylbenzene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
Naphthalene	ND	2.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
1-Methylnaphthalene	ND	4.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
2-Methylnaphthalene	ND	4.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
Acetone	ND	10		µg/L	1	5/3/2022 6:53:00 PM	R87680
Bromobenzene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
Bromodichloromethane	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
Bromoform	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
Bromomethane	ND	3.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
2-Butanone	ND	10		µg/L	1	5/3/2022 6:53:00 PM	R87680
Carbon disulfide	ND	10		µg/L	1	5/3/2022 6:53:00 PM	R87680
Carbon Tetrachloride	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
Chlorobenzene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
Chloroethane	ND	2.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
Chloroform	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
Chloromethane	ND	3.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
2-Chlorotoluene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
4-Chlorotoluene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
cis-1,2-DCE	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
Dibromochloromethane	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
Dibromomethane	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
1,1-Dichloroethane	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
1,1-Dichloroethene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
1,2-Dichloropropane	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
1,3-Dichloropropane	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
2,2-Dichloropropane	ND	2.0		µg/L	1	5/3/2022 6:53:00 PM	R87680

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC 27-220428 (Dup)
Project: Joint Superfund Project Monthly Analysi
Collection Date: 4/28/2022 8:29:00 AM
Lab ID: 2204D07-002 **Matrix:** DRINKING W **Received Date:** 4/29/2022 8:55:00 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	5/3/2022 6:53:00 PM	R87680
Hexachlorobutadiene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
2-Hexanone	ND	10		µg/L	1	5/3/2022 6:53:00 PM	R87680
Isopropylbenzene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
4-Isopropyltoluene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
4-Methyl-2-pentanone	ND	10		µg/L	1	5/3/2022 6:53:00 PM	R87680
Methylene Chloride	ND	3.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
n-Butylbenzene	ND	3.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
n-Propylbenzene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
sec-Butylbenzene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
Styrene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
tert-Butylbenzene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
Tetrachloroethene (PCE)	13	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
trans-1,2-DCE	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
Trichlorofluoromethane	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
Vinyl chloride	ND	1.0		µg/L	1	5/3/2022 6:53:00 PM	R87680
Xylenes, Total	ND	1.5		µg/L	1	5/3/2022 6:53:00 PM	R87680
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	5/3/2022 6:53:00 PM	R87680
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	5/3/2022 6:53:00 PM	R87680
Surr: Dibromofluoromethane	99.6	70-130		%Rec	1	5/3/2022 6:53:00 PM	R87680
Surr: Toluene-d8	96.2	70-130		%Rec	1	5/3/2022 6:53:00 PM	R87680

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC 27-220428
Project: Joint Superfund Project Monthly Analysi
Collection Date: 4/28/2022 8:28:00 AM
Lab ID: 2204D07-003
Matrix: DRINKING W
Received Date: 4/29/2022 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
Toluene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
Ethylbenzene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
Naphthalene	ND	2.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
1-Methylnaphthalene	ND	4.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
2-Methylnaphthalene	ND	4.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
Acetone	ND	10		µg/L	1	5/3/2022 7:16:00 PM	R87680
Bromobenzene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
Bromodichloromethane	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
Bromoform	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
Bromomethane	ND	3.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
2-Butanone	ND	10		µg/L	1	5/3/2022 7:16:00 PM	R87680
Carbon disulfide	ND	10		µg/L	1	5/3/2022 7:16:00 PM	R87680
Carbon Tetrachloride	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
Chlorobenzene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
Chloroethane	ND	2.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
Chloroform	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
Chloromethane	ND	3.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
2-Chlorotoluene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
4-Chlorotoluene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
cis-1,2-DCE	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
Dibromochloromethane	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
Dibromomethane	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
1,1-Dichloroethane	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
1,1-Dichloroethene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
1,2-Dichloropropane	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
1,3-Dichloropropane	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
2,2-Dichloropropane	ND	2.0		µg/L	1	5/3/2022 7:16:00 PM	R87680

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 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, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-220428
Project: Joint Superfund Project Monthly Analysi
Collection Date: 4/28/2022 8:28:00 AM
Lab ID: 2204D07-003
Matrix: DRINKING W
Received Date: 4/29/2022 8:55:00 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	5/3/2022 7:16:00 PM	R87680
Hexachlorobutadiene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
2-Hexanone	ND	10		µg/L	1	5/3/2022 7:16:00 PM	R87680
Isopropylbenzene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
4-Isopropyltoluene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
4-Methyl-2-pentanone	ND	10		µg/L	1	5/3/2022 7:16:00 PM	R87680
Methylene Chloride	ND	3.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
n-Butylbenzene	ND	3.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
n-Propylbenzene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
sec-Butylbenzene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
Styrene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
tert-Butylbenzene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
Tetrachloroethene (PCE)	13	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
trans-1,2-DCE	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
Trichlorofluoromethane	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
Vinyl chloride	ND	1.0		µg/L	1	5/3/2022 7:16:00 PM	R87680
Xylenes, Total	ND	1.5		µg/L	1	5/3/2022 7:16:00 PM	R87680
Surr: 1,2-Dichloroethane-d4	99.4	70-130		%Rec	1	5/3/2022 7:16:00 PM	R87680
Surr: 4-Bromofluorobenzene	98.8	70-130		%Rec	1	5/3/2022 7:16:00 PM	R87680
Surr: Dibromofluoromethane	100	70-130		%Rec	1	5/3/2022 7:16:00 PM	R87680
Surr: Toluene-d8	96.9	70-130		%Rec	1	5/3/2022 7:16:00 PM	R87680

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC IS1-220428
Project: Joint Superfund Project Monthly Analysi
Collection Date: 4/28/2022 8:14:00 AM
Lab ID: 2204D07-004
Matrix: DRINKING W
Received Date: 4/29/2022 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
Toluene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
Ethylbenzene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
Naphthalene	ND	2.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
1-Methylnaphthalene	ND	4.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
2-Methylnaphthalene	ND	4.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
Acetone	ND	10		µg/L	1	5/3/2022 7:39:00 PM	R87680
Bromobenzene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
Bromodichloromethane	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
Bromoform	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
Bromomethane	ND	3.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
2-Butanone	ND	10		µg/L	1	5/3/2022 7:39:00 PM	R87680
Carbon disulfide	ND	10		µg/L	1	5/3/2022 7:39:00 PM	R87680
Carbon Tetrachloride	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
Chlorobenzene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
Chloroethane	ND	2.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
Chloroform	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
Chloromethane	ND	3.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
2-Chlorotoluene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
4-Chlorotoluene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
cis-1,2-DCE	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
Dibromochloromethane	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
Dibromomethane	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
1,1-Dichloroethane	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
1,1-Dichloroethene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
1,2-Dichloropropane	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
1,3-Dichloropropane	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
2,2-Dichloropropane	ND	2.0		µg/L	1	5/3/2022 7:39:00 PM	R87680

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC IS1-220428
Project: Joint Superfund Project Monthly Analysi
Collection Date: 4/28/2022 8:14:00 AM
Lab ID: 2204D07-004
Matrix: DRINKING W
Received Date: 4/29/2022 8:55:00 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	5/3/2022 7:39:00 PM	R87680
Hexachlorobutadiene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
2-Hexanone	ND	10		µg/L	1	5/3/2022 7:39:00 PM	R87680
Isopropylbenzene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
4-Isopropyltoluene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
4-Methyl-2-pentanone	ND	10		µg/L	1	5/3/2022 7:39:00 PM	R87680
Methylene Chloride	ND	3.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
n-Butylbenzene	ND	3.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
n-Propylbenzene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
sec-Butylbenzene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
Styrene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
tert-Butylbenzene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
Tetrachloroethene (PCE)	11	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
trans-1,2-DCE	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
Trichlorofluoromethane	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
Vinyl chloride	ND	1.0		µg/L	1	5/3/2022 7:39:00 PM	R87680
Xylenes, Total	ND	1.5		µg/L	1	5/3/2022 7:39:00 PM	R87680
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	5/3/2022 7:39:00 PM	R87680
Surr: 4-Bromofluorobenzene	98.0	70-130		%Rec	1	5/3/2022 7:39:00 PM	R87680
Surr: Dibromofluoromethane	101	70-130		%Rec	1	5/3/2022 7:39:00 PM	R87680
Surr: Toluene-d8	96.1	70-130		%Rec	1	5/3/2022 7:39:00 PM	R87680

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC ES1-220428
Project: Joint Superfund Project Monthly Analysi
Collection Date: 4/28/2022 8:16:00 AM
Lab ID: 2204D07-005
Matrix: DRINKING W
Received Date: 4/29/2022 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
Toluene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
Ethylbenzene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
Naphthalene	ND	2.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
1-Methylnaphthalene	ND	4.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
2-Methylnaphthalene	ND	4.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
Acetone	ND	10		µg/L	1	5/3/2022 8:02:00 PM	R87680
Bromobenzene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
Bromodichloromethane	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
Bromoform	4.8	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
Bromomethane	ND	3.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
2-Butanone	ND	10		µg/L	1	5/3/2022 8:02:00 PM	R87680
Carbon disulfide	ND	10		µg/L	1	5/3/2022 8:02:00 PM	R87680
Carbon Tetrachloride	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
Chlorobenzene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
Chloroethane	ND	2.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
Chloroform	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
Chloromethane	ND	3.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
2-Chlorotoluene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
4-Chlorotoluene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
cis-1,2-DCE	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
Dibromochloromethane	1.9	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
Dibromomethane	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
1,2-Dichlorobenzene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
1,3-Dichlorobenzene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
1,4-Dichlorobenzene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
Dichlorodifluoromethane	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
1,1-Dichloroethane	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
1,1-Dichloroethene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
1,2-Dichloropropane	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
1,3-Dichloropropane	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
2,2-Dichloropropane	ND	2.0		µg/L	1	5/3/2022 8:02:00 PM	R87680

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC ES1-220428
Project: Joint Superfund Project Monthly Analysi
Collection Date: 4/28/2022 8:16:00 AM
Lab ID: 2204D07-005 **Matrix:** DRINKING W **Received Date:** 4/29/2022 8:55:00 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	5/3/2022 8:02:00 PM	R87680
Hexachlorobutadiene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
2-Hexanone	ND	10		µg/L	1	5/3/2022 8:02:00 PM	R87680
Isopropylbenzene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
4-Isopropyltoluene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
4-Methyl-2-pentanone	ND	10		µg/L	1	5/3/2022 8:02:00 PM	R87680
Methylene Chloride	ND	3.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
n-Butylbenzene	ND	3.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
n-Propylbenzene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
sec-Butylbenzene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
Styrene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
tert-Butylbenzene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
trans-1,2-DCE	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
1,1,1-Trichloroethane	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
1,1,2-Trichloroethane	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
Trichloroethene (TCE)	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
Trichlorofluoromethane	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
1,2,3-Trichloropropane	ND	2.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
Vinyl chloride	ND	1.0		µg/L	1	5/3/2022 8:02:00 PM	R87680
Xylenes, Total	ND	1.5		µg/L	1	5/3/2022 8:02:00 PM	R87680
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	5/3/2022 8:02:00 PM	R87680
Surr: 4-Bromofluorobenzene	98.1	70-130		%Rec	1	5/3/2022 8:02:00 PM	R87680
Surr: Dibromofluoromethane	99.0	70-130		%Rec	1	5/3/2022 8:02:00 PM	R87680
Surr: Toluene-d8	96.7	70-130		%Rec	1	5/3/2022 8:02:00 PM	R87680

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2204D07**

05-May-22

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: **R87680**	RunNo: **87680**
Prep Date:	Analysis Date: **5/3/2022**	SeqNo: **3105051** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	97.2	70	130			
Toluene	20	1.0	20.00	0	99.4	70	130			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	90.0	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	94.1	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.5	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.4	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.3	70	130			
Surr: Toluene-d8	9.5		10.00		95.1	70	130			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R87680**	RunNo: **87680**
Prep Date:	Analysis Date: **5/3/2022**	SeqNo: **3105054** 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#: **2204D07**
05-May-22

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: **R87680**	RunNo: **87680**
Prep Date:	Analysis Date: **5/3/2022**	SeqNo: **3105054** 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#: **2204D07**

05-May-22

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: **R87680**	RunNo: **87680**
Prep Date:	Analysis Date: **5/3/2022**	SeqNo: **3105054** 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		101	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.7	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.6		10.00		95.8	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 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: www.hallenvironmental.com

Sample Log-In Check List

Client Name: City of Las Cruces Work Order Number: 2204D07 RcptNo: 1

Received By: Kasandra Payan 4/29/2022 8:55:00 AM

Completed By: Tracy Casarrubias 4/29/2022 10:42:02 AM

Reviewed By: DAD 04/29/22

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: JN 4/29/22

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	2.3	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)

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): 2.3-0=2.3 (°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. 2204D07	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)
4/28/22	0810	Drinking ~~Water~~ Water	CLC 18-220428	3-40mL Vials	HgCl2	001								X		
"	0829	"	CLC 27-220428 (Dup)	"	"	002								X		
"	0828	"	CLC 27-220428	"	"	003								X		
"	0814	"	CLC ESI-220428	"	"	004								X		
4/28/22	0816	Drinking ~~Water~~ Water	CLC ESI-220428	3-40mL Vials	HgCl2	005								X		

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
4/28/22	1400			Fedex	4-29-22	8:55
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
				HDA 4-29-22		

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: www.hallenvironmental.com

June 02, 2022

Luis Guerra

City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3635
FAX: (575) 528-3513

RE: Joint Superfund Project Monthly Analysis OrderNo.: 2205B19

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 5/25/2022 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 18-220524
Project: Joint Superfund Project Monthly Analysi
Collection Date: 5/24/2022 8:07:00 AM
Lab ID: 2205B19-001
Matrix: DRINKING W
Received Date: 5/25/2022 9:10:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Benzene	ND	0.23	1.0		µg/L	1	5/27/2022 1:29:00 PM
Toluene	ND	0.20	1.0		µg/L	1	5/27/2022 1:29:00 PM
Ethylbenzene	ND	0.21	1.0		µg/L	1	5/27/2022 1:29:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	5/27/2022 1:29:00 PM
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	5/27/2022 1:29:00 PM
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	5/27/2022 1:29:00 PM
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	5/27/2022 1:29:00 PM
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	5/27/2022 1:29:00 PM
Naphthalene	ND	0.50	2.0		µg/L	1	5/27/2022 1:29:00 PM
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	5/27/2022 1:29:00 PM
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	5/27/2022 1:29:00 PM
Acetone	ND	2.5	10		µg/L	1	5/27/2022 1:29:00 PM
Bromobenzene	ND	0.28	1.0		µg/L	1	5/27/2022 1:29:00 PM
Bromodichloromethane	ND	0.20	1.0		µg/L	1	5/27/2022 1:29:00 PM
Bromoform	ND	0.31	1.0		µg/L	1	5/27/2022 1:29:00 PM
Bromomethane	ND	0.85	3.0		µg/L	1	5/27/2022 1:29:00 PM
2-Butanone	ND	2.0	10		µg/L	1	5/27/2022 1:29:00 PM
Carbon disulfide	ND	0.59	10		µg/L	1	5/27/2022 1:29:00 PM
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	5/27/2022 1:29:00 PM
Chlorobenzene	ND	0.16	1.0		µg/L	1	5/27/2022 1:29:00 PM
Chloroethane	ND	0.38	2.0		µg/L	1	5/27/2022 1:29:00 PM
Chloroform	ND	0.13	1.0		µg/L	1	5/27/2022 1:29:00 PM
Chloromethane	ND	0.41	3.0		µg/L	1	5/27/2022 1:29:00 PM
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	5/27/2022 1:29:00 PM
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	5/27/2022 1:29:00 PM
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	5/27/2022 1:29:00 PM
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	5/27/2022 1:29:00 PM
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	5/27/2022 1:29:00 PM
Dibromochloromethane	ND	0.28	1.0		µg/L	1	5/27/2022 1:29:00 PM
Dibromomethane	ND	0.31	1.0		µg/L	1	5/27/2022 1:29:00 PM
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/27/2022 1:29:00 PM
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	5/27/2022 1:29:00 PM
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	5/27/2022 1:29:00 PM
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	5/27/2022 1:29:00 PM
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	5/27/2022 1:29:00 PM
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	5/27/2022 1:29:00 PM
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	5/27/2022 1:29:00 PM
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	5/27/2022 1:29:00 PM
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	5/27/2022 1:29:00 PM
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	5/27/2022 1:29:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	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: City of Las Cruces
Client Sample ID: CLC 18-220524
Project: Joint Superfund Project Monthly Analysi
Collection Date: 5/24/2022 8:07:00 AM
Lab ID: 2205B19-001
Matrix: DRINKING W
Received Date: 5/25/2022 9:10:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	5/27/2022 1:29:00 PM
2-Hexanone	ND	1.8	10		µg/L	1	5/27/2022 1:29:00 PM
Isopropylbenzene	ND	0.18	1.0		µg/L	1	5/27/2022 1:29:00 PM
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	5/27/2022 1:29:00 PM
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	5/27/2022 1:29:00 PM
Methylene Chloride	ND	0.50	3.0		µg/L	1	5/27/2022 1:29:00 PM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	5/27/2022 1:29:00 PM
n-Propylbenzene	ND	0.18	1.0		µg/L	1	5/27/2022 1:29:00 PM
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	5/27/2022 1:29:00 PM
Styrene	ND	0.14	1.0		µg/L	1	5/27/2022 1:29:00 PM
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	5/27/2022 1:29:00 PM
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	5/27/2022 1:29:00 PM
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	5/27/2022 1:29:00 PM
Tetrachloroethene (PCE)	4.0	0.36	1.0		µg/L	1	5/27/2022 1:29:00 PM
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	5/27/2022 1:29:00 PM
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	5/27/2022 1:29:00 PM
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	5/27/2022 1:29:00 PM
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	5/27/2022 1:29:00 PM
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	5/27/2022 1:29:00 PM
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	5/27/2022 1:29:00 PM
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	5/27/2022 1:29:00 PM
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	5/27/2022 1:29:00 PM
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	5/27/2022 1:29:00 PM
Vinyl chloride	ND	0.32	1.0		µg/L	1	5/27/2022 1:29:00 PM
Xylenes, Total	ND	0.37	1.5		µg/L	1	5/27/2022 1:29:00 PM
Surr: 1,2-Dichloroethane-d4	90.3	0	70-130		%Rec	1	5/27/2022 1:29:00 PM
Surr: 4-Bromofluorobenzene	92.6	0	70-130		%Rec	1	5/27/2022 1:29:00 PM
Surr: Dibromofluoromethane	95.7	0	70-130		%Rec	1	5/27/2022 1:29:00 PM
Surr: Toluene-d8	93.8	0	70-130		%Rec	1	5/27/2022 1:29:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: CLC 27-220524
Project: Joint Superfund Project Monthly Analysi
Collection Date: 5/24/2022 8:44:00 AM
Lab ID: 2205B19-002
Matrix: DRINKING W
Received Date: 5/25/2022 9:10:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Benzene	ND	0.23	1.0		µg/L	1	5/27/2022 2:38:00 PM
Toluene	ND	0.20	1.0		µg/L	1	5/27/2022 2:38:00 PM
Ethylbenzene	ND	0.21	1.0		µg/L	1	5/27/2022 2:38:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	5/27/2022 2:38:00 PM
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	5/27/2022 2:38:00 PM
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	5/27/2022 2:38:00 PM
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	5/27/2022 2:38:00 PM
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	5/27/2022 2:38:00 PM
Naphthalene	ND	0.50	2.0		µg/L	1	5/27/2022 2:38:00 PM
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	5/27/2022 2:38:00 PM
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	5/27/2022 2:38:00 PM
Acetone	ND	2.5	10		µg/L	1	5/27/2022 2:38:00 PM
Bromobenzene	ND	0.28	1.0		µg/L	1	5/27/2022 2:38:00 PM
Bromodichloromethane	ND	0.20	1.0		µg/L	1	5/27/2022 2:38:00 PM
Bromoform	ND	0.31	1.0		µg/L	1	5/27/2022 2:38:00 PM
Bromomethane	ND	0.85	3.0		µg/L	1	5/27/2022 2:38:00 PM
2-Butanone	ND	2.0	10		µg/L	1	5/27/2022 2:38:00 PM
Carbon disulfide	ND	0.59	10		µg/L	1	5/27/2022 2:38:00 PM
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	5/27/2022 2:38:00 PM
Chlorobenzene	ND	0.16	1.0		µg/L	1	5/27/2022 2:38:00 PM
Chloroethane	ND	0.38	2.0		µg/L	1	5/27/2022 2:38:00 PM
Chloroform	ND	0.13	1.0		µg/L	1	5/27/2022 2:38:00 PM
Chloromethane	ND	0.41	3.0		µg/L	1	5/27/2022 2:38:00 PM
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	5/27/2022 2:38:00 PM
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	5/27/2022 2:38:00 PM
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	5/27/2022 2:38:00 PM
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	5/27/2022 2:38:00 PM
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	5/27/2022 2:38:00 PM
Dibromochloromethane	ND	0.28	1.0		µg/L	1	5/27/2022 2:38:00 PM
Dibromomethane	ND	0.31	1.0		µg/L	1	5/27/2022 2:38:00 PM
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/27/2022 2:38:00 PM
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	5/27/2022 2:38:00 PM
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	5/27/2022 2:38:00 PM
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	5/27/2022 2:38:00 PM
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	5/27/2022 2:38:00 PM
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	5/27/2022 2:38:00 PM
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	5/27/2022 2:38:00 PM
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	5/27/2022 2:38:00 PM
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	5/27/2022 2:38:00 PM
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	5/27/2022 2:38:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	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: City of Las Cruces
Client Sample ID: CLC 27-220524
Project: Joint Superfund Project Monthly Analysi
Collection Date: 5/24/2022 8:44:00 AM
Lab ID: 2205B19-002
Matrix: DRINKING W
Received Date: 5/25/2022 9:10:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	5/27/2022 2:38:00 PM
2-Hexanone	ND	1.8	10		µg/L	1	5/27/2022 2:38:00 PM
Isopropylbenzene	ND	0.18	1.0		µg/L	1	5/27/2022 2:38:00 PM
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	5/27/2022 2:38:00 PM
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	5/27/2022 2:38:00 PM
Methylene Chloride	ND	0.50	3.0		µg/L	1	5/27/2022 2:38:00 PM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	5/27/2022 2:38:00 PM
n-Propylbenzene	ND	0.18	1.0		µg/L	1	5/27/2022 2:38:00 PM
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	5/27/2022 2:38:00 PM
Styrene	ND	0.14	1.0		µg/L	1	5/27/2022 2:38:00 PM
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	5/27/2022 2:38:00 PM
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	5/27/2022 2:38:00 PM
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	5/27/2022 2:38:00 PM
Tetrachloroethene (PCE)	16	0.36	1.0		µg/L	1	5/27/2022 2:38:00 PM
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	5/27/2022 2:38:00 PM
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	5/27/2022 2:38:00 PM
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	5/27/2022 2:38:00 PM
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	5/27/2022 2:38:00 PM
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	5/27/2022 2:38:00 PM
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	5/27/2022 2:38:00 PM
Trichloroethene (TCE)	0.28	0.20	1.0	J	µg/L	1	5/27/2022 2:38:00 PM
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	5/27/2022 2:38:00 PM
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	5/27/2022 2:38:00 PM
Vinyl chloride	ND	0.32	1.0		µg/L	1	5/27/2022 2:38:00 PM
Xylenes, Total	ND	0.37	1.5		µg/L	1	5/27/2022 2:38:00 PM
Surr: 1,2-Dichloroethane-d4	88.8	0	70-130		%Rec	1	5/27/2022 2:38:00 PM
Surr: 4-Bromofluorobenzene	92.7	0	70-130		%Rec	1	5/27/2022 2:38:00 PM
Surr: Dibromofluoromethane	97.2	0	70-130		%Rec	1	5/27/2022 2:38:00 PM
Surr: Toluene-d8	95.6	0	70-130		%Rec	1	5/27/2022 2:38:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: CLC IS1-220524
Project: Joint Superfund Project Monthly Analysi
Collection Date: 5/24/2022 8:17:00 AM
Lab ID: 2205B19-003
Matrix: DRINKING W
Received Date: 5/25/2022 9:10:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Benzene	ND	0.23	1.0		µg/L	1	5/27/2022 3:02:00 PM
Toluene	ND	0.20	1.0		µg/L	1	5/27/2022 3:02:00 PM
Ethylbenzene	ND	0.21	1.0		µg/L	1	5/27/2022 3:02:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	5/27/2022 3:02:00 PM
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	5/27/2022 3:02:00 PM
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	5/27/2022 3:02:00 PM
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	5/27/2022 3:02:00 PM
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	5/27/2022 3:02:00 PM
Naphthalene	ND	0.50	2.0		µg/L	1	5/27/2022 3:02:00 PM
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	5/27/2022 3:02:00 PM
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	5/27/2022 3:02:00 PM
Acetone	ND	2.5	10		µg/L	1	5/27/2022 3:02:00 PM
Bromobenzene	ND	0.28	1.0		µg/L	1	5/27/2022 3:02:00 PM
Bromodichloromethane	ND	0.20	1.0		µg/L	1	5/27/2022 3:02:00 PM
Bromoform	ND	0.31	1.0		µg/L	1	5/27/2022 3:02:00 PM
Bromomethane	ND	0.85	3.0		µg/L	1	5/27/2022 3:02:00 PM
2-Butanone	ND	2.0	10		µg/L	1	5/27/2022 3:02:00 PM
Carbon disulfide	ND	0.59	10		µg/L	1	5/27/2022 3:02:00 PM
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	5/27/2022 3:02:00 PM
Chlorobenzene	ND	0.16	1.0		µg/L	1	5/27/2022 3:02:00 PM
Chloroethane	ND	0.38	2.0		µg/L	1	5/27/2022 3:02:00 PM
Chloroform	ND	0.13	1.0		µg/L	1	5/27/2022 3:02:00 PM
Chloromethane	ND	0.41	3.0		µg/L	1	5/27/2022 3:02:00 PM
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	5/27/2022 3:02:00 PM
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	5/27/2022 3:02:00 PM
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	5/27/2022 3:02:00 PM
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	5/27/2022 3:02:00 PM
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	5/27/2022 3:02:00 PM
Dibromochloromethane	ND	0.28	1.0		µg/L	1	5/27/2022 3:02:00 PM
Dibromomethane	ND	0.31	1.0		µg/L	1	5/27/2022 3:02:00 PM
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/27/2022 3:02:00 PM
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	5/27/2022 3:02:00 PM
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	5/27/2022 3:02:00 PM
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	5/27/2022 3:02:00 PM
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	5/27/2022 3:02:00 PM
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	5/27/2022 3:02:00 PM
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	5/27/2022 3:02:00 PM
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	5/27/2022 3:02:00 PM
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	5/27/2022 3:02:00 PM
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	5/27/2022 3:02:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
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, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-220524
Project: Joint Superfund Project Monthly Analysi
Collection Date: 5/24/2022 8:17:00 AM
Lab ID: 2205B19-003
Matrix: DRINKING W
Received Date: 5/25/2022 9:10:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	5/27/2022 3:02:00 PM
2-Hexanone	ND	1.8	10		µg/L	1	5/27/2022 3:02:00 PM
Isopropylbenzene	ND	0.18	1.0		µg/L	1	5/27/2022 3:02:00 PM
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	5/27/2022 3:02:00 PM
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	5/27/2022 3:02:00 PM
Methylene Chloride	ND	0.50	3.0		µg/L	1	5/27/2022 3:02:00 PM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	5/27/2022 3:02:00 PM
n-Propylbenzene	ND	0.18	1.0		µg/L	1	5/27/2022 3:02:00 PM
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	5/27/2022 3:02:00 PM
Styrene	ND	0.14	1.0		µg/L	1	5/27/2022 3:02:00 PM
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	5/27/2022 3:02:00 PM
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	5/27/2022 3:02:00 PM
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	5/27/2022 3:02:00 PM
Tetrachloroethene (PCE)	12	0.36	1.0		µg/L	1	5/27/2022 3:02:00 PM
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	5/27/2022 3:02:00 PM
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	5/27/2022 3:02:00 PM
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	5/27/2022 3:02:00 PM
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	5/27/2022 3:02:00 PM
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	5/27/2022 3:02:00 PM
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	5/27/2022 3:02:00 PM
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	5/27/2022 3:02:00 PM
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	5/27/2022 3:02:00 PM
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	5/27/2022 3:02:00 PM
Vinyl chloride	ND	0.32	1.0		µg/L	1	5/27/2022 3:02:00 PM
Xylenes, Total	ND	0.37	1.5		µg/L	1	5/27/2022 3:02:00 PM
Surr: 1,2-Dichloroethane-d4	89.5	0	70-130		%Rec	1	5/27/2022 3:02:00 PM
Surr: 4-Bromofluorobenzene	91.3	0	70-130		%Rec	1	5/27/2022 3:02:00 PM
Surr: Dibromofluoromethane	96.7	0	70-130		%Rec	1	5/27/2022 3:02:00 PM
Surr: Toluene-d8	95.0	0	70-130		%Rec	1	5/27/2022 3:02:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: CLC C1-220524
Project: Joint Superfund Project Monthly Analysi
Collection Date: 5/24/2022 8:20:00 AM
Lab ID: 2205B19-004
Matrix: DRINKING W
Received Date: 5/25/2022 9:10:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Benzene	ND	0.23	1.0		µg/L	1	5/27/2022 3:25:00 PM
Toluene	ND	0.20	1.0		µg/L	1	5/27/2022 3:25:00 PM
Ethylbenzene	ND	0.21	1.0		µg/L	1	5/27/2022 3:25:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	5/27/2022 3:25:00 PM
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	5/27/2022 3:25:00 PM
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	5/27/2022 3:25:00 PM
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	5/27/2022 3:25:00 PM
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	5/27/2022 3:25:00 PM
Naphthalene	ND	0.50	2.0		µg/L	1	5/27/2022 3:25:00 PM
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	5/27/2022 3:25:00 PM
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	5/27/2022 3:25:00 PM
Acetone	ND	2.5	10		µg/L	1	5/27/2022 3:25:00 PM
Bromobenzene	ND	0.28	1.0		µg/L	1	5/27/2022 3:25:00 PM
Bromodichloromethane	ND	0.20	1.0		µg/L	1	5/27/2022 3:25:00 PM
Bromoform	ND	0.31	1.0		µg/L	1	5/27/2022 3:25:00 PM
Bromomethane	ND	0.85	3.0		µg/L	1	5/27/2022 3:25:00 PM
2-Butanone	ND	2.0	10		µg/L	1	5/27/2022 3:25:00 PM
Carbon disulfide	ND	0.59	10		µg/L	1	5/27/2022 3:25:00 PM
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	5/27/2022 3:25:00 PM
Chlorobenzene	ND	0.16	1.0		µg/L	1	5/27/2022 3:25:00 PM
Chloroethane	ND	0.38	2.0		µg/L	1	5/27/2022 3:25:00 PM
Chloroform	ND	0.13	1.0		µg/L	1	5/27/2022 3:25:00 PM
Chloromethane	ND	0.41	3.0		µg/L	1	5/27/2022 3:25:00 PM
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	5/27/2022 3:25:00 PM
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	5/27/2022 3:25:00 PM
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	5/27/2022 3:25:00 PM
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	5/27/2022 3:25:00 PM
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	5/27/2022 3:25:00 PM
Dibromochloromethane	ND	0.28	1.0		µg/L	1	5/27/2022 3:25:00 PM
Dibromomethane	ND	0.31	1.0		µg/L	1	5/27/2022 3:25:00 PM
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/27/2022 3:25:00 PM
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	5/27/2022 3:25:00 PM
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	5/27/2022 3:25:00 PM
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	5/27/2022 3:25:00 PM
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	5/27/2022 3:25:00 PM
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	5/27/2022 3:25:00 PM
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	5/27/2022 3:25:00 PM
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	5/27/2022 3:25:00 PM
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	5/27/2022 3:25:00 PM
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	5/27/2022 3:25:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: CLC C1-220524
Project: Joint Superfund Project Monthly Analysi
Collection Date: 5/24/2022 8:20:00 AM
Lab ID: 2205B19-004
Matrix: DRINKING W
Received Date: 5/25/2022 9:10:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	5/27/2022 3:25:00 PM
2-Hexanone	ND	1.8	10		µg/L	1	5/27/2022 3:25:00 PM
Isopropylbenzene	ND	0.18	1.0		µg/L	1	5/27/2022 3:25:00 PM
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	5/27/2022 3:25:00 PM
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	5/27/2022 3:25:00 PM
Methylene Chloride	ND	0.50	3.0		µg/L	1	5/27/2022 3:25:00 PM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	5/27/2022 3:25:00 PM
n-Propylbenzene	ND	0.18	1.0		µg/L	1	5/27/2022 3:25:00 PM
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	5/27/2022 3:25:00 PM
Styrene	ND	0.14	1.0		µg/L	1	5/27/2022 3:25:00 PM
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	5/27/2022 3:25:00 PM
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	5/27/2022 3:25:00 PM
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	5/27/2022 3:25:00 PM
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	5/27/2022 3:25:00 PM
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	5/27/2022 3:25:00 PM
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	5/27/2022 3:25:00 PM
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	5/27/2022 3:25:00 PM
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	5/27/2022 3:25:00 PM
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	5/27/2022 3:25:00 PM
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	5/27/2022 3:25:00 PM
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	5/27/2022 3:25:00 PM
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	5/27/2022 3:25:00 PM
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	5/27/2022 3:25:00 PM
Vinyl chloride	ND	0.32	1.0		µg/L	1	5/27/2022 3:25:00 PM
Xylenes, Total	ND	0.37	1.5		µg/L	1	5/27/2022 3:25:00 PM
Surr: 1,2-Dichloroethane-d4	90.0	0	70-130		%Rec	1	5/27/2022 3:25:00 PM
Surr: 4-Bromofluorobenzene	93.0	0	70-130		%Rec	1	5/27/2022 3:25:00 PM
Surr: Dibromofluoromethane	95.7	0	70-130		%Rec	1	5/27/2022 3:25:00 PM
Surr: Toluene-d8	96.9	0	70-130		%Rec	1	5/27/2022 3:25:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: CLC C2-220524
Project: Joint Superfund Project Monthly Analysi
Collection Date: 5/24/2022 8:24:00 AM
Lab ID: 2205B19-005
Matrix: DRINKING W
Received Date: 5/25/2022 9:10:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Benzene	ND	0.23	1.0		µg/L	1	5/27/2022 3:48:00 PM
Toluene	ND	0.20	1.0		µg/L	1	5/27/2022 3:48:00 PM
Ethylbenzene	ND	0.21	1.0		µg/L	1	5/27/2022 3:48:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	5/27/2022 3:48:00 PM
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	5/27/2022 3:48:00 PM
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	5/27/2022 3:48:00 PM
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	5/27/2022 3:48:00 PM
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	5/27/2022 3:48:00 PM
Naphthalene	ND	0.50	2.0		µg/L	1	5/27/2022 3:48:00 PM
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	5/27/2022 3:48:00 PM
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	5/27/2022 3:48:00 PM
Acetone	ND	2.5	10		µg/L	1	5/27/2022 3:48:00 PM
Bromobenzene	ND	0.28	1.0		µg/L	1	5/27/2022 3:48:00 PM
Bromodichloromethane	ND	0.20	1.0		µg/L	1	5/27/2022 3:48:00 PM
Bromoform	ND	0.31	1.0		µg/L	1	5/27/2022 3:48:00 PM
Bromomethane	ND	0.85	3.0		µg/L	1	5/27/2022 3:48:00 PM
2-Butanone	ND	2.0	10		µg/L	1	5/27/2022 3:48:00 PM
Carbon disulfide	ND	0.59	10		µg/L	1	5/27/2022 3:48:00 PM
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	5/27/2022 3:48:00 PM
Chlorobenzene	ND	0.16	1.0		µg/L	1	5/27/2022 3:48:00 PM
Chloroethane	ND	0.38	2.0		µg/L	1	5/27/2022 3:48:00 PM
Chloroform	ND	0.13	1.0		µg/L	1	5/27/2022 3:48:00 PM
Chloromethane	ND	0.41	3.0		µg/L	1	5/27/2022 3:48:00 PM
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	5/27/2022 3:48:00 PM
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	5/27/2022 3:48:00 PM
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	5/27/2022 3:48:00 PM
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	5/27/2022 3:48:00 PM
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	5/27/2022 3:48:00 PM
Dibromochloromethane	ND	0.28	1.0		µg/L	1	5/27/2022 3:48:00 PM
Dibromomethane	ND	0.31	1.0		µg/L	1	5/27/2022 3:48:00 PM
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/27/2022 3:48:00 PM
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	5/27/2022 3:48:00 PM
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	5/27/2022 3:48:00 PM
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	5/27/2022 3:48:00 PM
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	5/27/2022 3:48:00 PM
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	5/27/2022 3:48:00 PM
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	5/27/2022 3:48:00 PM
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	5/27/2022 3:48:00 PM
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	5/27/2022 3:48:00 PM
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	5/27/2022 3:48:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
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, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C2-220524
Project: Joint Superfund Project Monthly Analysi
Collection Date: 5/24/2022 8:24:00 AM
Lab ID: 2205B19-005
Matrix: DRINKING W
Received Date: 5/25/2022 9:10:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	5/27/2022 3:48:00 PM
2-Hexanone	ND	1.8	10		µg/L	1	5/27/2022 3:48:00 PM
Isopropylbenzene	ND	0.18	1.0		µg/L	1	5/27/2022 3:48:00 PM
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	5/27/2022 3:48:00 PM
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	5/27/2022 3:48:00 PM
Methylene Chloride	ND	0.50	3.0		µg/L	1	5/27/2022 3:48:00 PM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	5/27/2022 3:48:00 PM
n-Propylbenzene	ND	0.18	1.0		µg/L	1	5/27/2022 3:48:00 PM
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	5/27/2022 3:48:00 PM
Styrene	ND	0.14	1.0		µg/L	1	5/27/2022 3:48:00 PM
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	5/27/2022 3:48:00 PM
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	5/27/2022 3:48:00 PM
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	5/27/2022 3:48:00 PM
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	5/27/2022 3:48:00 PM
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	5/27/2022 3:48:00 PM
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	5/27/2022 3:48:00 PM
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	5/27/2022 3:48:00 PM
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	5/27/2022 3:48:00 PM
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	5/27/2022 3:48:00 PM
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	5/27/2022 3:48:00 PM
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	5/27/2022 3:48:00 PM
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	5/27/2022 3:48:00 PM
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	5/27/2022 3:48:00 PM
Vinyl chloride	ND	0.32	1.0		µg/L	1	5/27/2022 3:48:00 PM
Xylenes, Total	ND	0.37	1.5		µg/L	1	5/27/2022 3:48:00 PM
Surr: 1,2-Dichloroethane-d4	90.0	0	70-130		%Rec	1	5/27/2022 3:48:00 PM
Surr: 4-Bromofluorobenzene	93.0	0	70-130		%Rec	1	5/27/2022 3:48:00 PM
Surr: Dibromofluoromethane	96.8	0	70-130		%Rec	1	5/27/2022 3:48:00 PM
Surr: Toluene-d8	97.9	0	70-130		%Rec	1	5/27/2022 3:48:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: CLC C2-220524 (DUP)
Project: Joint Superfund Project Monthly Analysi
Collection Date: 5/24/2022 8:26:00 AM
Lab ID: 2205B19-006
Matrix: DRINKING W
Received Date: 5/25/2022 9:10:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Benzene	ND	0.23	1.0		µg/L	1	5/27/2022 4:11:00 PM
Toluene	ND	0.20	1.0		µg/L	1	5/27/2022 4:11:00 PM
Ethylbenzene	ND	0.21	1.0		µg/L	1	5/27/2022 4:11:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	5/27/2022 4:11:00 PM
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	5/27/2022 4:11:00 PM
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	5/27/2022 4:11:00 PM
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	5/27/2022 4:11:00 PM
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	5/27/2022 4:11:00 PM
Naphthalene	ND	0.50	2.0		µg/L	1	5/27/2022 4:11:00 PM
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	5/27/2022 4:11:00 PM
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	5/27/2022 4:11:00 PM
Acetone	ND	2.5	10		µg/L	1	5/27/2022 4:11:00 PM
Bromobenzene	ND	0.28	1.0		µg/L	1	5/27/2022 4:11:00 PM
Bromodichloromethane	ND	0.20	1.0		µg/L	1	5/27/2022 4:11:00 PM
Bromoform	ND	0.31	1.0		µg/L	1	5/27/2022 4:11:00 PM
Bromomethane	ND	0.85	3.0		µg/L	1	5/27/2022 4:11:00 PM
2-Butanone	ND	2.0	10		µg/L	1	5/27/2022 4:11:00 PM
Carbon disulfide	ND	0.59	10		µg/L	1	5/27/2022 4:11:00 PM
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	5/27/2022 4:11:00 PM
Chlorobenzene	ND	0.16	1.0		µg/L	1	5/27/2022 4:11:00 PM
Chloroethane	ND	0.38	2.0		µg/L	1	5/27/2022 4:11:00 PM
Chloroform	ND	0.13	1.0		µg/L	1	5/27/2022 4:11:00 PM
Chloromethane	ND	0.41	3.0		µg/L	1	5/27/2022 4:11:00 PM
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	5/27/2022 4:11:00 PM
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	5/27/2022 4:11:00 PM
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	5/27/2022 4:11:00 PM
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	5/27/2022 4:11:00 PM
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	5/27/2022 4:11:00 PM
Dibromochloromethane	ND	0.28	1.0		µg/L	1	5/27/2022 4:11:00 PM
Dibromomethane	ND	0.31	1.0		µg/L	1	5/27/2022 4:11:00 PM
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/27/2022 4:11:00 PM
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	5/27/2022 4:11:00 PM
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	5/27/2022 4:11:00 PM
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	5/27/2022 4:11:00 PM
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	5/27/2022 4:11:00 PM
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	5/27/2022 4:11:00 PM
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	5/27/2022 4:11:00 PM
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	5/27/2022 4:11:00 PM
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	5/27/2022 4:11:00 PM
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	5/27/2022 4:11:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
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, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C2-220524 (DUP)
Project: Joint Superfund Project Monthly Analysi
Collection Date: 5/24/2022 8:26:00 AM
Lab ID: 2205B19-006
Matrix: DRINKING W
Received Date: 5/25/2022 9:10:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	5/27/2022 4:11:00 PM
2-Hexanone	ND	1.8	10		µg/L	1	5/27/2022 4:11:00 PM
Isopropylbenzene	ND	0.18	1.0		µg/L	1	5/27/2022 4:11:00 PM
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	5/27/2022 4:11:00 PM
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	5/27/2022 4:11:00 PM
Methylene Chloride	ND	0.50	3.0		µg/L	1	5/27/2022 4:11:00 PM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	5/27/2022 4:11:00 PM
n-Propylbenzene	ND	0.18	1.0		µg/L	1	5/27/2022 4:11:00 PM
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	5/27/2022 4:11:00 PM
Styrene	ND	0.14	1.0		µg/L	1	5/27/2022 4:11:00 PM
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	5/27/2022 4:11:00 PM
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	5/27/2022 4:11:00 PM
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	5/27/2022 4:11:00 PM
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	5/27/2022 4:11:00 PM
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	5/27/2022 4:11:00 PM
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	5/27/2022 4:11:00 PM
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	5/27/2022 4:11:00 PM
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	5/27/2022 4:11:00 PM
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	5/27/2022 4:11:00 PM
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	5/27/2022 4:11:00 PM
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	5/27/2022 4:11:00 PM
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	5/27/2022 4:11:00 PM
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	5/27/2022 4:11:00 PM
Vinyl chloride	ND	0.32	1.0		µg/L	1	5/27/2022 4:11:00 PM
Xylenes, Total	ND	0.37	1.5		µg/L	1	5/27/2022 4:11:00 PM
Surr: 1,2-Dichloroethane-d4	91.5	0	70-130		%Rec	1	5/27/2022 4:11:00 PM
Surr: 4-Bromofluorobenzene	94.0	0	70-130		%Rec	1	5/27/2022 4:11:00 PM
Surr: Dibromofluoromethane	99.3	0	70-130		%Rec	1	5/27/2022 4:11:00 PM
Surr: Toluene-d8	96.9	0	70-130		%Rec	1	5/27/2022 4:11:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: CLC ES1-220524
Project: Joint Superfund Project Monthly Analysi
Collection Date: 5/24/2022 8:27:00 AM
Lab ID: 2205B19-007
Matrix: DRINKING W
Received Date: 5/25/2022 9:10:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Benzene	ND	0.23	1.0		µg/L	1	5/27/2022 4:35:00 PM
Toluene	ND	0.20	1.0		µg/L	1	5/27/2022 4:35:00 PM
Ethylbenzene	ND	0.21	1.0		µg/L	1	5/27/2022 4:35:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	5/27/2022 4:35:00 PM
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	5/27/2022 4:35:00 PM
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	5/27/2022 4:35:00 PM
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	5/27/2022 4:35:00 PM
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	5/27/2022 4:35:00 PM
Naphthalene	ND	0.50	2.0		µg/L	1	5/27/2022 4:35:00 PM
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	5/27/2022 4:35:00 PM
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	5/27/2022 4:35:00 PM
Acetone	ND	2.5	10		µg/L	1	5/27/2022 4:35:00 PM
Bromobenzene	ND	0.28	1.0		µg/L	1	5/27/2022 4:35:00 PM
Bromodichloromethane	0.59	0.20	1.0	J	µg/L	1	5/27/2022 4:35:00 PM
Bromoform	6.2	0.31	1.0		µg/L	1	5/27/2022 4:35:00 PM
Bromomethane	ND	0.85	3.0		µg/L	1	5/27/2022 4:35:00 PM
2-Butanone	ND	2.0	10		µg/L	1	5/27/2022 4:35:00 PM
Carbon disulfide	ND	0.59	10		µg/L	1	5/27/2022 4:35:00 PM
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	5/27/2022 4:35:00 PM
Chlorobenzene	ND	0.16	1.0		µg/L	1	5/27/2022 4:35:00 PM
Chloroethane	ND	0.38	2.0		µg/L	1	5/27/2022 4:35:00 PM
Chloroform	ND	0.13	1.0		µg/L	1	5/27/2022 4:35:00 PM
Chloromethane	ND	0.41	3.0		µg/L	1	5/27/2022 4:35:00 PM
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	5/27/2022 4:35:00 PM
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	5/27/2022 4:35:00 PM
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	5/27/2022 4:35:00 PM
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	5/27/2022 4:35:00 PM
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	5/27/2022 4:35:00 PM
Dibromochloromethane	2.3	0.28	1.0		µg/L	1	5/27/2022 4:35:00 PM
Dibromomethane	ND	0.31	1.0		µg/L	1	5/27/2022 4:35:00 PM
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	5/27/2022 4:35:00 PM
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	5/27/2022 4:35:00 PM
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	5/27/2022 4:35:00 PM
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	5/27/2022 4:35:00 PM
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	5/27/2022 4:35:00 PM
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	5/27/2022 4:35:00 PM
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	5/27/2022 4:35:00 PM
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	5/27/2022 4:35:00 PM
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	5/27/2022 4:35:00 PM
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	5/27/2022 4:35:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
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, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-220524
Project: Joint Superfund Project Monthly Analysi
Collection Date: 5/24/2022 8:27:00 AM
Lab ID: 2205B19-007
Matrix: DRINKING W
Received Date: 5/25/2022 9:10:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	5/27/2022 4:35:00 PM
2-Hexanone	ND	1.8	10		µg/L	1	5/27/2022 4:35:00 PM
Isopropylbenzene	ND	0.18	1.0		µg/L	1	5/27/2022 4:35:00 PM
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	5/27/2022 4:35:00 PM
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	5/27/2022 4:35:00 PM
Methylene Chloride	ND	0.50	3.0		µg/L	1	5/27/2022 4:35:00 PM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	5/27/2022 4:35:00 PM
n-Propylbenzene	ND	0.18	1.0		µg/L	1	5/27/2022 4:35:00 PM
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	5/27/2022 4:35:00 PM
Styrene	ND	0.14	1.0		µg/L	1	5/27/2022 4:35:00 PM
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	5/27/2022 4:35:00 PM
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	5/27/2022 4:35:00 PM
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	5/27/2022 4:35:00 PM
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	5/27/2022 4:35:00 PM
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	5/27/2022 4:35:00 PM
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	5/27/2022 4:35:00 PM
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	5/27/2022 4:35:00 PM
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	5/27/2022 4:35:00 PM
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	5/27/2022 4:35:00 PM
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	5/27/2022 4:35:00 PM
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	5/27/2022 4:35:00 PM
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	5/27/2022 4:35:00 PM
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	5/27/2022 4:35:00 PM
Vinyl chloride	ND	0.32	1.0		µg/L	1	5/27/2022 4:35:00 PM
Xylenes, Total	ND	0.37	1.5		µg/L	1	5/27/2022 4:35:00 PM
Surr: 1,2-Dichloroethane-d4	92.5	0	70-130		%Rec	1	5/27/2022 4:35:00 PM
Surr: 4-Bromofluorobenzene	94.5	0	70-130		%Rec	1	5/27/2022 4:35:00 PM
Surr: Dibromofluoromethane	97.3	0	70-130		%Rec	1	5/27/2022 4:35:00 PM
Surr: Toluene-d8	97.2	0	70-130		%Rec	1	5/27/2022 4:35:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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#: **2205B19**

02-Jun-22

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: **R88329**	RunNo: **88329**
Prep Date:	Analysis Date: **5/27/2022**	SeqNo: **3132999** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	92.3	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Chlorobenzene	21	1.0	20.00	0	104	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	90.7	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	91.2	70	130			
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.4	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		94.0	70	130			
Surr: Dibromofluoromethane	9.2		10.00		91.7	70	130			
Surr: Toluene-d8	9.5		10.00		94.5	70	130			

Sample ID: **2205B19-001ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **CLC 18-220524**	Batch ID: **R88329**	RunNo: **88329**
Prep Date:	Analysis Date: **5/27/2022**	SeqNo: **3133585** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.3	70	130			
Toluene	21	1.0	20.00	0	104	70	130			
Chlorobenzene	22	1.0	20.00	0	109	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	91.6	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	93.3	70	130			
Surr: 1,2-Dichloroethane-d4	8.8		10.00		88.3	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.5	70	130			
Surr: Dibromofluoromethane	9.3		10.00		92.9	70	130			
Surr: Toluene-d8	9.5		10.00		94.5	70	130			

Sample ID: **2205B19-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **CLC 18-220524**	Batch ID: **R88329**	RunNo: **88329**
Prep Date:	Analysis Date: **5/27/2022**	SeqNo: **3133586** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	91.7	70	130	3.82	20	
Toluene	20	1.0	20.00	0	99.0	70	130	4.63	20	
Chlorobenzene	21	1.0	20.00	0	104	70	130	5.09	20	
1,1-Dichloroethene	18	1.0	20.00	0	88.2	70	130	3.68	20	
Trichloroethene (TCE)	18	1.0	20.00	0	89.9	70	130	3.77	20	
Surr: 1,2-Dichloroethane-d4	9.0		10.00		89.7	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.5		10.00		94.8	70	130	0	0	
Surr: Dibromofluoromethane	9.5		10.00		94.9	70	130	0	0	
Surr: Toluene-d8	9.5		10.00		94.8	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical 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#: **2205B19**
02-Jun-22

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: **R88329**	RunNo: **88329**
Prep Date:	Analysis Date: **5/27/2022**	SeqNo: **3133609** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical 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#: **2205B19**

02-Jun-22

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: **R88329**	RunNo: **88329**
Prep Date:	Analysis Date: **5/27/2022**	SeqNo: **3133609** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.1	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.3	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.6	70	130			
Surr: Toluene-d8	9.4		10.00		94.0	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		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: City of Las Cruces Work Order Number: 2205B19 RcptNo: 1

Received By: Juan Rojas 5/25/2022 9:10:00 AM

Completed By: Tracy Casarrubias 5/25/2022 11:19:48 AM

Reviewed By: jn 5/25/22

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: SGL 5/25/22

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	1.7	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: ☐ 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): 1.8-0.1=1.7 (°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. 2205B19
5/24/22	0807	Drinking Water	CLC 18-220524	3-40 ml VOAs	$HgCl_2$	001
	0814		CLC 29-220524	3-40 ml VOAs		002
	0817		CLC TS1-220524	3-40 ml VOAs		003
	0820		CLC C1-220524	2-40 ml VOAs		004
	0824		CLC C2 220524	2-40 ml VOAs		005
	0826		CLC C2-220524 (DUP)	2-40 ml VOAs		006
5/24/22	0827	Drinking Water	CLC ES1-220524	3-40 ml VOAs	$HgCl_2$	007

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		

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
5/24/22	1500	Yadira Reyna		FedEx	5/25/22	9:10
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Send results to:
Luis Guerra: lguerra@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: www.hallenvironmental.com

June 06, 2022

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.: 2205D02

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 3 sample(s) on 5/27/2022 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: AS1-220524
Project: Joint Superfund Project Monthly Analysi
Collection Date: 5/24/2022 8:31:00 AM
Lab ID: 2205D02-001 **Matrix:** AIR
Received Date: 5/27/2022 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
Toluene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
Ethylbenzene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
Naphthalene	ND	0.20		µg/L	1	6/1/2022 2:11:00 PM	R88380
1-Methylnaphthalene	ND	0.40		µg/L	1	6/1/2022 2:11:00 PM	R88380
2-Methylnaphthalene	ND	0.40		µg/L	1	6/1/2022 2:11:00 PM	R88380
Acetone	ND	1.0		µg/L	1	6/1/2022 2:11:00 PM	R88380
Bromobenzene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
Bromodichloromethane	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
Bromoform	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
Bromomethane	ND	0.20		µg/L	1	6/1/2022 2:11:00 PM	R88380
2-Butanone	ND	1.0		µg/L	1	6/1/2022 2:11:00 PM	R88380
Carbon disulfide	ND	1.0		µg/L	1	6/1/2022 2:11:00 PM	R88380
Carbon tetrachloride	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
Chlorobenzene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
Chloroethane	ND	0.20		µg/L	1	6/1/2022 2:11:00 PM	R88380
Chloroform	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
Chloromethane	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
2-Chlorotoluene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
4-Chlorotoluene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
cis-1,2-DCE	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	6/1/2022 2:11:00 PM	R88380
Dibromochloromethane	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
Dibromomethane	ND	0.20		µg/L	1	6/1/2022 2:11:00 PM	R88380
1,2-Dichlorobenzene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
1,3-Dichlorobenzene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
1,4-Dichlorobenzene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
Dichlorodifluoromethane	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
1,1-Dichloroethane	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
1,1-Dichloroethene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
1,2-Dichloropropane	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
1,3-Dichloropropane	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
2,2-Dichloropropane	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: AS1-220524
Project: Joint Superfund Project Monthly Analysi
Collection Date: 5/24/2022 8:31:00 AM
Lab ID: 2205D02-001 **Matrix:** AIR
Received Date: 5/27/2022 9:20:00 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	6/1/2022 2:11:00 PM	R88380
Hexachlorobutadiene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
2-Hexanone	ND	1.0		µg/L	1	6/1/2022 2:11:00 PM	R88380
Isopropylbenzene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
4-Isopropyltoluene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
4-Methyl-2-pentanone	ND	1.0		µg/L	1	6/1/2022 2:11:00 PM	R88380
Methylene chloride	ND	0.30		µg/L	1	6/1/2022 2:11:00 PM	R88380
n-Butylbenzene	ND	0.30		µg/L	1	6/1/2022 2:11:00 PM	R88380
n-Propylbenzene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
sec-Butylbenzene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
Styrene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
tert-Butylbenzene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
Tetrachloroethene (PCE)	0.15	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
trans-1,2-DCE	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
1,1,1-Trichloroethane	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
1,1,2-Trichloroethane	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
Trichloroethene (TCE)	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
Trichlorofluoromethane	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
1,2,3-Trichloropropane	ND	0.20		µg/L	1	6/1/2022 2:11:00 PM	R88380
Vinyl chloride	ND	0.10		µg/L	1	6/1/2022 2:11:00 PM	R88380
Xylenes, Total	ND	0.15		µg/L	1	6/1/2022 2:11:00 PM	R88380
Surr: Dibromofluoromethane	101	70-130		%Rec	1	6/1/2022 2:11:00 PM	R88380
Surr: 1,2-Dichloroethane-d4	94.0	70-130		%Rec	1	6/1/2022 2:11:00 PM	R88380
Surr: Toluene-d8	98.1	70-130		%Rec	1	6/1/2022 2:11:00 PM	R88380
Surr: 4-Bromofluorobenzene	98.8	70-130		%Rec	1	6/1/2022 2:11:00 PM	R88380

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: AS2-220524
Project: Joint Superfund Project Monthly Analysi
Collection Date: 5/24/2022 8:34:00 AM
Lab ID: 2205D02-002 **Matrix:** AIR
Received Date: 5/27/2022 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
Toluene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
Ethylbenzene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
Naphthalene	ND	0.20		µg/L	1	6/1/2022 2:57:00 PM	R88380
1-Methylnaphthalene	ND	0.40		µg/L	1	6/1/2022 2:57:00 PM	R88380
2-Methylnaphthalene	ND	0.40		µg/L	1	6/1/2022 2:57:00 PM	R88380
Acetone	ND	1.0		µg/L	1	6/1/2022 2:57:00 PM	R88380
Bromobenzene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
Bromodichloromethane	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
Bromoform	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
Bromomethane	ND	0.20		µg/L	1	6/1/2022 2:57:00 PM	R88380
2-Butanone	ND	1.0		µg/L	1	6/1/2022 2:57:00 PM	R88380
Carbon disulfide	ND	1.0		µg/L	1	6/1/2022 2:57:00 PM	R88380
Carbon tetrachloride	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
Chlorobenzene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
Chloroethane	ND	0.20		µg/L	1	6/1/2022 2:57:00 PM	R88380
Chloroform	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
Chloromethane	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
2-Chlorotoluene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
4-Chlorotoluene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
cis-1,2-DCE	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	6/1/2022 2:57:00 PM	R88380
Dibromochloromethane	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
Dibromomethane	ND	0.20		µg/L	1	6/1/2022 2:57:00 PM	R88380
1,2-Dichlorobenzene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
1,3-Dichlorobenzene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
1,4-Dichlorobenzene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
Dichlorodifluoromethane	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
1,1-Dichloroethane	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
1,1-Dichloroethene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
1,2-Dichloropropane	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
1,3-Dichloropropane	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
2,2-Dichloropropane	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: AS2-220524
Project: Joint Superfund Project Monthly Analysi
Collection Date: 5/24/2022 8:34:00 AM
Lab ID: 2205D02-002 **Matrix:** AIR
Received Date: 5/27/2022 9:20:00 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	6/1/2022 2:57:00 PM	R88380
Hexachlorobutadiene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
2-Hexanone	ND	1.0		µg/L	1	6/1/2022 2:57:00 PM	R88380
Isopropylbenzene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
4-Isopropyltoluene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
4-Methyl-2-pentanone	ND	1.0		µg/L	1	6/1/2022 2:57:00 PM	R88380
Methylene chloride	ND	0.30		µg/L	1	6/1/2022 2:57:00 PM	R88380
n-Butylbenzene	ND	0.30		µg/L	1	6/1/2022 2:57:00 PM	R88380
n-Propylbenzene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
sec-Butylbenzene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
Styrene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
tert-Butylbenzene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
Tetrachloroethene (PCE)	0.17	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
trans-1,2-DCE	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
1,1,1-Trichloroethane	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
1,1,2-Trichloroethane	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
Trichloroethene (TCE)	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
Trichlorofluoromethane	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
1,2,3-Trichloropropane	ND	0.20		µg/L	1	6/1/2022 2:57:00 PM	R88380
Vinyl chloride	ND	0.10		µg/L	1	6/1/2022 2:57:00 PM	R88380
Xylenes, Total	ND	0.15		µg/L	1	6/1/2022 2:57:00 PM	R88380
Surr: Dibromofluoromethane	103	70-130		%Rec	1	6/1/2022 2:57:00 PM	R88380
Surr: 1,2-Dichloroethane-d4	95.1	70-130		%Rec	1	6/1/2022 2:57:00 PM	R88380
Surr: Toluene-d8	98.2	70-130		%Rec	1	6/1/2022 2:57:00 PM	R88380
Surr: 4-Bromofluorobenzene	97.4	70-130		%Rec	1	6/1/2022 2:57:00 PM	R88380

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: AS2-220524 DUP
Project: Joint Superfund Project Monthly Analysi
Collection Date: 5/24/2022 8:34:00 AM
Lab ID: 2205D02-003 **Matrix:** AIR
Received Date: 5/27/2022 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
Toluene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
Ethylbenzene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
Naphthalene	ND	0.20		µg/L	1	6/1/2022 3:20:00 PM	R88380
1-Methylnaphthalene	ND	0.40		µg/L	1	6/1/2022 3:20:00 PM	R88380
2-Methylnaphthalene	ND	0.40		µg/L	1	6/1/2022 3:20:00 PM	R88380
Acetone	ND	1.0		µg/L	1	6/1/2022 3:20:00 PM	R88380
Bromobenzene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
Bromodichloromethane	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
Bromoform	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
Bromomethane	ND	0.20		µg/L	1	6/1/2022 3:20:00 PM	R88380
2-Butanone	ND	1.0		µg/L	1	6/1/2022 3:20:00 PM	R88380
Carbon disulfide	ND	1.0		µg/L	1	6/1/2022 3:20:00 PM	R88380
Carbon tetrachloride	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
Chlorobenzene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
Chloroethane	ND	0.20		µg/L	1	6/1/2022 3:20:00 PM	R88380
Chloroform	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
Chloromethane	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
2-Chlorotoluene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
4-Chlorotoluene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
cis-1,2-DCE	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	6/1/2022 3:20:00 PM	R88380
Dibromochloromethane	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
Dibromomethane	ND	0.20		µg/L	1	6/1/2022 3:20:00 PM	R88380
1,2-Dichlorobenzene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
1,3-Dichlorobenzene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
1,4-Dichlorobenzene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
Dichlorodifluoromethane	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
1,1-Dichloroethane	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
1,1-Dichloroethene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
1,2-Dichloropropane	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
1,3-Dichloropropane	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
2,2-Dichloropropane	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: AS2-220524 DUP
Project: Joint Superfund Project Monthly Analysi
Collection Date: 5/24/2022 8:34:00 AM
Lab ID: 2205D02-003 **Matrix:** AIR
Received Date: 5/27/2022 9:20:00 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	6/1/2022 3:20:00 PM	R88380
Hexachlorobutadiene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
2-Hexanone	ND	1.0		µg/L	1	6/1/2022 3:20:00 PM	R88380
Isopropylbenzene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
4-Isopropyltoluene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
4-Methyl-2-pentanone	ND	1.0		µg/L	1	6/1/2022 3:20:00 PM	R88380
Methylene chloride	ND	0.30		µg/L	1	6/1/2022 3:20:00 PM	R88380
n-Butylbenzene	ND	0.30		µg/L	1	6/1/2022 3:20:00 PM	R88380
n-Propylbenzene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
sec-Butylbenzene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
Styrene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
tert-Butylbenzene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
Tetrachloroethene (PCE)	0.16	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
trans-1,2-DCE	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
1,1,1-Trichloroethane	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
1,1,2-Trichloroethane	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
Trichloroethene (TCE)	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
Trichlorofluoromethane	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
1,2,3-Trichloropropane	ND	0.20		µg/L	1	6/1/2022 3:20:00 PM	R88380
Vinyl chloride	ND	0.10		µg/L	1	6/1/2022 3:20:00 PM	R88380
Xylenes, Total	ND	0.15		µg/L	1	6/1/2022 3:20:00 PM	R88380
Surr: Dibromofluoromethane	103	70-130		%Rec	1	6/1/2022 3:20:00 PM	R88380
Surr: 1,2-Dichloroethane-d4	95.4	70-130		%Rec	1	6/1/2022 3:20:00 PM	R88380
Surr: Toluene-d8	98.1	70-130		%Rec	1	6/1/2022 3:20:00 PM	R88380
Surr: 4-Bromofluorobenzene	97.4	70-130		%Rec	1	6/1/2022 3:20:00 PM	R88380

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

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

Sample Log-In Check List

Client Name: **City of Las Cruces** Work Order Number: **2205D02** RcptNo: 1

Received By: **Sean Livingston** **5/27/2022 9:20:00 AM** Sean Livingston

Completed By: **Desiree Dominguez** **5/27/2022 3:21:08 PM** DD

Reviewed By: DD 5.27.22

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: DD 5/27/22

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:

Samples received in dented box from Fed Ex. Samples we in good condition and intact. - DAD 5/27/22

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	NA	Not Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
Mailing Address: P.O. Box 20000
Las Cruces N.M. 88004
Phone #: 575-522-3609
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: Gordon Bunn
On Ice: ☐ Yes ☐ No
# of Coolers:
Cooler Temp (including CF): (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
5/24/22	0831	Air	AS1-220524	Tedlar Bag	N/A	2205102 COR1
1	0834	Air	AS2-220524	Tedlar Bag	N/A	- COR
5/24/22	0834	Air	AS2-220524-DUP	Tedlar Bag	N/A	- COR3

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
5/24/22	1500	Gordon Bunn	SGC	Fedex	5/27/22	9:45 am
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

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

Analysis Request

BTEX / MTBE / TMB's (8021)	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										

Remarks: Send results to:
Luis Guerra: lguerra@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: www.hallenvironmental.com

June 28, 2022

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.: 2206981

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 5 sample(s) on 6/17/2022 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 18-220616
Project: Joint Superfund Project Monthly Analysi **Collection Date:** 6/16/2022 8:12:00 AM
Lab ID: 2206981-001 **Matrix:** DRINKING W **Received Date:** 6/17/2022 9:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
Benzene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
Toluene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
Ethylbenzene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
Naphthalene	ND	2.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
1-Methylnaphthalene	ND	4.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
2-Methylnaphthalene	ND	4.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
Acetone	ND	10		µg/L	1	6/27/2022 8:22:44 PM	A89059
Bromobenzene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
Bromodichloromethane	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
Bromoform	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
Bromomethane	ND	3.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
2-Butanone	ND	10		µg/L	1	6/27/2022 8:22:44 PM	A89059
Carbon disulfide	ND	10		µg/L	1	6/27/2022 8:22:44 PM	A89059
Carbon Tetrachloride	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
Chlorobenzene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
Chloroethane	ND	2.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
Chloroform	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
Chloromethane	ND	3.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
2-Chlorotoluene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
4-Chlorotoluene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
cis-1,2-DCE	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
Dibromochloromethane	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
Dibromomethane	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
1,1-Dichloroethane	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
1,1-Dichloroethene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
1,2-Dichloropropane	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
1,3-Dichloropropane	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
2,2-Dichloropropane	ND	2.0		µg/L	1	6/27/2022 8:22:44 PM	A89059

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces **Client Sample ID:** CLC 18-220616
Project: Joint Superfund Project Monthly Analysi **Collection Date:** 6/16/2022 8:12:00 AM
Lab ID: 2206981-001 **Matrix:** DRINKING W **Received Date:** 6/17/2022 9:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
Hexachlorobutadiene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
2-Hexanone	ND	10		µg/L	1	6/27/2022 8:22:44 PM	A89059
Isopropylbenzene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
4-Isopropyltoluene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
4-Methyl-2-pentanone	ND	10		µg/L	1	6/27/2022 8:22:44 PM	A89059
Methylene Chloride	ND	3.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
n-Butylbenzene	ND	3.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
n-Propylbenzene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
sec-Butylbenzene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
Styrene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
tert-Butylbenzene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
Tetrachloroethene (PCE)	4.0	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
trans-1,2-DCE	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
Trichlorofluoromethane	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
Vinyl chloride	ND	1.0		µg/L	1	6/27/2022 8:22:44 PM	A89059
Xylenes, Total	ND	1.5		µg/L	1	6/27/2022 8:22:44 PM	A89059
Surr: 1,2-Dichloroethane-d4	94.3	70-130		%Rec	1	6/27/2022 8:22:44 PM	A89059
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	1	6/27/2022 8:22:44 PM	A89059
Surr: Dibromofluoromethane	88.5	70-130		%Rec	1	6/27/2022 8:22:44 PM	A89059
Surr: Toluene-d8	103	70-130		%Rec	1	6/27/2022 8:22:44 PM	A89059

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces **Client Sample ID:** CLC 27-220616
Project: Joint Superfund Project Monthly Analysi **Collection Date:** 6/16/2022 8:33:00 AM
Lab ID: 2206981-002 **Matrix:** DRINKING W **Received Date:** 6/17/2022 9:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
Benzene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
Toluene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
Ethylbenzene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
Naphthalene	ND	2.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
1-Methylnaphthalene	ND	4.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
2-Methylnaphthalene	ND	4.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
Acetone	ND	10		µg/L	1	6/27/2022 8:49:39 PM	A89059
Bromobenzene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
Bromodichloromethane	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
Bromoform	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
Bromomethane	ND	3.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
2-Butanone	ND	10		µg/L	1	6/27/2022 8:49:39 PM	A89059
Carbon disulfide	ND	10		µg/L	1	6/27/2022 8:49:39 PM	A89059
Carbon Tetrachloride	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
Chlorobenzene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
Chloroethane	ND	2.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
Chloroform	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
Chloromethane	ND	3.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
2-Chlorotoluene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
4-Chlorotoluene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
cis-1,2-DCE	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
Dibromochloromethane	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
Dibromomethane	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
1,1-Dichloroethane	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
1,1-Dichloroethene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
1,2-Dichloropropane	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
1,3-Dichloropropane	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
2,2-Dichloropropane	ND	2.0		µg/L	1	6/27/2022 8:49:39 PM	A89059

Refer to the QC Summary report and sample login checklist for flagged QC data 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
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces **Client Sample ID:** CLC 27-220616
Project: Joint Superfund Project Monthly Analysi **Collection Date:** 6/16/2022 8:33:00 AM
Lab ID: 2206981-002 **Matrix:** DRINKING W **Received Date:** 6/17/2022 9:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
Hexachlorobutadiene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
2-Hexanone	ND	10		µg/L	1	6/27/2022 8:49:39 PM	A89059
Isopropylbenzene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
4-Isopropyltoluene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
4-Methyl-2-pentanone	ND	10		µg/L	1	6/27/2022 8:49:39 PM	A89059
Methylene Chloride	ND	3.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
n-Butylbenzene	ND	3.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
n-Propylbenzene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
sec-Butylbenzene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
Styrene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
tert-Butylbenzene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
Tetrachloroethene (PCE)	14	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
trans-1,2-DCE	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
Trichlorofluoromethane	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
Vinyl chloride	ND	1.0		µg/L	1	6/27/2022 8:49:39 PM	A89059
Xylenes, Total	ND	1.5		µg/L	1	6/27/2022 8:49:39 PM	A89059
Surr: 1,2-Dichloroethane-d4	98.1	70-130		%Rec	1	6/27/2022 8:49:39 PM	A89059
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	6/27/2022 8:49:39 PM	A89059
Surr: Dibromofluoromethane	92.3	70-130		%Rec	1	6/27/2022 8:49:39 PM	A89059
Surr: Toluene-d8	101	70-130		%Rec	1	6/27/2022 8:49:39 PM	A89059

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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
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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 interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-220616
Project: Joint Superfund Project Monthly Analysi
Collection Date: 6/16/2022 8:18:00 AM
Lab ID: 2206981-003
Matrix: DRINKING W
Received Date: 6/17/2022 9:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
Benzene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
Toluene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
Ethylbenzene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
Naphthalene	ND	2.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
1-Methylnaphthalene	ND	4.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
2-Methylnaphthalene	ND	4.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
Acetone	ND	10		µg/L	1	6/27/2022 9:16:37 PM	A89059
Bromobenzene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
Bromodichloromethane	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
Bromoform	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
Bromomethane	ND	3.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
2-Butanone	ND	10		µg/L	1	6/27/2022 9:16:37 PM	A89059
Carbon disulfide	ND	10		µg/L	1	6/27/2022 9:16:37 PM	A89059
Carbon Tetrachloride	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
Chlorobenzene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
Chloroethane	ND	2.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
Chloroform	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
Chloromethane	ND	3.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
2-Chlorotoluene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
4-Chlorotoluene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
cis-1,2-DCE	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
Dibromochloromethane	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
Dibromomethane	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
1,1-Dichloroethane	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
1,1-Dichloroethene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
1,2-Dichloropropane	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
1,3-Dichloropropane	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
2,2-Dichloropropane	ND	2.0		µg/L	1	6/27/2022 9:16:37 PM	A89059

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC IS1-220616
Project: Joint Superfund Project Monthly Analysi
Collection Date: 6/16/2022 8:18:00 AM
Lab ID: 2206981-003
Matrix: DRINKING W
Received Date: 6/17/2022 9:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
Hexachlorobutadiene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
2-Hexanone	ND	10		µg/L	1	6/27/2022 9:16:37 PM	A89059
Isopropylbenzene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
4-Isopropyltoluene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
4-Methyl-2-pentanone	ND	10		µg/L	1	6/27/2022 9:16:37 PM	A89059
Methylene Chloride	ND	3.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
n-Butylbenzene	ND	3.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
n-Propylbenzene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
sec-Butylbenzene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
Styrene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
tert-Butylbenzene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
Tetrachloroethene (PCE)	11	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
trans-1,2-DCE	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
Trichlorofluoromethane	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
Vinyl chloride	ND	1.0		µg/L	1	6/27/2022 9:16:37 PM	A89059
Xylenes, Total	ND	1.5		µg/L	1	6/27/2022 9:16:37 PM	A89059
Surr: 1,2-Dichloroethane-d4	92.0	70-130		%Rec	1	6/27/2022 9:16:37 PM	A89059
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	6/27/2022 9:16:37 PM	A89059
Surr: Dibromofluoromethane	88.6	70-130		%Rec	1	6/27/2022 9:16:37 PM	A89059
Surr: Toluene-d8	107	70-130		%Rec	1	6/27/2022 9:16:37 PM	A89059

Refer to the QC Summary report and sample login checklist for flagged QC data 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
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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 ES1-220616
Project: Joint Superfund Project Monthly Analysi
Collection Date: 6/16/2022 8:21:00 AM
Lab ID: 2206981-004
Matrix: DRINKING W
Received Date: 6/17/2022 9:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
Benzene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
Toluene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
Ethylbenzene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
Naphthalene	ND	2.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
1-Methylnaphthalene	ND	4.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
2-Methylnaphthalene	ND	4.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
Acetone	ND	10		µg/L	1	6/27/2022 9:43:33 PM	A89059
Bromobenzene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
Bromodichloromethane	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
Bromoform	7.8	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
Bromomethane	ND	3.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
2-Butanone	ND	10		µg/L	1	6/27/2022 9:43:33 PM	A89059
Carbon disulfide	ND	10		µg/L	1	6/27/2022 9:43:33 PM	A89059
Carbon Tetrachloride	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
Chlorobenzene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
Chloroethane	ND	2.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
Chloroform	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
Chloromethane	ND	3.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
2-Chlorotoluene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
4-Chlorotoluene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
cis-1,2-DCE	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
Dibromochloromethane	2.3	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
Dibromomethane	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
1,1-Dichloroethane	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
1,1-Dichloroethene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
1,2-Dichloropropane	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
1,3-Dichloropropane	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
2,2-Dichloropropane	ND	2.0		µg/L	1	6/27/2022 9:43:33 PM	A89059

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC ES1-220616
Project: Joint Superfund Project Monthly Analysi
Collection Date: 6/16/2022 8:21:00 AM
Lab ID: 2206981-004
Matrix: DRINKING W
Received Date: 6/17/2022 9:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
Hexachlorobutadiene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
2-Hexanone	ND	10		µg/L	1	6/27/2022 9:43:33 PM	A89059
Isopropylbenzene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
4-Isopropyltoluene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
4-Methyl-2-pentanone	ND	10		µg/L	1	6/27/2022 9:43:33 PM	A89059
Methylene Chloride	ND	3.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
n-Butylbenzene	ND	3.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
n-Propylbenzene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
sec-Butylbenzene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
Styrene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
tert-Butylbenzene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
trans-1,2-DCE	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
Trichlorofluoromethane	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
Vinyl chloride	ND	1.0		µg/L	1	6/27/2022 9:43:33 PM	A89059
Xylenes, Total	ND	1.5		µg/L	1	6/27/2022 9:43:33 PM	A89059
Surr: 1,2-Dichloroethane-d4	75.7	70-130		%Rec	1	6/27/2022 9:43:33 PM	A89059
Surr: 4-Bromofluorobenzene	109	70-130		%Rec	1	6/27/2022 9:43:33 PM	A89059
Surr: Dibromofluoromethane	76.3	70-130		%Rec	1	6/27/2022 9:43:33 PM	A89059
Surr: Toluene-d8	98.2	70-130		%Rec	1	6/27/2022 9:43:33 PM	A89059

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC ES1-220616(DUP)
Project: Joint Superfund Project Monthly Analysi
Collection Date: 6/16/2022 8:22:00 AM
Lab ID: 2206981-005
Matrix: DRINKING W
Received Date: 6/17/2022 9:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
Benzene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
Toluene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
Ethylbenzene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
Naphthalene	ND	2.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
1-Methylnaphthalene	ND	4.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
2-Methylnaphthalene	ND	4.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
Acetone	ND	10		µg/L	1	6/27/2022 10:10:29 PM	A89059
Bromobenzene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
Bromodichloromethane	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
Bromoform	7.2	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
Bromomethane	ND	3.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
2-Butanone	ND	10		µg/L	1	6/27/2022 10:10:29 PM	A89059
Carbon disulfide	ND	10		µg/L	1	6/27/2022 10:10:29 PM	A89059
Carbon Tetrachloride	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
Chlorobenzene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
Chloroethane	ND	2.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
Chloroform	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
Chloromethane	ND	3.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
2-Chlorotoluene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
4-Chlorotoluene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
cis-1,2-DCE	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
Dibromochloromethane	2.8	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
Dibromomethane	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
1,1-Dichloroethane	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
1,1-Dichloroethene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
1,2-Dichloropropane	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
1,3-Dichloropropane	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
2,2-Dichloropropane	ND	2.0		µg/L	1	6/27/2022 10:10:29 PM	A89059

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC ES1-220616(DUP)
Project: Joint Superfund Project Monthly Analysi
Collection Date: 6/16/2022 8:22:00 AM
Lab ID: 2206981-005
Matrix: DRINKING W
Received Date: 6/17/2022 9:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
Hexachlorobutadiene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
2-Hexanone	ND	10		µg/L	1	6/27/2022 10:10:29 PM	A89059
Isopropylbenzene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
4-Isopropyltoluene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
4-Methyl-2-pentanone	ND	10		µg/L	1	6/27/2022 10:10:29 PM	A89059
Methylene Chloride	ND	3.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
n-Butylbenzene	ND	3.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
n-Propylbenzene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
sec-Butylbenzene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
Styrene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
tert-Butylbenzene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
trans-1,2-DCE	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
Trichlorofluoromethane	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
Vinyl chloride	ND	1.0		µg/L	1	6/27/2022 10:10:29 PM	A89059
Xylenes, Total	ND	1.5		µg/L	1	6/27/2022 10:10:29 PM	A89059
Surr: 1,2-Dichloroethane-d4	96.0	70-130		%Rec	1	6/27/2022 10:10:29 PM	A89059
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	6/27/2022 10:10:29 PM	A89059
Surr: Dibromofluoromethane	88.9	70-130		%Rec	1	6/27/2022 10:10:29 PM	A89059
Surr: Toluene-d8	104	70-130		%Rec	1	6/27/2022 10:10:29 PM	A89059

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2206981**

28-Jun-22

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: **A89059**	RunNo: **89059**
Prep Date:	Analysis Date: **6/27/2022**	SeqNo: **3163329** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	17	1.0	20.00	0	84.3	70	130			
Toluene	19	1.0	20.00	0	94.4	70	130			
Chlorobenzene	18	1.0	20.00	0	91.4	70	130			
1,1-Dichloroethene	16	1.0	20.00	0	78.6	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	78.5	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.3	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	8.7		10.00		86.9	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **A89059**	RunNo: **89059**
Prep Date:	Analysis Date: **6/27/2022**	SeqNo: **3163344** 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#: **2206981**

28-Jun-22

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: **A89059**	RunNo: **89059**
Prep Date:	Analysis Date: **6/27/2022**	SeqNo: **3163344** 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	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#: **2206981**

28-Jun-22

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: **A89059**	RunNo: **89059**
Prep Date:	Analysis Date: **6/27/2022**	SeqNo: **3163344** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.9		10.00		89.1	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		111	70	130			
Surr: Dibromofluoromethane	8.4		10.00		83.9	70	130			
Surr: Toluene-d8	11		10.00		105	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: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **City of Las Cruces** Work Order Number: **2206981** RcptNo: 1

Received By: **Cheyenne Cason** **6/17/2022 9:23:00 AM**

Completed By: **Desiree Dominguez** **6/17/2022 3:11:36 PM**

Reviewed By: JR 6/20/22

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: KPA 6.20.22

6.20.22

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	4.6	Good				

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)

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): 4.6 - 0 = 4.6 (°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. 2206981
6/16/22	0810	drinking water	CLC 18-220616	3-40ml vials	HgCl2	-001
	0833		CLC 17-220616			-002
	0818		CLC 151-220616			-003
	0821		CLC ES1-220616			-004
6/16/22	0822	drinking water	CLC ES1-220616(Dup)	3-40ml vials	HgCl2	-005

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		

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
6/16/22	1500			Fedex		
					6/17/22	0923
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Send Results to:
Luis Guerra: lguerra@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: www.hallenvironmental.com

August 05, 2022

Luis Guerra

City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3635
FAX: (575) 528-3513

RE: Joint Superfund Project Monthly Analysis OrderNo.: 2207F21

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 5 sample(s) on 7/29/2022 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 18-220728
Project: Joint Superfund Project Monthly Analysi
Collection Date: 7/28/2022 8:13:00 AM
Lab ID: 2207F21-001
Matrix: DRINKING W
Received Date: 7/29/2022 8:50:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **JR**
Benzene	ND	0.23	1.0		µg/L	1	8/1/2022 11:43:38 AM
Toluene	ND	0.20	1.0		µg/L	1	8/1/2022 11:43:38 AM
Ethylbenzene	ND	0.21	1.0		µg/L	1	8/1/2022 11:43:38 AM
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	8/1/2022 11:43:38 AM
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	8/1/2022 11:43:38 AM
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	8/1/2022 11:43:38 AM
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	8/1/2022 11:43:38 AM
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	8/1/2022 11:43:38 AM
Naphthalene	ND	0.50	2.0		µg/L	1	8/1/2022 11:43:38 AM
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	8/1/2022 11:43:38 AM
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	8/1/2022 11:43:38 AM
Acetone	ND	2.5	10		µg/L	1	8/1/2022 11:43:38 AM
Bromobenzene	ND	0.28	1.0		µg/L	1	8/1/2022 11:43:38 AM
Bromodichloromethane	ND	0.20	1.0		µg/L	1	8/1/2022 11:43:38 AM
Bromoform	ND	0.31	1.0		µg/L	1	8/1/2022 11:43:38 AM
Bromomethane	ND	0.85	3.0		µg/L	1	8/1/2022 11:43:38 AM
2-Butanone	ND	2.0	10		µg/L	1	8/1/2022 11:43:38 AM
Carbon disulfide	ND	0.59	10		µg/L	1	8/1/2022 11:43:38 AM
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	8/1/2022 11:43:38 AM
Chlorobenzene	ND	0.16	1.0		µg/L	1	8/1/2022 11:43:38 AM
Chloroethane	ND	0.38	2.0		µg/L	1	8/1/2022 11:43:38 AM
Chloroform	ND	0.13	1.0		µg/L	1	8/1/2022 11:43:38 AM
Chloromethane	ND	0.41	3.0		µg/L	1	8/1/2022 11:43:38 AM
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	8/1/2022 11:43:38 AM
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	8/1/2022 11:43:38 AM
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	8/1/2022 11:43:38 AM
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	8/1/2022 11:43:38 AM
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	8/1/2022 11:43:38 AM
Dibromochloromethane	ND	0.28	1.0		µg/L	1	8/1/2022 11:43:38 AM
Dibromomethane	ND	0.31	1.0		µg/L	1	8/1/2022 11:43:38 AM
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	8/1/2022 11:43:38 AM
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	8/1/2022 11:43:38 AM
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	8/1/2022 11:43:38 AM
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	8/1/2022 11:43:38 AM
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	8/1/2022 11:43:38 AM
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	8/1/2022 11:43:38 AM
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	8/1/2022 11:43:38 AM
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	8/1/2022 11:43:38 AM
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	8/1/2022 11:43:38 AM
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	8/1/2022 11:43:38 AM

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 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, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-220728
Project: Joint Superfund Project Monthly Analysi
Collection Date: 7/28/2022 8:13:00 AM
Lab ID: 2207F21-001
Matrix: DRINKING W
Received Date: 7/29/2022 8:50:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **JR**
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	8/1/2022 11:43:38 AM
2-Hexanone	ND	1.8	10		µg/L	1	8/1/2022 11:43:38 AM
Isopropylbenzene	ND	0.18	1.0		µg/L	1	8/1/2022 11:43:38 AM
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	8/1/2022 11:43:38 AM
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	8/1/2022 11:43:38 AM
Methylene Chloride	ND	0.50	3.0		µg/L	1	8/1/2022 11:43:38 AM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/1/2022 11:43:38 AM
n-Propylbenzene	ND	0.18	1.0		µg/L	1	8/1/2022 11:43:38 AM
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	8/1/2022 11:43:38 AM
Styrene	ND	0.14	1.0		µg/L	1	8/1/2022 11:43:38 AM
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	8/1/2022 11:43:38 AM
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	8/1/2022 11:43:38 AM
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	8/1/2022 11:43:38 AM
Tetrachloroethene (PCE)	4.1	0.36	1.0		µg/L	1	8/1/2022 11:43:38 AM
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	8/1/2022 11:43:38 AM
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	8/1/2022 11:43:38 AM
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	8/1/2022 11:43:38 AM
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	8/1/2022 11:43:38 AM
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	8/1/2022 11:43:38 AM
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	8/1/2022 11:43:38 AM
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	8/1/2022 11:43:38 AM
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	8/1/2022 11:43:38 AM
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	8/1/2022 11:43:38 AM
Vinyl chloride	ND	0.32	1.0		µg/L	1	8/1/2022 11:43:38 AM
Xylenes, Total	ND	0.37	1.5		µg/L	1	8/1/2022 11:43:38 AM
Surr: 1,2-Dichloroethane-d4	107	0	70-130		%Rec	1	8/1/2022 11:43:38 AM
Surr: 4-Bromofluorobenzene	106	0	70-130		%Rec	1	8/1/2022 11:43:38 AM
Surr: Dibromofluoromethane	119	0	70-130		%Rec	1	8/1/2022 11:43:38 AM
Surr: Toluene-d8	102	0	70-130		%Rec	1	8/1/2022 11:43:38 AM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: CLC 27-220728
Project: Joint Superfund Project Monthly Analysi
Collection Date: 7/28/2022 8:24:00 AM
Lab ID: 2207F21-002
Matrix: DRINKING W
Received Date: 7/29/2022 8:50:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **JR**
Benzene	ND	0.23	1.0		µg/L	1	8/1/2022 1:09:43 PM
Toluene	ND	0.20	1.0		µg/L	1	8/1/2022 1:09:43 PM
Ethylbenzene	ND	0.21	1.0		µg/L	1	8/1/2022 1:09:43 PM
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	8/1/2022 1:09:43 PM
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	8/1/2022 1:09:43 PM
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	8/1/2022 1:09:43 PM
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	8/1/2022 1:09:43 PM
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	8/1/2022 1:09:43 PM
Naphthalene	ND	0.50	2.0		µg/L	1	8/1/2022 1:09:43 PM
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	8/1/2022 1:09:43 PM
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	8/1/2022 1:09:43 PM
Acetone	ND	2.5	10		µg/L	1	8/1/2022 1:09:43 PM
Bromobenzene	ND	0.28	1.0		µg/L	1	8/1/2022 1:09:43 PM
Bromodichloromethane	ND	0.20	1.0		µg/L	1	8/1/2022 1:09:43 PM
Bromoform	ND	0.31	1.0		µg/L	1	8/1/2022 1:09:43 PM
Bromomethane	ND	0.85	3.0		µg/L	1	8/1/2022 1:09:43 PM
2-Butanone	ND	2.0	10		µg/L	1	8/1/2022 1:09:43 PM
Carbon disulfide	ND	0.59	10		µg/L	1	8/1/2022 1:09:43 PM
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	8/1/2022 1:09:43 PM
Chlorobenzene	ND	0.16	1.0		µg/L	1	8/1/2022 1:09:43 PM
Chloroethane	ND	0.38	2.0		µg/L	1	8/1/2022 1:09:43 PM
Chloroform	ND	0.13	1.0		µg/L	1	8/1/2022 1:09:43 PM
Chloromethane	ND	0.41	3.0		µg/L	1	8/1/2022 1:09:43 PM
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	8/1/2022 1:09:43 PM
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	8/1/2022 1:09:43 PM
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	8/1/2022 1:09:43 PM
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	8/1/2022 1:09:43 PM
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	8/1/2022 1:09:43 PM
Dibromochloromethane	ND	0.28	1.0		µg/L	1	8/1/2022 1:09:43 PM
Dibromomethane	ND	0.31	1.0		µg/L	1	8/1/2022 1:09:43 PM
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	8/1/2022 1:09:43 PM
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	8/1/2022 1:09:43 PM
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	8/1/2022 1:09:43 PM
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	8/1/2022 1:09:43 PM
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	8/1/2022 1:09:43 PM
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	8/1/2022 1:09:43 PM
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	8/1/2022 1:09:43 PM
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	8/1/2022 1:09:43 PM
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	8/1/2022 1:09:43 PM
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	8/1/2022 1:09:43 PM

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 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, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-220728
Project: Joint Superfund Project Monthly Analysi
Collection Date: 7/28/2022 8:24:00 AM
Lab ID: 2207F21-002
Matrix: DRINKING W
Received Date: 7/29/2022 8:50:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **JR**
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	8/1/2022 1:09:43 PM
2-Hexanone	ND	1.8	10		µg/L	1	8/1/2022 1:09:43 PM
Isopropylbenzene	ND	0.18	1.0		µg/L	1	8/1/2022 1:09:43 PM
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	8/1/2022 1:09:43 PM
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	8/1/2022 1:09:43 PM
Methylene Chloride	ND	0.50	3.0		µg/L	1	8/1/2022 1:09:43 PM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/1/2022 1:09:43 PM
n-Propylbenzene	ND	0.18	1.0		µg/L	1	8/1/2022 1:09:43 PM
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	8/1/2022 1:09:43 PM
Styrene	ND	0.14	1.0		µg/L	1	8/1/2022 1:09:43 PM
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	8/1/2022 1:09:43 PM
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	8/1/2022 1:09:43 PM
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	8/1/2022 1:09:43 PM
Tetrachloroethene (PCE)	15	0.36	1.0		µg/L	1	8/1/2022 1:09:43 PM
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	8/1/2022 1:09:43 PM
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	8/1/2022 1:09:43 PM
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	8/1/2022 1:09:43 PM
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	8/1/2022 1:09:43 PM
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	8/1/2022 1:09:43 PM
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	8/1/2022 1:09:43 PM
Trichloroethene (TCE)	0.31	0.20	1.0	J	µg/L	1	8/1/2022 1:09:43 PM
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	8/1/2022 1:09:43 PM
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	8/1/2022 1:09:43 PM
Vinyl chloride	ND	0.32	1.0		µg/L	1	8/1/2022 1:09:43 PM
Xylenes, Total	ND	0.37	1.5		µg/L	1	8/1/2022 1:09:43 PM
Surr: 1,2-Dichloroethane-d4	110	0	70-130		%Rec	1	8/1/2022 1:09:43 PM
Surr: 4-Bromofluorobenzene	107	0	70-130		%Rec	1	8/1/2022 1:09:43 PM
Surr: Dibromofluoromethane	122	0	70-130		%Rec	1	8/1/2022 1:09:43 PM
Surr: Toluene-d8	99.3	0	70-130		%Rec	1	8/1/2022 1:09:43 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: CLC IS1-220728
Project: Joint Superfund Project Monthly Analysi
Collection Date: 7/28/2022 8:42:00 AM
Lab ID: 2207F21-003
Matrix: DRINKING W
Received Date: 7/29/2022 8:50:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **JR**
Benzene	ND	0.23	1.0		µg/L	1	8/1/2022 1:38:31 PM
Toluene	ND	0.20	1.0		µg/L	1	8/1/2022 1:38:31 PM
Ethylbenzene	ND	0.21	1.0		µg/L	1	8/1/2022 1:38:31 PM
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	8/1/2022 1:38:31 PM
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	8/1/2022 1:38:31 PM
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	8/1/2022 1:38:31 PM
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	8/1/2022 1:38:31 PM
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	8/1/2022 1:38:31 PM
Naphthalene	ND	0.50	2.0		µg/L	1	8/1/2022 1:38:31 PM
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	8/1/2022 1:38:31 PM
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	8/1/2022 1:38:31 PM
Acetone	ND	2.5	10		µg/L	1	8/1/2022 1:38:31 PM
Bromobenzene	ND	0.28	1.0		µg/L	1	8/1/2022 1:38:31 PM
Bromodichloromethane	ND	0.20	1.0		µg/L	1	8/1/2022 1:38:31 PM
Bromoform	ND	0.31	1.0		µg/L	1	8/1/2022 1:38:31 PM
Bromomethane	ND	0.85	3.0		µg/L	1	8/1/2022 1:38:31 PM
2-Butanone	ND	2.0	10		µg/L	1	8/1/2022 1:38:31 PM
Carbon disulfide	ND	0.59	10		µg/L	1	8/1/2022 1:38:31 PM
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	8/1/2022 1:38:31 PM
Chlorobenzene	ND	0.16	1.0		µg/L	1	8/1/2022 1:38:31 PM
Chloroethane	ND	0.38	2.0		µg/L	1	8/1/2022 1:38:31 PM
Chloroform	ND	0.13	1.0		µg/L	1	8/1/2022 1:38:31 PM
Chloromethane	ND	0.41	3.0		µg/L	1	8/1/2022 1:38:31 PM
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	8/1/2022 1:38:31 PM
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	8/1/2022 1:38:31 PM
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	8/1/2022 1:38:31 PM
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	8/1/2022 1:38:31 PM
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	8/1/2022 1:38:31 PM
Dibromochloromethane	ND	0.28	1.0		µg/L	1	8/1/2022 1:38:31 PM
Dibromomethane	ND	0.31	1.0		µg/L	1	8/1/2022 1:38:31 PM
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	8/1/2022 1:38:31 PM
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	8/1/2022 1:38:31 PM
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	8/1/2022 1:38:31 PM
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	8/1/2022 1:38:31 PM
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	8/1/2022 1:38:31 PM
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	8/1/2022 1:38:31 PM
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	8/1/2022 1:38:31 PM
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	8/1/2022 1:38:31 PM
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	8/1/2022 1:38:31 PM
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	8/1/2022 1:38:31 PM

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 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, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-220728
Project: Joint Superfund Project Monthly Analysi
Collection Date: 7/28/2022 8:42:00 AM
Lab ID: 2207F21-003
Matrix: DRINKING W
Received Date: 7/29/2022 8:50:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **JR**
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	8/1/2022 1:38:31 PM
2-Hexanone	ND	1.8	10		µg/L	1	8/1/2022 1:38:31 PM
Isopropylbenzene	ND	0.18	1.0		µg/L	1	8/1/2022 1:38:31 PM
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	8/1/2022 1:38:31 PM
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	8/1/2022 1:38:31 PM
Methylene Chloride	ND	0.50	3.0		µg/L	1	8/1/2022 1:38:31 PM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/1/2022 1:38:31 PM
n-Propylbenzene	ND	0.18	1.0		µg/L	1	8/1/2022 1:38:31 PM
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	8/1/2022 1:38:31 PM
Styrene	ND	0.14	1.0		µg/L	1	8/1/2022 1:38:31 PM
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	8/1/2022 1:38:31 PM
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	8/1/2022 1:38:31 PM
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	8/1/2022 1:38:31 PM
Tetrachloroethene (PCE)	11	0.36	1.0		µg/L	1	8/1/2022 1:38:31 PM
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	8/1/2022 1:38:31 PM
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	8/1/2022 1:38:31 PM
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	8/1/2022 1:38:31 PM
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	8/1/2022 1:38:31 PM
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	8/1/2022 1:38:31 PM
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	8/1/2022 1:38:31 PM
Trichloroethene (TCE)	0.30	0.20	1.0	J	µg/L	1	8/1/2022 1:38:31 PM
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	8/1/2022 1:38:31 PM
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	8/1/2022 1:38:31 PM
Vinyl chloride	ND	0.32	1.0		µg/L	1	8/1/2022 1:38:31 PM
Xylenes, Total	ND	0.37	1.5		µg/L	1	8/1/2022 1:38:31 PM
Surr: 1,2-Dichloroethane-d4	111	0	70-130		%Rec	1	8/1/2022 1:38:31 PM
Surr: 4-Bromofluorobenzene	105	0	70-130		%Rec	1	8/1/2022 1:38:31 PM
Surr: Dibromofluoromethane	125	0	70-130		%Rec	1	8/1/2022 1:38:31 PM
Surr: Toluene-d8	96.4	0	70-130		%Rec	1	8/1/2022 1:38:31 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: CLC IS1-220728 Dup
Project: Joint Superfund Project Monthly Analysi
Collection Date: 7/28/2022 8:43:00 AM
Lab ID: 2207F21-004
Matrix: DRINKING W
Received Date: 7/29/2022 8:50:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **JR**
Benzene	ND	0.23	1.0		µg/L	1	8/1/2022 2:07:18 PM
Toluene	ND	0.20	1.0		µg/L	1	8/1/2022 2:07:18 PM
Ethylbenzene	ND	0.21	1.0		µg/L	1	8/1/2022 2:07:18 PM
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	8/1/2022 2:07:18 PM
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	8/1/2022 2:07:18 PM
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	8/1/2022 2:07:18 PM
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	8/1/2022 2:07:18 PM
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	8/1/2022 2:07:18 PM
Naphthalene	ND	0.50	2.0		µg/L	1	8/1/2022 2:07:18 PM
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	8/1/2022 2:07:18 PM
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	8/1/2022 2:07:18 PM
Acetone	ND	2.5	10		µg/L	1	8/1/2022 2:07:18 PM
Bromobenzene	ND	0.28	1.0		µg/L	1	8/1/2022 2:07:18 PM
Bromodichloromethane	ND	0.20	1.0		µg/L	1	8/1/2022 2:07:18 PM
Bromoform	ND	0.31	1.0		µg/L	1	8/1/2022 2:07:18 PM
Bromomethane	ND	0.85	3.0		µg/L	1	8/1/2022 2:07:18 PM
2-Butanone	ND	2.0	10		µg/L	1	8/1/2022 2:07:18 PM
Carbon disulfide	ND	0.59	10		µg/L	1	8/1/2022 2:07:18 PM
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	8/1/2022 2:07:18 PM
Chlorobenzene	ND	0.16	1.0		µg/L	1	8/1/2022 2:07:18 PM
Chloroethane	ND	0.38	2.0		µg/L	1	8/1/2022 2:07:18 PM
Chloroform	ND	0.13	1.0		µg/L	1	8/1/2022 2:07:18 PM
Chloromethane	ND	0.41	3.0		µg/L	1	8/1/2022 2:07:18 PM
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	8/1/2022 2:07:18 PM
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	8/1/2022 2:07:18 PM
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	8/1/2022 2:07:18 PM
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	8/1/2022 2:07:18 PM
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	8/1/2022 2:07:18 PM
Dibromochloromethane	ND	0.28	1.0		µg/L	1	8/1/2022 2:07:18 PM
Dibromomethane	ND	0.31	1.0		µg/L	1	8/1/2022 2:07:18 PM
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	8/1/2022 2:07:18 PM
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	8/1/2022 2:07:18 PM
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	8/1/2022 2:07:18 PM
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	8/1/2022 2:07:18 PM
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	8/1/2022 2:07:18 PM
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	8/1/2022 2:07:18 PM
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	8/1/2022 2:07:18 PM
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	8/1/2022 2:07:18 PM
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	8/1/2022 2:07:18 PM
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	8/1/2022 2:07:18 PM

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 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, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-220728 Dup
Project: Joint Superfund Project Monthly Analysi
Collection Date: 7/28/2022 8:43:00 AM
Lab ID: 2207F21-004
Matrix: DRINKING W
Received Date: 7/29/2022 8:50:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **JR**
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	8/1/2022 2:07:18 PM
2-Hexanone	ND	1.8	10		µg/L	1	8/1/2022 2:07:18 PM
Isopropylbenzene	ND	0.18	1.0		µg/L	1	8/1/2022 2:07:18 PM
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	8/1/2022 2:07:18 PM
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	8/1/2022 2:07:18 PM
Methylene Chloride	ND	0.50	3.0		µg/L	1	8/1/2022 2:07:18 PM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/1/2022 2:07:18 PM
n-Propylbenzene	ND	0.18	1.0		µg/L	1	8/1/2022 2:07:18 PM
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	8/1/2022 2:07:18 PM
Styrene	ND	0.14	1.0		µg/L	1	8/1/2022 2:07:18 PM
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	8/1/2022 2:07:18 PM
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	8/1/2022 2:07:18 PM
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	8/1/2022 2:07:18 PM
Tetrachloroethene (PCE)	11	0.36	1.0		µg/L	1	8/1/2022 2:07:18 PM
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	8/1/2022 2:07:18 PM
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	8/1/2022 2:07:18 PM
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	8/1/2022 2:07:18 PM
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	8/1/2022 2:07:18 PM
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	8/1/2022 2:07:18 PM
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	8/1/2022 2:07:18 PM
Trichloroethene (TCE)	0.32	0.20	1.0	J	µg/L	1	8/1/2022 2:07:18 PM
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	8/1/2022 2:07:18 PM
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	8/1/2022 2:07:18 PM
Vinyl chloride	ND	0.32	1.0		µg/L	1	8/1/2022 2:07:18 PM
Xylenes, Total	ND	0.37	1.5		µg/L	1	8/1/2022 2:07:18 PM
Surr: 1,2-Dichloroethane-d4	114	0	70-130		%Rec	1	8/1/2022 2:07:18 PM
Surr: 4-Bromofluorobenzene	108	0	70-130		%Rec	1	8/1/2022 2:07:18 PM
Surr: Dibromofluoromethane	124	0	70-130		%Rec	1	8/1/2022 2:07:18 PM
Surr: Toluene-d8	97.1	0	70-130		%Rec	1	8/1/2022 2:07:18 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: CLC ES1-220728
Project: Joint Superfund Project Monthly Analysi
Collection Date: 7/28/2022 8:46:00 AM
Lab ID: 2207F21-005
Matrix: DRINKING W
Received Date: 7/29/2022 8:50:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **JR**
Benzene	ND	0.23	1.0		µg/L	1	8/1/2022 2:36:10 PM
Toluene	ND	0.20	1.0		µg/L	1	8/1/2022 2:36:10 PM
Ethylbenzene	ND	0.21	1.0		µg/L	1	8/1/2022 2:36:10 PM
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	8/1/2022 2:36:10 PM
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	8/1/2022 2:36:10 PM
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	8/1/2022 2:36:10 PM
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	8/1/2022 2:36:10 PM
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	8/1/2022 2:36:10 PM
Naphthalene	ND	0.50	2.0		µg/L	1	8/1/2022 2:36:10 PM
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	8/1/2022 2:36:10 PM
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	8/1/2022 2:36:10 PM
Acetone	ND	2.5	10		µg/L	1	8/1/2022 2:36:10 PM
Bromobenzene	ND	0.28	1.0		µg/L	1	8/1/2022 2:36:10 PM
Bromodichloromethane	1.3	0.20	1.0		µg/L	1	8/1/2022 2:36:10 PM
Bromoform	4.4	0.31	1.0		µg/L	1	8/1/2022 2:36:10 PM
Bromomethane	ND	0.85	3.0		µg/L	1	8/1/2022 2:36:10 PM
2-Butanone	ND	2.0	10		µg/L	1	8/1/2022 2:36:10 PM
Carbon disulfide	ND	0.59	10		µg/L	1	8/1/2022 2:36:10 PM
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	8/1/2022 2:36:10 PM
Chlorobenzene	ND	0.16	1.0		µg/L	1	8/1/2022 2:36:10 PM
Chloroethane	ND	0.38	2.0		µg/L	1	8/1/2022 2:36:10 PM
Chloroform	ND	0.13	1.0		µg/L	1	8/1/2022 2:36:10 PM
Chloromethane	ND	0.41	3.0		µg/L	1	8/1/2022 2:36:10 PM
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	8/1/2022 2:36:10 PM
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	8/1/2022 2:36:10 PM
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	8/1/2022 2:36:10 PM
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	8/1/2022 2:36:10 PM
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	8/1/2022 2:36:10 PM
Dibromochloromethane	3.7	0.28	1.0		µg/L	1	8/1/2022 2:36:10 PM
Dibromomethane	ND	0.31	1.0		µg/L	1	8/1/2022 2:36:10 PM
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	8/1/2022 2:36:10 PM
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	8/1/2022 2:36:10 PM
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	8/1/2022 2:36:10 PM
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	8/1/2022 2:36:10 PM
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	8/1/2022 2:36:10 PM
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	8/1/2022 2:36:10 PM
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	8/1/2022 2:36:10 PM
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	8/1/2022 2:36:10 PM
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	8/1/2022 2:36:10 PM
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	8/1/2022 2:36:10 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: CLC ES1-220728
Project: Joint Superfund Project Monthly Analysi
Collection Date: 7/28/2022 8:46:00 AM
Lab ID: 2207F21-005
Matrix: DRINKING W
Received Date: 7/29/2022 8:50:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **JR**
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	8/1/2022 2:36:10 PM
2-Hexanone	ND	1.8	10		µg/L	1	8/1/2022 2:36:10 PM
Isopropylbenzene	ND	0.18	1.0		µg/L	1	8/1/2022 2:36:10 PM
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	8/1/2022 2:36:10 PM
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	8/1/2022 2:36:10 PM
Methylene Chloride	ND	0.50	3.0		µg/L	1	8/1/2022 2:36:10 PM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	8/1/2022 2:36:10 PM
n-Propylbenzene	ND	0.18	1.0		µg/L	1	8/1/2022 2:36:10 PM
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	8/1/2022 2:36:10 PM
Styrene	ND	0.14	1.0		µg/L	1	8/1/2022 2:36:10 PM
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	8/1/2022 2:36:10 PM
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	8/1/2022 2:36:10 PM
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	8/1/2022 2:36:10 PM
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	8/1/2022 2:36:10 PM
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	8/1/2022 2:36:10 PM
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	8/1/2022 2:36:10 PM
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	8/1/2022 2:36:10 PM
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	8/1/2022 2:36:10 PM
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	8/1/2022 2:36:10 PM
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	8/1/2022 2:36:10 PM
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	8/1/2022 2:36:10 PM
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	8/1/2022 2:36:10 PM
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	8/1/2022 2:36:10 PM
Vinyl chloride	ND	0.32	1.0		µg/L	1	8/1/2022 2:36:10 PM
Xylenes, Total	ND	0.37	1.5		µg/L	1	8/1/2022 2:36:10 PM
Surr: 1,2-Dichloroethane-d4	109	0	70-130		%Rec	1	8/1/2022 2:36:10 PM
Surr: 4-Bromofluorobenzene	107	0	70-130		%Rec	1	8/1/2022 2:36:10 PM
Surr: Dibromofluoromethane	124	0	70-130		%Rec	1	8/1/2022 2:36:10 PM
Surr: Toluene-d8	97.5	0	70-130		%Rec	1	8/1/2022 2:36:10 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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#: **2207F21**

05-Aug-22

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: **R89937**	RunNo: **89937**
Prep Date:	Analysis Date: **8/1/2022**	SeqNo: **3203994** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	20	1.0	20.00	0	98.6	70	130			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	93.7	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	100	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		99.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	9.9		10.00		98.6	70	130			

Sample ID: **2207f21-001ams**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **CLC 18-220728**	Batch ID: **R89937**	RunNo: **89937**
Prep Date:	Analysis Date: **8/1/2022**	SeqNo: **3204001** 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			
Toluene	20	1.0	20.00	0	98.9	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	97.1	70	130			
Trichloroethene (TCE)	22	1.0	20.00	0	108	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	12		10.00		121	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID: **2207f21-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **CLC 18-220728**	Batch ID: **R89937**	RunNo: **89937**
Prep Date:	Analysis Date: **8/1/2022**	SeqNo: **3204003** 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	4.14	20	
Toluene	19	1.0	20.00	0	95.5	70	130	3.47	20	
Chlorobenzene	19	1.0	20.00	0	96.9	70	130	5.16	20	
1,1-Dichloroethene	18	1.0	20.00	0	92.5	70	130	4.93	20	
Trichloroethene (TCE)	21	1.0	20.00	0	104	70	130	3.35	20	
Surr: 1,2-Dichloroethane-d4	11		10.00		108	70	130	0	0	
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130	0	0	
Surr: Dibromofluoromethane	12		10.00		123	70	130	0	0	
Surr: Toluene-d8	10		10.00		100	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical 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#: **2207F21**

05-Aug-22

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: **R89937**	RunNo: **89937**
Prep Date:	Analysis Date: **8/1/2022**	SeqNo: **3204047** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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#: **2207F21**

05-Aug-22

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: **R89937**	RunNo: **89937**
Prep Date:	Analysis Date: **8/1/2022**	SeqNo: **3204047** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	11		10.00		114	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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **City of Las Cruces** Work Order Number: **2207F21** RcptNo: **1**

Received By: **Juan Rojas** **7/29/2022 8:50:00 AM**

Completed By: **Cheyenne Cason** **7/29/2022 9:34:51 AM**

Reviewed By: JR 7/29/22

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: KM 7-29-22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.1	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: ☐ 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 Byrne
On Ice: ☑ Yes ☐ No
# of Coolers: 1
Cooler Temp (including CF): 3.1-0=3.1 (°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. 2207F21	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)
7/28/22	0813	Drinking water	CLC 18-220728	3-40ml Vials	$HgCl_2$	001								X		
	0824		CLC 27-220728			002								X		
	0842		CLC IS1-220728			003								X		
	0843		CLC IS1-220728 DUP			004								X		
7/28/22	0846	Drinking water	CLC ES1-220728	3-40ml Vials	$HgCl_2$	005								X		

Date	Time	Relinquished by	Received by	Via	Date	Time
7/28/22	1100	Yadira Byrne		FedEx	7/29/22	8:50
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Send Results to: Luis Guerra lguerra@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: www.hallenvironmental.com

September 08, 2022

Luis Guerra

City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3635
FAX: (575) 528-3513

RE: Joint Superfund Project Monthly Analysis OrderNo.: 2208I20

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 8/31/2022 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- 220830
Project: Joint Superfund Project Monthly Analysi
Collection Date: 8/30/2022 8:05:00 AM
Lab ID: 2208I20-001
Matrix: DRINKING W
Received Date: 8/31/2022 9:25:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Benzene	ND	0.23	1.0		µg/L	1	9/2/2022 4:49:00 PM
Toluene	ND	0.20	1.0		µg/L	1	9/2/2022 4:49:00 PM
Ethylbenzene	ND	0.21	1.0		µg/L	1	9/2/2022 4:49:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	9/2/2022 4:49:00 PM
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/2/2022 4:49:00 PM
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	9/2/2022 4:49:00 PM
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	9/2/2022 4:49:00 PM
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	9/2/2022 4:49:00 PM
Naphthalene	ND	0.50	2.0		µg/L	1	9/2/2022 4:49:00 PM
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	9/2/2022 4:49:00 PM
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	9/2/2022 4:49:00 PM
Acetone	ND	2.5	10		µg/L	1	9/2/2022 4:49:00 PM
Bromobenzene	ND	0.28	1.0		µg/L	1	9/2/2022 4:49:00 PM
Bromodichloromethane	ND	0.20	1.0		µg/L	1	9/2/2022 4:49:00 PM
Bromoform	ND	0.31	1.0		µg/L	1	9/2/2022 4:49:00 PM
Bromomethane	ND	0.85	3.0		µg/L	1	9/2/2022 4:49:00 PM
2-Butanone	ND	2.0	10		µg/L	1	9/2/2022 4:49:00 PM
Carbon disulfide	ND	0.59	10		µg/L	1	9/2/2022 4:49:00 PM
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	9/2/2022 4:49:00 PM
Chlorobenzene	ND	0.16	1.0		µg/L	1	9/2/2022 4:49:00 PM
Chloroethane	ND	0.38	2.0		µg/L	1	9/2/2022 4:49:00 PM
Chloroform	ND	0.13	1.0		µg/L	1	9/2/2022 4:49:00 PM
Chloromethane	ND	0.41	3.0		µg/L	1	9/2/2022 4:49:00 PM
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/2/2022 4:49:00 PM
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	9/2/2022 4:49:00 PM
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	9/2/2022 4:49:00 PM
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	9/2/2022 4:49:00 PM
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	9/2/2022 4:49:00 PM
Dibromochloromethane	ND	0.28	1.0		µg/L	1	9/2/2022 4:49:00 PM
Dibromomethane	ND	0.31	1.0		µg/L	1	9/2/2022 4:49:00 PM
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	9/2/2022 4:49:00 PM
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	9/2/2022 4:49:00 PM
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	9/2/2022 4:49:00 PM
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	9/2/2022 4:49:00 PM
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	9/2/2022 4:49:00 PM
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	9/2/2022 4:49:00 PM
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	9/2/2022 4:49:00 PM
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	9/2/2022 4:49:00 PM
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	9/2/2022 4:49:00 PM
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	9/2/2022 4:49:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
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, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18- 220830
Project: Joint Superfund Project Monthly Analysi
Collection Date: 8/30/2022 8:05:00 AM
Lab ID: 2208I20-001
Matrix: DRINKING W
Received Date: 8/31/2022 9:25:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	9/2/2022 4:49:00 PM
2-Hexanone	ND	1.8	10		µg/L	1	9/2/2022 4:49:00 PM
Isopropylbenzene	ND	0.18	1.0		µg/L	1	9/2/2022 4:49:00 PM
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	9/2/2022 4:49:00 PM
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	9/2/2022 4:49:00 PM
Methylene Chloride	ND	0.50	3.0		µg/L	1	9/2/2022 4:49:00 PM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/2/2022 4:49:00 PM
n-Propylbenzene	ND	0.18	1.0		µg/L	1	9/2/2022 4:49:00 PM
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	9/2/2022 4:49:00 PM
Styrene	ND	0.14	1.0		µg/L	1	9/2/2022 4:49:00 PM
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	9/2/2022 4:49:00 PM
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	9/2/2022 4:49:00 PM
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	9/2/2022 4:49:00 PM
Tetrachloroethene (PCE)	3.9	0.36	1.0		µg/L	1	9/2/2022 4:49:00 PM
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	9/2/2022 4:49:00 PM
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	9/2/2022 4:49:00 PM
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	9/2/2022 4:49:00 PM
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	9/2/2022 4:49:00 PM
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	9/2/2022 4:49:00 PM
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	9/2/2022 4:49:00 PM
Trichloroethene (TCE)	0.26	0.20	1.0	J	µg/L	1	9/2/2022 4:49:00 PM
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	9/2/2022 4:49:00 PM
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	9/2/2022 4:49:00 PM
Vinyl chloride	ND	0.32	1.0		µg/L	1	9/2/2022 4:49:00 PM
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/2/2022 4:49:00 PM
Surr: 1,2-Dichloroethane-d4	109	0	70-130		%Rec	1	9/2/2022 4:49:00 PM
Surr: 4-Bromofluorobenzene	91.7	0	70-130		%Rec	1	9/2/2022 4:49:00 PM
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	9/2/2022 4:49:00 PM
Surr: Toluene-d8	92.8	0	70-130		%Rec	1	9/2/2022 4:49:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: CLC 27- 220830
Project: Joint Superfund Project Monthly Analysi
Collection Date: 8/30/2022 8:50:00 AM
Lab ID: 2208I20-002
Matrix: DRINKING W
Received Date: 8/31/2022 9:25:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Benzene	ND	0.23	1.0		µg/L	1	9/2/2022 5:13:00 PM
Toluene	ND	0.20	1.0		µg/L	1	9/2/2022 5:13:00 PM
Ethylbenzene	ND	0.21	1.0		µg/L	1	9/2/2022 5:13:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	9/2/2022 5:13:00 PM
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/2/2022 5:13:00 PM
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	9/2/2022 5:13:00 PM
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	9/2/2022 5:13:00 PM
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	9/2/2022 5:13:00 PM
Naphthalene	ND	0.50	2.0		µg/L	1	9/2/2022 5:13:00 PM
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	9/2/2022 5:13:00 PM
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	9/2/2022 5:13:00 PM
Acetone	ND	2.5	10		µg/L	1	9/2/2022 5:13:00 PM
Bromobenzene	ND	0.28	1.0		µg/L	1	9/2/2022 5:13:00 PM
Bromodichloromethane	ND	0.20	1.0		µg/L	1	9/2/2022 5:13:00 PM
Bromoform	ND	0.31	1.0		µg/L	1	9/2/2022 5:13:00 PM
Bromomethane	ND	0.85	3.0		µg/L	1	9/2/2022 5:13:00 PM
2-Butanone	ND	2.0	10		µg/L	1	9/2/2022 5:13:00 PM
Carbon disulfide	ND	0.59	10		µg/L	1	9/2/2022 5:13:00 PM
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	9/2/2022 5:13:00 PM
Chlorobenzene	ND	0.16	1.0		µg/L	1	9/2/2022 5:13:00 PM
Chloroethane	ND	0.38	2.0		µg/L	1	9/2/2022 5:13:00 PM
Chloroform	ND	0.13	1.0		µg/L	1	9/2/2022 5:13:00 PM
Chloromethane	ND	0.41	3.0		µg/L	1	9/2/2022 5:13:00 PM
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/2/2022 5:13:00 PM
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	9/2/2022 5:13:00 PM
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	9/2/2022 5:13:00 PM
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	9/2/2022 5:13:00 PM
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	9/2/2022 5:13:00 PM
Dibromochloromethane	ND	0.28	1.0		µg/L	1	9/2/2022 5:13:00 PM
Dibromomethane	ND	0.31	1.0		µg/L	1	9/2/2022 5:13:00 PM
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	9/2/2022 5:13:00 PM
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	9/2/2022 5:13:00 PM
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	9/2/2022 5:13:00 PM
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	9/2/2022 5:13:00 PM
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	9/2/2022 5:13:00 PM
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	9/2/2022 5:13:00 PM
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	9/2/2022 5:13:00 PM
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	9/2/2022 5:13:00 PM
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	9/2/2022 5:13:00 PM
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	9/2/2022 5:13:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
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, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27- 220830
Project: Joint Superfund Project Monthly Analysi
Collection Date: 8/30/2022 8:50:00 AM
Lab ID: 2208I20-002
Matrix: DRINKING W
Received Date: 8/31/2022 9:25:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	9/2/2022 5:13:00 PM
2-Hexanone	ND	1.8	10		µg/L	1	9/2/2022 5:13:00 PM
Isopropylbenzene	ND	0.18	1.0		µg/L	1	9/2/2022 5:13:00 PM
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	9/2/2022 5:13:00 PM
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	9/2/2022 5:13:00 PM
Methylene Chloride	ND	0.50	3.0		µg/L	1	9/2/2022 5:13:00 PM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/2/2022 5:13:00 PM
n-Propylbenzene	ND	0.18	1.0		µg/L	1	9/2/2022 5:13:00 PM
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	9/2/2022 5:13:00 PM
Styrene	ND	0.14	1.0		µg/L	1	9/2/2022 5:13:00 PM
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	9/2/2022 5:13:00 PM
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	9/2/2022 5:13:00 PM
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	9/2/2022 5:13:00 PM
Tetrachloroethene (PCE)	14	0.36	1.0		µg/L	1	9/2/2022 5:13:00 PM
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	9/2/2022 5:13:00 PM
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	9/2/2022 5:13:00 PM
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	9/2/2022 5:13:00 PM
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	9/2/2022 5:13:00 PM
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	9/2/2022 5:13:00 PM
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	9/2/2022 5:13:00 PM
Trichloroethene (TCE)	0.21	0.20	1.0	J	µg/L	1	9/2/2022 5:13:00 PM
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	9/2/2022 5:13:00 PM
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	9/2/2022 5:13:00 PM
Vinyl chloride	ND	0.32	1.0		µg/L	1	9/2/2022 5:13:00 PM
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/2/2022 5:13:00 PM
Surr: 1,2-Dichloroethane-d4	109	0	70-130		%Rec	1	9/2/2022 5:13:00 PM
Surr: 4-Bromofluorobenzene	93.4	0	70-130		%Rec	1	9/2/2022 5:13:00 PM
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	9/2/2022 5:13:00 PM
Surr: Toluene-d8	91.2	0	70-130		%Rec	1	9/2/2022 5:13:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: CLC IS1- 220830
Project: Joint Superfund Project Monthly Analysi
Collection Date: 8/30/2022 8:27:00 AM
Lab ID: 2208I20-003
Matrix: DRINKING W
Received Date: 8/31/2022 9:25:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Benzene	ND	0.23	1.0		µg/L	1	9/2/2022 5:36:00 PM
Toluene	ND	0.20	1.0		µg/L	1	9/2/2022 5:36:00 PM
Ethylbenzene	ND	0.21	1.0		µg/L	1	9/2/2022 5:36:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	9/2/2022 5:36:00 PM
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/2/2022 5:36:00 PM
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	9/2/2022 5:36:00 PM
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	9/2/2022 5:36:00 PM
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	9/2/2022 5:36:00 PM
Naphthalene	ND	0.50	2.0		µg/L	1	9/2/2022 5:36:00 PM
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	9/2/2022 5:36:00 PM
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	9/2/2022 5:36:00 PM
Acetone	ND	2.5	10		µg/L	1	9/2/2022 5:36:00 PM
Bromobenzene	ND	0.28	1.0		µg/L	1	9/2/2022 5:36:00 PM
Bromodichloromethane	ND	0.20	1.0		µg/L	1	9/2/2022 5:36:00 PM
Bromoform	ND	0.31	1.0		µg/L	1	9/2/2022 5:36:00 PM
Bromomethane	ND	0.85	3.0		µg/L	1	9/2/2022 5:36:00 PM
2-Butanone	ND	2.0	10		µg/L	1	9/2/2022 5:36:00 PM
Carbon disulfide	ND	0.59	10		µg/L	1	9/2/2022 5:36:00 PM
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	9/2/2022 5:36:00 PM
Chlorobenzene	ND	0.16	1.0		µg/L	1	9/2/2022 5:36:00 PM
Chloroethane	ND	0.38	2.0		µg/L	1	9/2/2022 5:36:00 PM
Chloroform	ND	0.13	1.0		µg/L	1	9/2/2022 5:36:00 PM
Chloromethane	ND	0.41	3.0		µg/L	1	9/2/2022 5:36:00 PM
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/2/2022 5:36:00 PM
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	9/2/2022 5:36:00 PM
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	9/2/2022 5:36:00 PM
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	9/2/2022 5:36:00 PM
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	9/2/2022 5:36:00 PM
Dibromochloromethane	ND	0.28	1.0		µg/L	1	9/2/2022 5:36:00 PM
Dibromomethane	ND	0.31	1.0		µg/L	1	9/2/2022 5:36:00 PM
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	9/2/2022 5:36:00 PM
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	9/2/2022 5:36:00 PM
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	9/2/2022 5:36:00 PM
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	9/2/2022 5:36:00 PM
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	9/2/2022 5:36:00 PM
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	9/2/2022 5:36:00 PM
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	9/2/2022 5:36:00 PM
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	9/2/2022 5:36:00 PM
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	9/2/2022 5:36:00 PM
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	9/2/2022 5:36:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
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, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1- 220830
Project: Joint Superfund Project Monthly Analysi
Collection Date: 8/30/2022 8:27:00 AM
Lab ID: 2208I20-003
Matrix: DRINKING W
Received Date: 8/31/2022 9:25:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	9/2/2022 5:36:00 PM
2-Hexanone	ND	1.8	10		µg/L	1	9/2/2022 5:36:00 PM
Isopropylbenzene	ND	0.18	1.0		µg/L	1	9/2/2022 5:36:00 PM
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	9/2/2022 5:36:00 PM
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	9/2/2022 5:36:00 PM
Methylene Chloride	ND	0.50	3.0		µg/L	1	9/2/2022 5:36:00 PM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/2/2022 5:36:00 PM
n-Propylbenzene	ND	0.18	1.0		µg/L	1	9/2/2022 5:36:00 PM
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	9/2/2022 5:36:00 PM
Styrene	ND	0.14	1.0		µg/L	1	9/2/2022 5:36:00 PM
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	9/2/2022 5:36:00 PM
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	9/2/2022 5:36:00 PM
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	9/2/2022 5:36:00 PM
Tetrachloroethene (PCE)	10	0.36	1.0		µg/L	1	9/2/2022 5:36:00 PM
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	9/2/2022 5:36:00 PM
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	9/2/2022 5:36:00 PM
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	9/2/2022 5:36:00 PM
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	9/2/2022 5:36:00 PM
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	9/2/2022 5:36:00 PM
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	9/2/2022 5:36:00 PM
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	9/2/2022 5:36:00 PM
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	9/2/2022 5:36:00 PM
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	9/2/2022 5:36:00 PM
Vinyl chloride	ND	0.32	1.0		µg/L	1	9/2/2022 5:36:00 PM
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/2/2022 5:36:00 PM
Surr: 1,2-Dichloroethane-d4	111	0	70-130		%Rec	1	9/2/2022 5:36:00 PM
Surr: 4-Bromofluorobenzene	92.2	0	70-130		%Rec	1	9/2/2022 5:36:00 PM
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	9/2/2022 5:36:00 PM
Surr: Toluene-d8	90.9	0	70-130		%Rec	1	9/2/2022 5:36:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: CLC C1- 220830
Project: Joint Superfund Project Monthly Analysi
Collection Date: 8/30/2022 8:30:00 AM
Lab ID: 2208I20-004
Matrix: DRINKING W
Received Date: 8/31/2022 9:25:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Benzene	ND	0.23	1.0		µg/L	1	9/2/2022 5:59:00 PM
Toluene	ND	0.20	1.0		µg/L	1	9/2/2022 5:59:00 PM
Ethylbenzene	ND	0.21	1.0		µg/L	1	9/2/2022 5:59:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	9/2/2022 5:59:00 PM
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/2/2022 5:59:00 PM
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	9/2/2022 5:59:00 PM
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	9/2/2022 5:59:00 PM
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	9/2/2022 5:59:00 PM
Naphthalene	ND	0.50	2.0		µg/L	1	9/2/2022 5:59:00 PM
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	9/2/2022 5:59:00 PM
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	9/2/2022 5:59:00 PM
Acetone	ND	2.5	10		µg/L	1	9/2/2022 5:59:00 PM
Bromobenzene	ND	0.28	1.0		µg/L	1	9/2/2022 5:59:00 PM
Bromodichloromethane	ND	0.20	1.0		µg/L	1	9/2/2022 5:59:00 PM
Bromoform	ND	0.31	1.0		µg/L	1	9/2/2022 5:59:00 PM
Bromomethane	ND	0.85	3.0		µg/L	1	9/2/2022 5:59:00 PM
2-Butanone	ND	2.0	10		µg/L	1	9/2/2022 5:59:00 PM
Carbon disulfide	ND	0.59	10		µg/L	1	9/2/2022 5:59:00 PM
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	9/2/2022 5:59:00 PM
Chlorobenzene	ND	0.16	1.0		µg/L	1	9/2/2022 5:59:00 PM
Chloroethane	ND	0.38	2.0		µg/L	1	9/2/2022 5:59:00 PM
Chloroform	ND	0.13	1.0		µg/L	1	9/2/2022 5:59:00 PM
Chloromethane	ND	0.41	3.0		µg/L	1	9/2/2022 5:59:00 PM
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/2/2022 5:59:00 PM
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	9/2/2022 5:59:00 PM
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	9/2/2022 5:59:00 PM
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	9/2/2022 5:59:00 PM
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	9/2/2022 5:59:00 PM
Dibromochloromethane	ND	0.28	1.0		µg/L	1	9/2/2022 5:59:00 PM
Dibromomethane	ND	0.31	1.0		µg/L	1	9/2/2022 5:59:00 PM
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	9/2/2022 5:59:00 PM
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	9/2/2022 5:59:00 PM
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	9/2/2022 5:59:00 PM
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	9/2/2022 5:59:00 PM
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	9/2/2022 5:59:00 PM
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	9/2/2022 5:59:00 PM
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	9/2/2022 5:59:00 PM
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	9/2/2022 5:59:00 PM
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	9/2/2022 5:59:00 PM
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	9/2/2022 5:59:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
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, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C1- 220830
Project: Joint Superfund Project Monthly Analysi
Collection Date: 8/30/2022 8:30:00 AM
Lab ID: 2208I20-004
Matrix: DRINKING W
Received Date: 8/31/2022 9:25:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	9/2/2022 5:59:00 PM
2-Hexanone	ND	1.8	10		µg/L	1	9/2/2022 5:59:00 PM
Isopropylbenzene	ND	0.18	1.0		µg/L	1	9/2/2022 5:59:00 PM
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	9/2/2022 5:59:00 PM
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	9/2/2022 5:59:00 PM
Methylene Chloride	ND	0.50	3.0		µg/L	1	9/2/2022 5:59:00 PM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/2/2022 5:59:00 PM
n-Propylbenzene	ND	0.18	1.0		µg/L	1	9/2/2022 5:59:00 PM
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	9/2/2022 5:59:00 PM
Styrene	ND	0.14	1.0		µg/L	1	9/2/2022 5:59:00 PM
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	9/2/2022 5:59:00 PM
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	9/2/2022 5:59:00 PM
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	9/2/2022 5:59:00 PM
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	9/2/2022 5:59:00 PM
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	9/2/2022 5:59:00 PM
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	9/2/2022 5:59:00 PM
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	9/2/2022 5:59:00 PM
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	9/2/2022 5:59:00 PM
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	9/2/2022 5:59:00 PM
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	9/2/2022 5:59:00 PM
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	9/2/2022 5:59:00 PM
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	9/2/2022 5:59:00 PM
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	9/2/2022 5:59:00 PM
Vinyl chloride	ND	0.32	1.0		µg/L	1	9/2/2022 5:59:00 PM
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/2/2022 5:59:00 PM
Surr: 1,2-Dichloroethane-d4	111	0	70-130		%Rec	1	9/2/2022 5:59:00 PM
Surr: 4-Bromofluorobenzene	91.2	0	70-130		%Rec	1	9/2/2022 5:59:00 PM
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	9/2/2022 5:59:00 PM
Surr: Toluene-d8	91.3	0	70-130		%Rec	1	9/2/2022 5:59:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: CLC C2- 220830
Project: Joint Superfund Project Monthly Analysi
Collection Date: 8/30/2022 8:32:00 AM
Lab ID: 2208I20-005
Matrix: DRINKING W
Received Date: 8/31/2022 9:25:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Benzene	ND	0.23	1.0		µg/L	1	9/2/2022 6:22:00 PM
Toluene	ND	0.20	1.0		µg/L	1	9/2/2022 6:22:00 PM
Ethylbenzene	ND	0.21	1.0		µg/L	1	9/2/2022 6:22:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	9/2/2022 6:22:00 PM
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/2/2022 6:22:00 PM
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	9/2/2022 6:22:00 PM
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	9/2/2022 6:22:00 PM
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	9/2/2022 6:22:00 PM
Naphthalene	ND	0.50	2.0		µg/L	1	9/2/2022 6:22:00 PM
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	9/2/2022 6:22:00 PM
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	9/2/2022 6:22:00 PM
Acetone	ND	2.5	10		µg/L	1	9/2/2022 6:22:00 PM
Bromobenzene	ND	0.28	1.0		µg/L	1	9/2/2022 6:22:00 PM
Bromodichloromethane	ND	0.20	1.0		µg/L	1	9/2/2022 6:22:00 PM
Bromoform	ND	0.31	1.0		µg/L	1	9/2/2022 6:22:00 PM
Bromomethane	ND	0.85	3.0		µg/L	1	9/2/2022 6:22:00 PM
2-Butanone	ND	2.0	10		µg/L	1	9/2/2022 6:22:00 PM
Carbon disulfide	ND	0.59	10		µg/L	1	9/2/2022 6:22:00 PM
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	9/2/2022 6:22:00 PM
Chlorobenzene	ND	0.16	1.0		µg/L	1	9/2/2022 6:22:00 PM
Chloroethane	ND	0.38	2.0		µg/L	1	9/2/2022 6:22:00 PM
Chloroform	ND	0.13	1.0		µg/L	1	9/2/2022 6:22:00 PM
Chloromethane	ND	0.41	3.0		µg/L	1	9/2/2022 6:22:00 PM
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/2/2022 6:22:00 PM
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	9/2/2022 6:22:00 PM
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	9/2/2022 6:22:00 PM
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	9/2/2022 6:22:00 PM
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	9/2/2022 6:22:00 PM
Dibromochloromethane	ND	0.28	1.0		µg/L	1	9/2/2022 6:22:00 PM
Dibromomethane	ND	0.31	1.0		µg/L	1	9/2/2022 6:22:00 PM
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	9/2/2022 6:22:00 PM
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	9/2/2022 6:22:00 PM
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	9/2/2022 6:22:00 PM
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	9/2/2022 6:22:00 PM
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	9/2/2022 6:22:00 PM
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	9/2/2022 6:22:00 PM
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	9/2/2022 6:22:00 PM
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	9/2/2022 6:22:00 PM
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	9/2/2022 6:22:00 PM
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	9/2/2022 6:22:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: CLC C2- 220830
Project: Joint Superfund Project Monthly Analysi
Collection Date: 8/30/2022 8:32:00 AM
Lab ID: 2208I20-005
Matrix: DRINKING W
Received Date: 8/31/2022 9:25:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	9/2/2022 6:22:00 PM
2-Hexanone	ND	1.8	10		µg/L	1	9/2/2022 6:22:00 PM
Isopropylbenzene	ND	0.18	1.0		µg/L	1	9/2/2022 6:22:00 PM
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	9/2/2022 6:22:00 PM
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	9/2/2022 6:22:00 PM
Methylene Chloride	ND	0.50	3.0		µg/L	1	9/2/2022 6:22:00 PM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/2/2022 6:22:00 PM
n-Propylbenzene	ND	0.18	1.0		µg/L	1	9/2/2022 6:22:00 PM
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	9/2/2022 6:22:00 PM
Styrene	ND	0.14	1.0		µg/L	1	9/2/2022 6:22:00 PM
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	9/2/2022 6:22:00 PM
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	9/2/2022 6:22:00 PM
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	9/2/2022 6:22:00 PM
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	9/2/2022 6:22:00 PM
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	9/2/2022 6:22:00 PM
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	9/2/2022 6:22:00 PM
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	9/2/2022 6:22:00 PM
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	9/2/2022 6:22:00 PM
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	9/2/2022 6:22:00 PM
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	9/2/2022 6:22:00 PM
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	9/2/2022 6:22:00 PM
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	9/2/2022 6:22:00 PM
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	9/2/2022 6:22:00 PM
Vinyl chloride	ND	0.32	1.0		µg/L	1	9/2/2022 6:22:00 PM
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/2/2022 6:22:00 PM
Surr: 1,2-Dichloroethane-d4	109	0	70-130		%Rec	1	9/2/2022 6:22:00 PM
Surr: 4-Bromofluorobenzene	92.4	0	70-130		%Rec	1	9/2/2022 6:22:00 PM
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	9/2/2022 6:22:00 PM
Surr: Toluene-d8	90.6	0	70-130		%Rec	1	9/2/2022 6:22:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: CLC C2- 220830 DUP
Project: Joint Superfund Project Monthly Analysi
Collection Date: 8/30/2022 8:33:00 AM
Lab ID: 2208I20-006
Matrix: DRINKING W
Received Date: 8/31/2022 9:25:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Benzene	ND	0.23	1.0		µg/L	1	9/2/2022 6:45:00 PM
Toluene	ND	0.20	1.0		µg/L	1	9/2/2022 6:45:00 PM
Ethylbenzene	ND	0.21	1.0		µg/L	1	9/2/2022 6:45:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	9/2/2022 6:45:00 PM
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/2/2022 6:45:00 PM
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	9/2/2022 6:45:00 PM
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	9/2/2022 6:45:00 PM
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	9/2/2022 6:45:00 PM
Naphthalene	ND	0.50	2.0		µg/L	1	9/2/2022 6:45:00 PM
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	9/2/2022 6:45:00 PM
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	9/2/2022 6:45:00 PM
Acetone	ND	2.5	10		µg/L	1	9/2/2022 6:45:00 PM
Bromobenzene	ND	0.28	1.0		µg/L	1	9/2/2022 6:45:00 PM
Bromodichloromethane	ND	0.20	1.0		µg/L	1	9/2/2022 6:45:00 PM
Bromoform	ND	0.31	1.0		µg/L	1	9/2/2022 6:45:00 PM
Bromomethane	ND	0.85	3.0		µg/L	1	9/2/2022 6:45:00 PM
2-Butanone	ND	2.0	10		µg/L	1	9/2/2022 6:45:00 PM
Carbon disulfide	ND	0.59	10		µg/L	1	9/2/2022 6:45:00 PM
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	9/2/2022 6:45:00 PM
Chlorobenzene	ND	0.16	1.0		µg/L	1	9/2/2022 6:45:00 PM
Chloroethane	ND	0.38	2.0		µg/L	1	9/2/2022 6:45:00 PM
Chloroform	ND	0.13	1.0		µg/L	1	9/2/2022 6:45:00 PM
Chloromethane	ND	0.41	3.0		µg/L	1	9/2/2022 6:45:00 PM
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/2/2022 6:45:00 PM
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	9/2/2022 6:45:00 PM
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	9/2/2022 6:45:00 PM
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	9/2/2022 6:45:00 PM
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	9/2/2022 6:45:00 PM
Dibromochloromethane	ND	0.28	1.0		µg/L	1	9/2/2022 6:45:00 PM
Dibromomethane	ND	0.31	1.0		µg/L	1	9/2/2022 6:45:00 PM
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	9/2/2022 6:45:00 PM
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	9/2/2022 6:45:00 PM
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	9/2/2022 6:45:00 PM
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	9/2/2022 6:45:00 PM
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	9/2/2022 6:45:00 PM
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	9/2/2022 6:45:00 PM
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	9/2/2022 6:45:00 PM
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	9/2/2022 6:45:00 PM
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	9/2/2022 6:45:00 PM
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	9/2/2022 6:45:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
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, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C2- 220830 DUP
Project: Joint Superfund Project Monthly Analysi
Collection Date: 8/30/2022 8:33:00 AM
Lab ID: 2208I20-006
Matrix: DRINKING W
Received Date: 8/31/2022 9:25:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	9/2/2022 6:45:00 PM
2-Hexanone	ND	1.8	10		µg/L	1	9/2/2022 6:45:00 PM
Isopropylbenzene	ND	0.18	1.0		µg/L	1	9/2/2022 6:45:00 PM
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	9/2/2022 6:45:00 PM
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	9/2/2022 6:45:00 PM
Methylene Chloride	ND	0.50	3.0		µg/L	1	9/2/2022 6:45:00 PM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/2/2022 6:45:00 PM
n-Propylbenzene	ND	0.18	1.0		µg/L	1	9/2/2022 6:45:00 PM
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	9/2/2022 6:45:00 PM
Styrene	ND	0.14	1.0		µg/L	1	9/2/2022 6:45:00 PM
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	9/2/2022 6:45:00 PM
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	9/2/2022 6:45:00 PM
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	9/2/2022 6:45:00 PM
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	9/2/2022 6:45:00 PM
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	9/2/2022 6:45:00 PM
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	9/2/2022 6:45:00 PM
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	9/2/2022 6:45:00 PM
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	9/2/2022 6:45:00 PM
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	9/2/2022 6:45:00 PM
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	9/2/2022 6:45:00 PM
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	9/2/2022 6:45:00 PM
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	9/2/2022 6:45:00 PM
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	9/2/2022 6:45:00 PM
Vinyl chloride	ND	0.32	1.0		µg/L	1	9/2/2022 6:45:00 PM
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/2/2022 6:45:00 PM
Surr: 1,2-Dichloroethane-d4	111	0	70-130		%Rec	1	9/2/2022 6:45:00 PM
Surr: 4-Bromofluorobenzene	92.4	0	70-130		%Rec	1	9/2/2022 6:45:00 PM
Surr: Dibromofluoromethane	105	0	70-130		%Rec	1	9/2/2022 6:45:00 PM
Surr: Toluene-d8	92.0	0	70-130		%Rec	1	9/2/2022 6:45:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: CLC ES 1-220830
Project: Joint Superfund Project Monthly Analysi
Collection Date: 8/30/2022 8:35:00 AM
Lab ID: 2208I20-007
Matrix: DRINKING W
Received Date: 8/31/2022 9:25:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Benzene	ND	0.23	1.0		µg/L	1	9/2/2022 7:08:00 PM
Toluene	ND	0.20	1.0		µg/L	1	9/2/2022 7:08:00 PM
Ethylbenzene	ND	0.21	1.0		µg/L	1	9/2/2022 7:08:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.39	1.0		µg/L	1	9/2/2022 7:08:00 PM
1,2,4-Trimethylbenzene	ND	0.12	1.0		µg/L	1	9/2/2022 7:08:00 PM
1,3,5-Trimethylbenzene	ND	0.18	1.0		µg/L	1	9/2/2022 7:08:00 PM
1,2-Dichloroethane (EDC)	ND	0.25	1.0		µg/L	1	9/2/2022 7:08:00 PM
1,2-Dibromoethane (EDB)	ND	0.30	1.0		µg/L	1	9/2/2022 7:08:00 PM
Naphthalene	ND	0.50	2.0		µg/L	1	9/2/2022 7:08:00 PM
1-Methylnaphthalene	ND	0.84	4.0		µg/L	1	9/2/2022 7:08:00 PM
2-Methylnaphthalene	ND	0.69	4.0		µg/L	1	9/2/2022 7:08:00 PM
Acetone	ND	2.5	10		µg/L	1	9/2/2022 7:08:00 PM
Bromobenzene	ND	0.28	1.0		µg/L	1	9/2/2022 7:08:00 PM
Bromodichloromethane	2.8	0.20	1.0		µg/L	1	9/2/2022 7:08:00 PM
Bromoform	3.3	0.31	1.0		µg/L	1	9/2/2022 7:08:00 PM
Bromomethane	ND	0.85	3.0		µg/L	1	9/2/2022 7:08:00 PM
2-Butanone	ND	2.0	10		µg/L	1	9/2/2022 7:08:00 PM
Carbon disulfide	ND	0.59	10		µg/L	1	9/2/2022 7:08:00 PM
Carbon Tetrachloride	ND	0.18	1.0		µg/L	1	9/2/2022 7:08:00 PM
Chlorobenzene	ND	0.16	1.0		µg/L	1	9/2/2022 7:08:00 PM
Chloroethane	ND	0.38	2.0		µg/L	1	9/2/2022 7:08:00 PM
Chloroform	1.3	0.13	1.0		µg/L	1	9/2/2022 7:08:00 PM
Chloromethane	ND	0.41	3.0		µg/L	1	9/2/2022 7:08:00 PM
2-Chlorotoluene	ND	0.13	1.0		µg/L	1	9/2/2022 7:08:00 PM
4-Chlorotoluene	ND	0.34	1.0		µg/L	1	9/2/2022 7:08:00 PM
cis-1,2-DCE	ND	0.39	1.0		µg/L	1	9/2/2022 7:08:00 PM
cis-1,3-Dichloropropene	ND	0.36	1.0		µg/L	1	9/2/2022 7:08:00 PM
1,2-Dibromo-3-chloropropane	ND	0.59	2.0		µg/L	1	9/2/2022 7:08:00 PM
Dibromochloromethane	4.4	0.28	1.0		µg/L	1	9/2/2022 7:08:00 PM
Dibromomethane	ND	0.31	1.0		µg/L	1	9/2/2022 7:08:00 PM
1,2-Dichlorobenzene	ND	0.15	1.0		µg/L	1	9/2/2022 7:08:00 PM
1,3-Dichlorobenzene	ND	0.16	1.0		µg/L	1	9/2/2022 7:08:00 PM
1,4-Dichlorobenzene	ND	0.21	1.0		µg/L	1	9/2/2022 7:08:00 PM
Dichlorodifluoromethane	ND	0.40	1.0		µg/L	1	9/2/2022 7:08:00 PM
1,1-Dichloroethane	ND	0.27	1.0		µg/L	1	9/2/2022 7:08:00 PM
1,1-Dichloroethene	ND	0.20	1.0		µg/L	1	9/2/2022 7:08:00 PM
1,2-Dichloropropane	ND	0.20	1.0		µg/L	1	9/2/2022 7:08:00 PM
1,3-Dichloropropane	ND	0.18	1.0		µg/L	1	9/2/2022 7:08:00 PM
2,2-Dichloropropane	ND	0.26	2.0		µg/L	1	9/2/2022 7:08:00 PM
1,1-Dichloropropene	ND	0.18	1.0		µg/L	1	9/2/2022 7:08:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: CLC ES 1-220830
Project: Joint Superfund Project Monthly Analysi
Collection Date: 8/30/2022 8:35:00 AM
Lab ID: 2208I20-007
Matrix: DRINKING W
Received Date: 8/31/2022 9:25:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Hexachlorobutadiene	ND	0.56	1.0		µg/L	1	9/2/2022 7:08:00 PM
2-Hexanone	ND	1.8	10		µg/L	1	9/2/2022 7:08:00 PM
Isopropylbenzene	ND	0.18	1.0		µg/L	1	9/2/2022 7:08:00 PM
4-Isopropyltoluene	ND	0.20	1.0		µg/L	1	9/2/2022 7:08:00 PM
4-Methyl-2-pentanone	ND	0.88	10		µg/L	1	9/2/2022 7:08:00 PM
Methylene Chloride	ND	0.50	3.0		µg/L	1	9/2/2022 7:08:00 PM
n-Butylbenzene	ND	0.25	3.0		µg/L	1	9/2/2022 7:08:00 PM
n-Propylbenzene	ND	0.18	1.0		µg/L	1	9/2/2022 7:08:00 PM
sec-Butylbenzene	ND	0.14	1.0		µg/L	1	9/2/2022 7:08:00 PM
Styrene	ND	0.14	1.0		µg/L	1	9/2/2022 7:08:00 PM
tert-Butylbenzene	ND	0.24	1.0		µg/L	1	9/2/2022 7:08:00 PM
1,1,1,2-Tetrachloroethane	ND	0.27	1.0		µg/L	1	9/2/2022 7:08:00 PM
1,1,2,2-Tetrachloroethane	ND	0.27	2.0		µg/L	1	9/2/2022 7:08:00 PM
Tetrachloroethene (PCE)	ND	0.36	1.0		µg/L	1	9/2/2022 7:08:00 PM
trans-1,2-DCE	ND	0.19	1.0		µg/L	1	9/2/2022 7:08:00 PM
trans-1,3-Dichloropropene	ND	0.34	1.0		µg/L	1	9/2/2022 7:08:00 PM
1,2,3-Trichlorobenzene	ND	0.25	1.0		µg/L	1	9/2/2022 7:08:00 PM
1,2,4-Trichlorobenzene	ND	0.24	1.0		µg/L	1	9/2/2022 7:08:00 PM
1,1,1-Trichloroethane	ND	0.30	1.0		µg/L	1	9/2/2022 7:08:00 PM
1,1,2-Trichloroethane	ND	0.20	1.0		µg/L	1	9/2/2022 7:08:00 PM
Trichloroethene (TCE)	ND	0.20	1.0		µg/L	1	9/2/2022 7:08:00 PM
Trichlorofluoromethane	ND	0.16	1.0		µg/L	1	9/2/2022 7:08:00 PM
1,2,3-Trichloropropane	ND	0.44	2.0		µg/L	1	9/2/2022 7:08:00 PM
Vinyl chloride	ND	0.32	1.0		µg/L	1	9/2/2022 7:08:00 PM
Xylenes, Total	ND	0.37	1.5		µg/L	1	9/2/2022 7:08:00 PM
Surr: 1,2-Dichloroethane-d4	112	0	70-130		%Rec	1	9/2/2022 7:08:00 PM
Surr: 4-Bromofluorobenzene	92.3	0	70-130		%Rec	1	9/2/2022 7:08:00 PM
Surr: Dibromofluoromethane	107	0	70-130		%Rec	1	9/2/2022 7:08:00 PM
Surr: Toluene-d8	90.0	0	70-130		%Rec	1	9/2/2022 7:08:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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#: **2208I20**
08-Sep-22

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: **R90814**	RunNo: **90814**
Prep Date:	Analysis Date: **9/2/2022**	SeqNo: **3246412** 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	20	1.0	20.00	0	102	70	130			
Chlorobenzene	21	1.0	20.00	0	104	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	87.4	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	96.4	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		93.8	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.3		10.00		93.2	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R90814**	RunNo: **90814**
Prep Date:	Analysis Date: **9/2/2022**	SeqNo: **3246413** 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#: **2208I20**
08-Sep-22

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: **R90814**	RunNo: **90814**
Prep Date:	Analysis Date: **9/2/2022**	SeqNo: **3246413** 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#: **2208I20**
08-Sep-22

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: **R90814**	RunNo: **90814**
Prep Date:	Analysis Date: **9/2/2022**	SeqNo: **3246413** 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	9.1		10.00		91.3	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.3		10.00		92.6	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		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: City of Las Cruces Work Order Number: 2208I20 RcptNo: 1

Received By: **Tracy Casarrubias** 8/31/2022 9:25:00 AM

Completed By: **Tracy Casarrubias** 8/31/2022 10:47:17 AM

Reviewed By: 8-31-22

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: TMc 8/31/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.3	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces Water Quality Laboratory
Mailing Address: P.O. Box 20000
Las Cruces, N.M. 88004
Phone #: 575-528-3609
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. 2208I20	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)
08/30/22	0805	Drinking Water	CLC 18-220830	3-40ml VOAs	$HgCl_2$	001								X		
	0850		CLC 27-220830			002								X		
	0827		CLC 151-220830			003								X		
	0830		CLC C1-220830			004								X		
	0832		CLC C2-220830			005								X		
	0833		CLC C2-220830 DUP			006								X		
08/30/22	0835	Drinking Water	CLC ES1-220830	3-40ml VOAs	$HgCl_2$	007								X		

Date:	Time:	Relinquished by:	Received by:	Via: ~~Fed Ex~~	Date	Time
08/30/22	1300	Yadira Reyna			8/31/22	9:25
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Send results to:
Luis Guerra: lguerra@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: www.hallenvironmental.com

September 12, 2022

Luis Guerra

City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3635
FAX: (575) 528-3513

RE: Joint Superfund Project Monthly Analysis OrderNo.: 2208I21

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 3 sample(s) on 8/31/2022 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: AS1-220830
Project: Joint Superfund Project Monthly Analysi
Collection Date: 8/30/2022 8:36:00 AM
Lab ID: 2208I21-001 **Matrix:** AIR **Received Date:** 8/31/2022 9:25:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Benzene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
Toluene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
Ethylbenzene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
1,2,4-Trimethylbenzene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
1,3,5-Trimethylbenzene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
1,2-Dichloroethane (EDC)	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
1,2-Dibromoethane (EDB)	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
Naphthalene	ND	0.20	0.20		µg/L	1	9/9/2022 1:47:00 PM
1-Methylnaphthalene	ND	0.40	0.40		µg/L	1	9/9/2022 1:47:00 PM
2-Methylnaphthalene	ND	0.40	0.40		µg/L	1	9/9/2022 1:47:00 PM
Acetone	ND	1.0	1.0		µg/L	1	9/9/2022 1:47:00 PM
Bromobenzene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
Bromodichloromethane	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
Bromoform	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
Bromomethane	ND	0.20	0.20		µg/L	1	9/9/2022 1:47:00 PM
2-Butanone	ND	1.0	1.0		µg/L	1	9/9/2022 1:47:00 PM
Carbon disulfide	ND	1.0	1.0		µg/L	1	9/9/2022 1:47:00 PM
Carbon tetrachloride	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
Chlorobenzene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
Chloroethane	ND	0.20	0.20		µg/L	1	9/9/2022 1:47:00 PM
Chloroform	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
Chloromethane	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
2-Chlorotoluene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
4-Chlorotoluene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
cis-1,2-DCE	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
cis-1,3-Dichloropropene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
1,2-Dibromo-3-chloropropane	ND	0.20	0.20		µg/L	1	9/9/2022 1:47:00 PM
Dibromochloromethane	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
Dibromomethane	ND	0.20	0.20		µg/L	1	9/9/2022 1:47:00 PM
1,2-Dichlorobenzene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
1,3-Dichlorobenzene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
1,4-Dichlorobenzene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
Dichlorodifluoromethane	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
1,1-Dichloroethane	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
1,1-Dichloroethene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
1,2-Dichloropropane	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
1,3-Dichloropropane	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
2,2-Dichloropropane	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
1,1-Dichloropropene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: AS1-220830
Project: Joint Superfund Project Monthly Analysi
Collection Date: 8/30/2022 8:36:00 AM
Lab ID: 2208I21-001 **Matrix:** AIR **Received Date:** 8/31/2022 9:25:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Hexachlorobutadiene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
2-Hexanone	ND	1.0	1.0		µg/L	1	9/9/2022 1:47:00 PM
Isopropylbenzene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
4-Isopropyltoluene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
4-Methyl-2-pentanone	ND	1.0	1.0		µg/L	1	9/9/2022 1:47:00 PM
Methylene chloride	ND	0.30	0.30		µg/L	1	9/9/2022 1:47:00 PM
n-Butylbenzene	ND	0.30	0.30		µg/L	1	9/9/2022 1:47:00 PM
n-Propylbenzene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
sec-Butylbenzene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
Styrene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
tert-Butylbenzene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
1,1,1,2-Tetrachloroethane	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
1,1,2,2-Tetrachloroethane	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
Tetrachloroethene (PCE)	0.17	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
trans-1,2-DCE	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
trans-1,3-Dichloropropene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
1,2,3-Trichlorobenzene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
1,2,4-Trichlorobenzene	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
1,1,1-Trichloroethane	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
1,1,2-Trichloroethane	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
Trichloroethene (TCE)	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
Trichlorofluoromethane	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
1,2,3-Trichloropropane	ND	0.20	0.20		µg/L	1	9/9/2022 1:47:00 PM
Vinyl chloride	ND	0.10	0.10		µg/L	1	9/9/2022 1:47:00 PM
Xylenes, Total	ND	0.15	0.15		µg/L	1	9/9/2022 1:47:00 PM
Surr: Dibromofluoromethane	101	0	70-130		%Rec	1	9/9/2022 1:47:00 PM
Surr: 1,2-Dichloroethane-d4	99.2	0	70-130		%Rec	1	9/9/2022 1:47:00 PM
Surr: Toluene-d8	86.1	0	70-130		%Rec	1	9/9/2022 1:47:00 PM
Surr: 4-Bromofluorobenzene	89.6	0	70-130		%Rec	1	9/9/2022 1:47:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: AS1-220830 DUP
Project: Joint Superfund Project Monthly Analysi
Collection Date: 8/30/2022 8:37:00 AM
Lab ID: 2208I21-002 **Matrix:** AIR **Received Date:** 8/31/2022 9:25:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Benzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
Toluene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
Ethylbenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
1,2,4-Trimethylbenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
1,3,5-Trimethylbenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
1,2-Dichloroethane (EDC)	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
1,2-Dibromoethane (EDB)	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
Naphthalene	ND	0.20	0.20		µg/L	1	9/9/2022 2:34:00 PM
1-Methylnaphthalene	ND	0.40	0.40		µg/L	1	9/9/2022 2:34:00 PM
2-Methylnaphthalene	ND	0.40	0.40		µg/L	1	9/9/2022 2:34:00 PM
Acetone	ND	1.0	1.0		µg/L	1	9/9/2022 2:34:00 PM
Bromobenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
Bromodichloromethane	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
Bromoform	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
Bromomethane	ND	0.20	0.20		µg/L	1	9/9/2022 2:34:00 PM
2-Butanone	ND	1.0	1.0		µg/L	1	9/9/2022 2:34:00 PM
Carbon disulfide	ND	1.0	1.0		µg/L	1	9/9/2022 2:34:00 PM
Carbon tetrachloride	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
Chlorobenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
Chloroethane	ND	0.20	0.20		µg/L	1	9/9/2022 2:34:00 PM
Chloroform	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
Chloromethane	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
2-Chlorotoluene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
4-Chlorotoluene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
cis-1,2-DCE	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
cis-1,3-Dichloropropene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
1,2-Dibromo-3-chloropropane	ND	0.20	0.20		µg/L	1	9/9/2022 2:34:00 PM
Dibromochloromethane	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
Dibromomethane	ND	0.20	0.20		µg/L	1	9/9/2022 2:34:00 PM
1,2-Dichlorobenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
1,3-Dichlorobenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
1,4-Dichlorobenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
Dichlorodifluoromethane	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
1,1-Dichloroethane	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
1,1-Dichloroethene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
1,2-Dichloropropane	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
1,3-Dichloropropane	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
2,2-Dichloropropane	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
1,1-Dichloropropene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: AS1-220830 DUP
Project: Joint Superfund Project Monthly Analysi
Collection Date: 8/30/2022 8:37:00 AM
Lab ID: 2208I21-002 **Matrix:** AIR **Received Date:** 8/31/2022 9:25:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Hexachlorobutadiene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
2-Hexanone	ND	1.0	1.0		µg/L	1	9/9/2022 2:34:00 PM
Isopropylbenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
4-Isopropyltoluene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
4-Methyl-2-pentanone	ND	1.0	1.0		µg/L	1	9/9/2022 2:34:00 PM
Methylene chloride	ND	0.30	0.30		µg/L	1	9/9/2022 2:34:00 PM
n-Butylbenzene	ND	0.30	0.30		µg/L	1	9/9/2022 2:34:00 PM
n-Propylbenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
sec-Butylbenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
Styrene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
tert-Butylbenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
1,1,1,2-Tetrachloroethane	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
1,1,2,2-Tetrachloroethane	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
Tetrachloroethene (PCE)	0.13	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
trans-1,2-DCE	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
trans-1,3-Dichloropropene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
1,2,3-Trichlorobenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
1,2,4-Trichlorobenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
1,1,1-Trichloroethane	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
1,1,2-Trichloroethane	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
Trichloroethene (TCE)	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
Trichlorofluoromethane	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
1,2,3-Trichloropropane	ND	0.20	0.20		µg/L	1	9/9/2022 2:34:00 PM
Vinyl chloride	ND	0.10	0.10		µg/L	1	9/9/2022 2:34:00 PM
Xylenes, Total	ND	0.15	0.15		µg/L	1	9/9/2022 2:34:00 PM
Surr: Dibromofluoromethane	102	0	70-130		%Rec	1	9/9/2022 2:34:00 PM
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%Rec	1	9/9/2022 2:34:00 PM
Surr: Toluene-d8	84.9	0	70-130		%Rec	1	9/9/2022 2:34:00 PM
Surr: 4-Bromofluorobenzene	89.6	0	70-130		%Rec	1	9/9/2022 2:34:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: AS2-220830
Project: Joint Superfund Project Monthly Analysi
Collection Date: 8/30/2022 8:39:00 AM
Lab ID: 2208I21-003 **Matrix:** AIR **Received Date:** 8/31/2022 9:25:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Benzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
Toluene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
Ethylbenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
1,2,4-Trimethylbenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
1,3,5-Trimethylbenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
1,2-Dichloroethane (EDC)	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
1,2-Dibromoethane (EDB)	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
Naphthalene	ND	0.20	0.20		µg/L	1	9/9/2022 2:57:00 PM
1-Methylnaphthalene	ND	0.40	0.40		µg/L	1	9/9/2022 2:57:00 PM
2-Methylnaphthalene	ND	0.40	0.40		µg/L	1	9/9/2022 2:57:00 PM
Acetone	ND	1.0	1.0		µg/L	1	9/9/2022 2:57:00 PM
Bromobenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
Bromodichloromethane	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
Bromoform	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
Bromomethane	ND	0.20	0.20		µg/L	1	9/9/2022 2:57:00 PM
2-Butanone	ND	1.0	1.0		µg/L	1	9/9/2022 2:57:00 PM
Carbon disulfide	ND	1.0	1.0		µg/L	1	9/9/2022 2:57:00 PM
Carbon tetrachloride	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
Chlorobenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
Chloroethane	ND	0.20	0.20		µg/L	1	9/9/2022 2:57:00 PM
Chloroform	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
Chloromethane	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
2-Chlorotoluene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
4-Chlorotoluene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
cis-1,2-DCE	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
cis-1,3-Dichloropropene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
1,2-Dibromo-3-chloropropane	ND	0.20	0.20		µg/L	1	9/9/2022 2:57:00 PM
Dibromochloromethane	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
Dibromomethane	ND	0.20	0.20		µg/L	1	9/9/2022 2:57:00 PM
1,2-Dichlorobenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
1,3-Dichlorobenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
1,4-Dichlorobenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
Dichlorodifluoromethane	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
1,1-Dichloroethane	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
1,1-Dichloroethene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
1,2-Dichloropropane	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
1,3-Dichloropropane	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
2,2-Dichloropropane	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
1,1-Dichloropropene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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: City of Las Cruces
Client Sample ID: AS2-220830
Project: Joint Superfund Project Monthly Analysi
Collection Date: 8/30/2022 8:39:00 AM
Lab ID: 2208I21-003 **Matrix:** AIR **Received Date:** 8/31/2022 9:25:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **CCM**
Hexachlorobutadiene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
2-Hexanone	ND	1.0	1.0		µg/L	1	9/9/2022 2:57:00 PM
Isopropylbenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
4-Isopropyltoluene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
4-Methyl-2-pentanone	ND	1.0	1.0		µg/L	1	9/9/2022 2:57:00 PM
Methylene chloride	ND	0.30	0.30		µg/L	1	9/9/2022 2:57:00 PM
n-Butylbenzene	ND	0.30	0.30		µg/L	1	9/9/2022 2:57:00 PM
n-Propylbenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
sec-Butylbenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
Styrene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
tert-Butylbenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
1,1,1,2-Tetrachloroethane	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
1,1,2,2-Tetrachloroethane	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
Tetrachloroethene (PCE)	0.15	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
trans-1,2-DCE	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
trans-1,3-Dichloropropene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
1,2,3-Trichlorobenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
1,2,4-Trichlorobenzene	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
1,1,1-Trichloroethane	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
1,1,2-Trichloroethane	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
Trichloroethene (TCE)	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
Trichlorofluoromethane	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
1,2,3-Trichloropropane	ND	0.20	0.20		µg/L	1	9/9/2022 2:57:00 PM
Vinyl chloride	ND	0.10	0.10		µg/L	1	9/9/2022 2:57:00 PM
Xylenes, Total	ND	0.15	0.15		µg/L	1	9/9/2022 2:57:00 PM
Surr: Dibromofluoromethane	104	0	70-130		%Rec	1	9/9/2022 2:57:00 PM
Surr: 1,2-Dichloroethane-d4	104	0	70-130		%Rec	1	9/9/2022 2:57:00 PM
Surr: Toluene-d8	86.0	0	70-130		%Rec	1	9/9/2022 2:57:00 PM
Surr: 4-Bromofluorobenzene	91.0	0	70-130		%Rec	1	9/9/2022 2:57:00 PM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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#: **2208I21**

12-Sep-22

Client: City of Las Cruces

Project: Joint Superfund Project Monthly Analysis

Sample ID: **2208i21-001adup**	SampType: **DUP**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **AS1-220830**	Batch ID: **R90917**	RunNo: **90917**
Prep Date:	Analysis Date: **9/9/2022**	SeqNo: **3251745** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.10						0	20	
Toluene	ND	0.10						0	20	
Ethylbenzene	ND	0.10						0	20	
Methyl tert-butyl ether (MTBE)	ND	0.10						0	20	
1,2,4-Trimethylbenzene	ND	0.10						0	20	
1,3,5-Trimethylbenzene	ND	0.10						0	20	
1,2-Dichloroethane (EDC)	ND	0.10						0	20	
1,2-Dibromoethane (EDB)	ND	0.10						0	20	
Naphthalene	ND	0.20						0	20	
1-Methylnaphthalene	ND	0.40						0	20	
2-Methylnaphthalene	ND	0.40						0	20	
Acetone	ND	1.0						0	20	
Bromobenzene	ND	0.10						0	20	
Bromodichloromethane	ND	0.10						0	20	
Bromoform	ND	0.10						0	20	
Bromomethane	ND	0.20						0	20	
2-Butanone	ND	1.0						0	20	
Carbon disulfide	ND	1.0						0	20	
Carbon tetrachloride	ND	0.10						0	20	
Chlorobenzene	ND	0.10						0	20	
Chloroethane	ND	0.20						0	20	
Chloroform	ND	0.10						0	20	
Chloromethane	ND	0.10						0	20	
2-Chlorotoluene	ND	0.10						0	20	
4-Chlorotoluene	ND	0.10						0	20	
cis-1,2-DCE	ND	0.10						0	20	
cis-1,3-Dichloropropene	ND	0.10						0	20	
1,2-Dibromo-3-chloropropane	ND	0.20						0	20	
Dibromochloromethane	ND	0.10						0	20	
Dibromomethane	ND	0.20						0	20	
1,2-Dichlorobenzene	ND	0.10						0	20	
1,3-Dichlorobenzene	ND	0.10						0	20	
1,4-Dichlorobenzene	ND	0.10						0	20	
Dichlorodifluoromethane	ND	0.10						0	20	
1,1-Dichloroethane	ND	0.10						0	20	
1,1-Dichloroethene	ND	0.10						0	20	
1,2-Dichloropropane	ND	0.10						0	20	
1,3-Dichloropropane	ND	0.10						0	20	
2,2-Dichloropropane	ND	0.10						0	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical 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#: **2208I21**

12-Sep-22

Client: City of Las Cruces

Project: Joint Superfund Project Monthly Analysis

Sample ID: **2208i21-001adup**	SampType: **DUP**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **AS1-220830**	Batch ID: **R90917**	RunNo: **90917**
Prep Date:	Analysis Date: **9/9/2022**	SeqNo: **3251745** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.10						0	20	
Hexachlorobutadiene	ND	0.10						0	20	
2-Hexanone	ND	1.0						0	20	
Isopropylbenzene	ND	0.10						0	20	
4-Isopropyltoluene	ND	0.10						0	20	
4-Methyl-2-pentanone	ND	1.0						0	20	
Methylene chloride	ND	0.30						0	20	
n-Butylbenzene	ND	0.30						0	20	
n-Propylbenzene	ND	0.10						0	20	
sec-Butylbenzene	ND	0.10						0	20	
Styrene	ND	0.10						0	20	
tert-Butylbenzene	ND	0.10						0	20	
1,1,1,2-Tetrachloroethane	ND	0.10						0	20	
1,1,2,2-Tetrachloroethane	ND	0.10						0	20	
Tetrachloroethene (PCE)	0.16	0.10						6.31	20	
trans-1,2-DCE	ND	0.10						0	20	
trans-1,3-Dichloropropene	ND	0.10						0	20	
1,2,3-Trichlorobenzene	ND	0.10						0	20	
1,2,4-Trichlorobenzene	ND	0.10						0	20	
1,1,1-Trichloroethane	ND	0.10						0	20	
1,1,2-Trichloroethane	ND	0.10						0	20	
Trichloroethene (TCE)	ND	0.10						0	20	
Trichlorofluoromethane	ND	0.10						0	20	
1,2,3-Trichloropropane	ND	0.20						0	20	
Vinyl chloride	ND	0.10						0	20	
Xylenes, Total	ND	0.15						0	20	
Surr: Dibromofluoromethane	1.0		1.000		102	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	1.0		1.000		99.7	70	130	0	0	
Surr: Toluene-d8	0.87		1.000		86.7	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.92		1.000		92.4	70	130	0	0	

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

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

Sample Log-In Check List

Client Name: City of Las Cruces Work Order Number: 2208I21 RcptNo: 1

Received By: **Tracy Casarrubias** 8/31/2022 9:25:00 AM

Completed By: **Tracy Casarrubias** 8/31/2022 10:59:26 AM

Reviewed By: KPA 8.31.22

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: JM 8/31/22

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	N/A	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
Mailing Address: P.O. Box 20000
Las Cruces N.M. 88004
Phone #: 575-528-3609
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 Bayna
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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2208121	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)
8/30/22	0836	AIR	AS1-220830	Tedlar Bag	N/A	001								X		
	0837	AIR	AS1-220830 DUP	Tedlar Bag	N/A	002								X		
8/30/22	0839	AIR	AS2-220830	Tedlar Bag	N/A	003								X		

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
08/30/22	1300	Yadira Bayna		Fedex	8/31/22	9:25
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Send Results to:
Luis Guerra: lguerra@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: www.hallenvironmental.com

October 04, 2022

Luis Guerra

City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3604
FAX

RE: Joint Super Fund Project Monthly Analysis OrderNo.: 2209F18

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 5 sample(s) on 9/28/2022 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-18-220927
Project: Joint Super Fund Project Monthly Analys
Collection Date: 9/27/2022 8:11:00 AM
Lab ID: 2209F18-001
Matrix: DRINKING W
Received Date: 9/28/2022 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
Benzene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
Toluene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
Ethylbenzene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
Naphthalene	ND	2.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
1-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
2-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
Acetone	ND	10		µg/L	1	10/1/2022 3:06:37 AM	C91469
Bromobenzene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
Bromodichloromethane	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
Bromoform	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
Bromomethane	ND	3.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
2-Butanone	ND	10		µg/L	1	10/1/2022 3:06:37 AM	C91469
Carbon disulfide	ND	10		µg/L	1	10/1/2022 3:06:37 AM	C91469
Carbon Tetrachloride	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
Chlorobenzene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
Chloroethane	ND	2.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
Chloroform	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
Chloromethane	ND	3.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
2-Chlorotoluene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
4-Chlorotoluene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
cis-1,2-DCE	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
Dibromochloromethane	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
Dibromomethane	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
1,1-Dichloroethane	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
1,1-Dichloroethene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
1,2-Dichloropropane	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
1,3-Dichloropropane	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
2,2-Dichloropropane	ND	2.0		µg/L	1	10/1/2022 3:06:37 AM	C91469

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC-18-220927
Project: Joint Super Fund Project Monthly Analys
Collection Date: 9/27/2022 8:11:00 AM
Lab ID: 2209F18-001
Matrix: DRINKING W
Received Date: 9/28/2022 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
Hexachlorobutadiene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
2-Hexanone	ND	10		µg/L	1	10/1/2022 3:06:37 AM	C91469
Isopropylbenzene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
4-Isopropyltoluene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
4-Methyl-2-pentanone	ND	10		µg/L	1	10/1/2022 3:06:37 AM	C91469
Methylene Chloride	ND	3.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
n-Butylbenzene	ND	3.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
n-Propylbenzene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
sec-Butylbenzene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
Styrene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
tert-Butylbenzene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
Tetrachloroethene (PCE)	3.8	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
trans-1,2-DCE	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
Trichlorofluoromethane	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
Vinyl chloride	ND	1.0		µg/L	1	10/1/2022 3:06:37 AM	C91469
Xylenes, Total	ND	1.5		µg/L	1	10/1/2022 3:06:37 AM	C91469
Surr: 1,2-Dichloroethane-d4	114	70-130		%Rec	1	10/1/2022 3:06:37 AM	C91469
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	10/1/2022 3:06:37 AM	C91469
Surr: Dibromofluoromethane	112	70-130		%Rec	1	10/1/2022 3:06:37 AM	C91469
Surr: Toluene-d8	100	70-130		%Rec	1	10/1/2022 3:06:37 AM	C91469

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC-18-220927 (Dup)
Project: Joint Super Fund Project Monthly Analys
Collection Date: 9/27/2022 8:12:00 AM
Lab ID: 2209F18-002
Matrix: DRINKING W
Received Date: 9/28/2022 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
Benzene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
Toluene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
Ethylbenzene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
Naphthalene	ND	2.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
1-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
2-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
Acetone	ND	10		µg/L	1	10/1/2022 3:33:40 AM	C91469
Bromobenzene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
Bromodichloromethane	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
Bromoform	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
Bromomethane	ND	3.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
2-Butanone	ND	10		µg/L	1	10/1/2022 3:33:40 AM	C91469
Carbon disulfide	ND	10		µg/L	1	10/1/2022 3:33:40 AM	C91469
Carbon Tetrachloride	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
Chlorobenzene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
Chloroethane	ND	2.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
Chloroform	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
Chloromethane	ND	3.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
2-Chlorotoluene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
4-Chlorotoluene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
cis-1,2-DCE	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
Dibromochloromethane	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
Dibromomethane	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
1,1-Dichloroethane	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
1,1-Dichloroethene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
1,2-Dichloropropane	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
1,3-Dichloropropane	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
2,2-Dichloropropane	ND	2.0		µg/L	1	10/1/2022 3:33:40 AM	C91469

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC-18-220927 (Dup)
Project: Joint Super Fund Project Monthly Analys
Collection Date: 9/27/2022 8:12:00 AM
Lab ID: 2209F18-002
Matrix: DRINKING W
Received Date: 9/28/2022 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
Hexachlorobutadiene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
2-Hexanone	ND	10		µg/L	1	10/1/2022 3:33:40 AM	C91469
Isopropylbenzene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
4-Isopropyltoluene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
4-Methyl-2-pentanone	ND	10		µg/L	1	10/1/2022 3:33:40 AM	C91469
Methylene Chloride	ND	3.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
n-Butylbenzene	ND	3.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
n-Propylbenzene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
sec-Butylbenzene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
Styrene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
tert-Butylbenzene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
Tetrachloroethene (PCE)	3.8	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
trans-1,2-DCE	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
Trichlorofluoromethane	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
Vinyl chloride	ND	1.0		µg/L	1	10/1/2022 3:33:40 AM	C91469
Xylenes, Total	ND	1.5		µg/L	1	10/1/2022 3:33:40 AM	C91469
Surr: 1,2-Dichloroethane-d4	113	70-130		%Rec	1	10/1/2022 3:33:40 AM	C91469
Surr: 4-Bromofluorobenzene	95.7	70-130		%Rec	1	10/1/2022 3:33:40 AM	C91469
Surr: Dibromofluoromethane	112	70-130		%Rec	1	10/1/2022 3:33:40 AM	C91469
Surr: Toluene-d8	99.8	70-130		%Rec	1	10/1/2022 3:33:40 AM	C91469

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC-27-220927
Project: Joint Super Fund Project Monthly Analys
Collection Date: 9/27/2022 8:36:00 AM
Lab ID: 2209F18-003
Matrix: DRINKING W
Received Date: 9/28/2022 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
Benzene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
Toluene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
Ethylbenzene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
Naphthalene	ND	2.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
1-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
2-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
Acetone	ND	10		µg/L	1	10/1/2022 4:00:35 AM	C91469
Bromobenzene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
Bromodichloromethane	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
Bromoform	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
Bromomethane	ND	3.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
2-Butanone	ND	10		µg/L	1	10/1/2022 4:00:35 AM	C91469
Carbon disulfide	ND	10		µg/L	1	10/1/2022 4:00:35 AM	C91469
Carbon Tetrachloride	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
Chlorobenzene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
Chloroethane	ND	2.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
Chloroform	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
Chloromethane	ND	3.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
2-Chlorotoluene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
4-Chlorotoluene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
cis-1,2-DCE	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
Dibromochloromethane	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
Dibromomethane	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
1,1-Dichloroethane	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
1,1-Dichloroethene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
1,2-Dichloropropane	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
1,3-Dichloropropane	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
2,2-Dichloropropane	ND	2.0		µg/L	1	10/1/2022 4:00:35 AM	C91469

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC-27-220927
Project: Joint Super Fund Project Monthly Analys
Collection Date: 9/27/2022 8:36:00 AM
Lab ID: 2209F18-003
Matrix: DRINKING W
Received Date: 9/28/2022 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
Hexachlorobutadiene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
2-Hexanone	ND	10		µg/L	1	10/1/2022 4:00:35 AM	C91469
Isopropylbenzene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
4-Isopropyltoluene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
4-Methyl-2-pentanone	ND	10		µg/L	1	10/1/2022 4:00:35 AM	C91469
Methylene Chloride	ND	3.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
n-Butylbenzene	ND	3.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
n-Propylbenzene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
sec-Butylbenzene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
Styrene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
tert-Butylbenzene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
Tetrachloroethene (PCE)	15	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
trans-1,2-DCE	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
Trichlorofluoromethane	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
Vinyl chloride	ND	1.0		µg/L	1	10/1/2022 4:00:35 AM	C91469
Xylenes, Total	ND	1.5		µg/L	1	10/1/2022 4:00:35 AM	C91469
Surr: 1,2-Dichloroethane-d4	114	70-130		%Rec	1	10/1/2022 4:00:35 AM	C91469
Surr: 4-Bromofluorobenzene	97.8	70-130		%Rec	1	10/1/2022 4:00:35 AM	C91469
Surr: Dibromofluoromethane	116	70-130		%Rec	1	10/1/2022 4:00:35 AM	C91469
Surr: Toluene-d8	100	70-130		%Rec	1	10/1/2022 4:00:35 AM	C91469

Refer to the QC Summary report and sample login checklist for flagged QC data 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: City of Las Cruces
Client Sample ID: CLC-IS1-220927
Project: Joint Super Fund Project Monthly Analys
Collection Date: 9/27/2022 8:22:00 AM
Lab ID: 2209F18-004
Matrix: DRINKING W
Received Date: 9/28/2022 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
Benzene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
Toluene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
Ethylbenzene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
Naphthalene	ND	2.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
1-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
2-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
Acetone	ND	10		µg/L	1	10/1/2022 4:27:27 AM	C91469
Bromobenzene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
Bromodichloromethane	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
Bromoform	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
Bromomethane	ND	3.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
2-Butanone	ND	10		µg/L	1	10/1/2022 4:27:27 AM	C91469
Carbon disulfide	ND	10		µg/L	1	10/1/2022 4:27:27 AM	C91469
Carbon Tetrachloride	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
Chlorobenzene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
Chloroethane	ND	2.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
Chloroform	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
Chloromethane	ND	3.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
2-Chlorotoluene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
4-Chlorotoluene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
cis-1,2-DCE	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
Dibromochloromethane	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
Dibromomethane	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
1,1-Dichloroethane	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
1,1-Dichloroethene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
1,2-Dichloropropane	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
1,3-Dichloropropane	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
2,2-Dichloropropane	ND	2.0		µg/L	1	10/1/2022 4:27:27 AM	C91469

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Qualifiers:

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P	Sample pH Not In Range
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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: CLC-IS1-220927
Project: Joint Super Fund Project Monthly Analys
Collection Date: 9/27/2022 8:22:00 AM
Lab ID: 2209F18-004
Matrix: DRINKING W
Received Date: 9/28/2022 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
Hexachlorobutadiene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
2-Hexanone	ND	10		µg/L	1	10/1/2022 4:27:27 AM	C91469
Isopropylbenzene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
4-Isopropyltoluene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
4-Methyl-2-pentanone	ND	10		µg/L	1	10/1/2022 4:27:27 AM	C91469
Methylene Chloride	ND	3.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
n-Butylbenzene	ND	3.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
n-Propylbenzene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
sec-Butylbenzene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
Styrene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
tert-Butylbenzene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
Tetrachloroethene (PCE)	11	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
trans-1,2-DCE	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
Trichlorofluoromethane	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
Vinyl chloride	ND	1.0		µg/L	1	10/1/2022 4:27:27 AM	C91469
Xylenes, Total	ND	1.5		µg/L	1	10/1/2022 4:27:27 AM	C91469
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	10/1/2022 4:27:27 AM	C91469
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	10/1/2022 4:27:27 AM	C91469
Surr: Dibromofluoromethane	110	70-130		%Rec	1	10/1/2022 4:27:27 AM	C91469
Surr: Toluene-d8	103	70-130		%Rec	1	10/1/2022 4:27:27 AM	C91469

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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: City of Las Cruces
Client Sample ID: CLC-ES1-220927
Project: Joint Super Fund Project Monthly Analys
Collection Date: 9/27/2022 8:27:00 AM
Lab ID: 2209F18-005
Matrix: DRINKING W
Received Date: 9/28/2022 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
Benzene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
Toluene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
Ethylbenzene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
Naphthalene	ND	2.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
1-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
2-Methylnaphthalene	ND	4.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
Acetone	ND	10		µg/L	1	10/1/2022 4:54:18 AM	C91469
Bromobenzene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
Bromodichloromethane	2.6	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
Bromoform	1.8	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
Bromomethane	ND	3.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
2-Butanone	ND	10		µg/L	1	10/1/2022 4:54:18 AM	C91469
Carbon disulfide	ND	10		µg/L	1	10/1/2022 4:54:18 AM	C91469
Carbon Tetrachloride	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
Chlorobenzene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
Chloroethane	ND	2.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
Chloroform	1.7	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
Chloromethane	ND	3.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
2-Chlorotoluene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
4-Chlorotoluene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
cis-1,2-DCE	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
Dibromochloromethane	3.5	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
Dibromomethane	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
1,1-Dichloroethane	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
1,1-Dichloroethene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
1,2-Dichloropropane	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
1,3-Dichloropropane	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
2,2-Dichloropropane	ND	2.0		µg/L	1	10/1/2022 4:54:18 AM	C91469

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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Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC-ES1-220927
Project: Joint Super Fund Project Monthly Analys
Collection Date: 9/27/2022 8:27:00 AM
Lab ID: 2209F18-005
Matrix: DRINKING W
Received Date: 9/28/2022 10:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **BRM**	
1,1-Dichloropropene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
Hexachlorobutadiene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
2-Hexanone	ND	10		µg/L	1	10/1/2022 4:54:18 AM	C91469
Isopropylbenzene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
4-Isopropyltoluene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
4-Methyl-2-pentanone	ND	10		µg/L	1	10/1/2022 4:54:18 AM	C91469
Methylene Chloride	ND	3.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
n-Butylbenzene	ND	3.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
n-Propylbenzene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
sec-Butylbenzene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
Styrene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
tert-Butylbenzene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
trans-1,2-DCE	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
Trichlorofluoromethane	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
Vinyl chloride	ND	1.0		µg/L	1	10/1/2022 4:54:18 AM	C91469
Xylenes, Total	ND	1.5		µg/L	1	10/1/2022 4:54:18 AM	C91469
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	1	10/1/2022 4:54:18 AM	C91469
Surr: 4-Bromofluorobenzene	98.0	70-130		%Rec	1	10/1/2022 4:54:18 AM	C91469
Surr: Dibromofluoromethane	113	70-130		%Rec	1	10/1/2022 4:54:18 AM	C91469
Surr: Toluene-d8	102	70-130		%Rec	1	10/1/2022 4:54:18 AM	C91469

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2209F18**
04-Oct-22

Client: City of Las Cruces
Project: Joint Super Fund Project Monthly Analysis

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **C91469**	RunNo: **91469**
Prep Date:	Analysis Date: **10/1/2022**	SeqNo: **3275864** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	113	70	130			
Toluene	19	1.0	20.00	0	97.2	70	130			
Chlorobenzene	18	1.0	20.00	0	92.4	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	103	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	12		10.00		121	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	12		10.00		119	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: **C91469**	RunNo: **91469**
Prep Date:	Analysis Date: **10/1/2022**	SeqNo: **3275904** 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#: **2209F18**
04-Oct-22

Client: City of Las Cruces
Project: Joint Super Fund Project Monthly Analysis

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **C91469**	RunNo: **91469**
Prep Date:	Analysis Date: **10/1/2022**	SeqNo: **3275904** 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#: **2209F18**

04-Oct-22

Client: City of Las Cruces

Project: Joint Super Fund Project Monthly Analysis

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **C91469**	RunNo: **91469**
Prep Date:	Analysis Date: **10/1/2022**	SeqNo: **3275904** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		110	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	9.9		10.00		98.7	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: www.hallenvironmental.com

Sample Log-In Check List

Client Name: City of Las Cruces Work Order Number: 2209F18 RcptNo: 1

Received By: Sean Livingston 9/28/2022 10:50:00 AM Sean Livingston

Completed By: Sean Livingston 9/28/2022 11:11:45 AM Sean Livingston

Reviewed By: KPA 9-28-22

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: KPA 9-28-22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good				

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)

Turn-Around Time:
☑ Standard ☐ Rush
Project Name: Joint Super fund Project Monthly Analysis
Project #: CLC JSP Griggs Walnut
Project Manager: Luis Guerra: 575-528-3609
Sampler:
On Ice: ☑ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 2.0-0.2=1.8 (°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. 2209F18
9/20/22	0811	Drinking water	CLC-18-220920	3-40mL Vials	HgCl2	001
	0812		CLC-18-220920 (Dup)			002
	0816		CLC-MW-220920			003
	0820		CLC-151-220920			004
9/20/22	0827	Drinking water	CLC-ES1-220920	3-40 mL Vials	HgCl2	005

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		

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
9/20/2022	1300		SCA	Fedex	9/21/22	10:50
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Send results to:
Luis Guerra: lguerra@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: www.hallenvironmental.com

November 08, 2022

Luis Guerra
City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3604
FAX:

RE: Joint Super Fund Project Monthly Analysis OrderNo.: 2210C84

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 5 sample(s) on 10/26/2022 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 18-221025
Project: Joint Super Fund Project Monthly Analy
Collection Date: 10/25/2022 9:09:00 AM
Lab ID: 2210C84-001
Matrix: DRINKING W
Received Date: 10/26/2022 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
Toluene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
Ethylbenzene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
Naphthalene	ND	2.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
1-Methylnaphthalene	ND	4.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
2-Methylnaphthalene	ND	4.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
Acetone	ND	10		µg/L	1	11/2/2022 6:38:00 PM	R92260
Bromobenzene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
Bromodichloromethane	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
Bromoform	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
Bromomethane	ND	3.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
2-Butanone	ND	10		µg/L	1	11/2/2022 6:38:00 PM	R92260
Carbon disulfide	ND	10		µg/L	1	11/2/2022 6:38:00 PM	R92260
Carbon Tetrachloride	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
Chlorobenzene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
Chloroethane	ND	2.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
Chloroform	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
Chloromethane	ND	3.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
2-Chlorotoluene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
4-Chlorotoluene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
cis-1,2-DCE	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
Dibromochloromethane	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
Dibromomethane	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
1,1-Dichloroethane	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
1,1-Dichloroethene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
1,2-Dichloropropane	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
1,3-Dichloropropane	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
2,2-Dichloropropane	ND	2.0		µg/L	1	11/2/2022 6:38:00 PM	R92260

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18-221025
Project: Joint Super Fund Project Monthly Analy
Collection Date: 10/25/2022 9:09:00 AM
Lab ID: 2210C84-001
Matrix: DRINKING W
Received Date: 10/26/2022 8:50:00 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	11/2/2022 6:38:00 PM	R92260
Hexachlorobutadiene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
2-Hexanone	ND	10		µg/L	1	11/2/2022 6:38:00 PM	R92260
Isopropylbenzene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
4-Isopropyltoluene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
4-Methyl-2-pentanone	ND	10		µg/L	1	11/2/2022 6:38:00 PM	R92260
Methylene Chloride	ND	3.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
n-Butylbenzene	ND	3.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
n-Propylbenzene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
sec-Butylbenzene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
Styrene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
tert-Butylbenzene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
Tetrachloroethene (PCE)	3.8	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
trans-1,2-DCE	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
Trichlorofluoromethane	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
Vinyl chloride	ND	1.0		µg/L	1	11/2/2022 6:38:00 PM	R92260
Xylenes, Total	ND	1.5		µg/L	1	11/2/2022 6:38:00 PM	R92260
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	11/2/2022 6:38:00 PM	R92260
Surr: 4-Bromofluorobenzene	96.5	70-130		%Rec	1	11/2/2022 6:38:00 PM	R92260
Surr: Dibromofluoromethane	95.2	70-130		%Rec	1	11/2/2022 6:38:00 PM	R92260
Surr: Toluene-d8	90.1	70-130		%Rec	1	11/2/2022 6:38:00 PM	R92260

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-221025
Project: Joint Super Fund Project Monthly Analy
Collection Date: 10/25/2022 9:13:00 AM
Lab ID: 2210C84-002
Matrix: DRINKING W
Received Date: 10/26/2022 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
Toluene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
Ethylbenzene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
Naphthalene	ND	2.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
1-Methylnaphthalene	ND	4.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
2-Methylnaphthalene	ND	4.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
Acetone	ND	10		µg/L	1	11/2/2022 7:01:00 PM	R92260
Bromobenzene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
Bromodichloromethane	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
Bromoform	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
Bromomethane	ND	3.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
2-Butanone	ND	10		µg/L	1	11/2/2022 7:01:00 PM	R92260
Carbon disulfide	ND	10		µg/L	1	11/2/2022 7:01:00 PM	R92260
Carbon Tetrachloride	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
Chlorobenzene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
Chloroethane	ND	2.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
Chloroform	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
Chloromethane	ND	3.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
2-Chlorotoluene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
4-Chlorotoluene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
cis-1,2-DCE	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
Dibromochloromethane	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
Dibromomethane	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
1,1-Dichloroethane	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
1,1-Dichloroethene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
1,2-Dichloropropane	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
1,3-Dichloropropane	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
2,2-Dichloropropane	ND	2.0		µg/L	1	11/2/2022 7:01:00 PM	R92260

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-221025
Project: Joint Super Fund Project Monthly Analy
Collection Date: 10/25/2022 9:13:00 AM
Lab ID: 2210C84-002
Matrix: DRINKING W
Received Date: 10/26/2022 8:50:00 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	11/2/2022 7:01:00 PM	R92260
Hexachlorobutadiene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
2-Hexanone	ND	10		µg/L	1	11/2/2022 7:01:00 PM	R92260
Isopropylbenzene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
4-Isopropyltoluene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
4-Methyl-2-pentanone	ND	10		µg/L	1	11/2/2022 7:01:00 PM	R92260
Methylene Chloride	ND	3.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
n-Butylbenzene	ND	3.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
n-Propylbenzene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
sec-Butylbenzene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
Styrene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
tert-Butylbenzene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
Tetrachloroethene (PCE)	9.7	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
trans-1,2-DCE	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
Trichlorofluoromethane	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
Vinyl chloride	ND	1.0		µg/L	1	11/2/2022 7:01:00 PM	R92260
Xylenes, Total	ND	1.5		µg/L	1	11/2/2022 7:01:00 PM	R92260
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	11/2/2022 7:01:00 PM	R92260
Surr: 4-Bromofluorobenzene	93.7	70-130		%Rec	1	11/2/2022 7:01:00 PM	R92260
Surr: Dibromofluoromethane	97.4	70-130		%Rec	1	11/2/2022 7:01:00 PM	R92260
Surr: Toluene-d8	90.4	70-130		%Rec	1	11/2/2022 7:01:00 PM	R92260

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-221025
Project: Joint Super Fund Project Monthly Analy
Collection Date: 10/25/2022 9:16:00 AM
Lab ID: 2210C84-003
Matrix: DRINKING W
Received Date: 10/26/2022 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
Toluene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
Ethylbenzene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
Naphthalene	ND	2.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
1-Methylnaphthalene	ND	4.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
2-Methylnaphthalene	ND	4.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
Acetone	ND	10		µg/L	1	11/2/2022 7:24:00 PM	R92260
Bromobenzene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
Bromodichloromethane	2.6	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
Bromoform	3.5	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
Bromomethane	ND	3.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
2-Butanone	ND	10		µg/L	1	11/2/2022 7:24:00 PM	R92260
Carbon disulfide	ND	10		µg/L	1	11/2/2022 7:24:00 PM	R92260
Carbon Tetrachloride	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
Chlorobenzene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
Chloroethane	ND	2.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
Chloroform	1.0	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
Chloromethane	ND	3.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
2-Chlorotoluene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
4-Chlorotoluene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
cis-1,2-DCE	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
Dibromochloromethane	4.0	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
Dibromomethane	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
1,1-Dichloroethane	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
1,1-Dichloroethene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
1,2-Dichloropropane	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
1,3-Dichloropropane	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
2,2-Dichloropropane	ND	2.0		µg/L	1	11/2/2022 7:24:00 PM	R92260

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-221025
Project: Joint Super Fund Project Monthly Analy
Collection Date: 10/25/2022 9:16:00 AM
Lab ID: 2210C84-003
Matrix: DRINKING W
Received Date: 10/26/2022 8:50:00 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	11/2/2022 7:24:00 PM	R92260
Hexachlorobutadiene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
2-Hexanone	ND	10		µg/L	1	11/2/2022 7:24:00 PM	R92260
Isopropylbenzene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
4-Isopropyltoluene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
4-Methyl-2-pentanone	ND	10		µg/L	1	11/2/2022 7:24:00 PM	R92260
Methylene Chloride	ND	3.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
n-Butylbenzene	ND	3.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
n-Propylbenzene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
sec-Butylbenzene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
Styrene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
tert-Butylbenzene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
trans-1,2-DCE	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
Trichlorofluoromethane	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
Vinyl chloride	ND	1.0		µg/L	1	11/2/2022 7:24:00 PM	R92260
Xylenes, Total	ND	1.5		µg/L	1	11/2/2022 7:24:00 PM	R92260
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	11/2/2022 7:24:00 PM	R92260
Surr: 4-Bromofluorobenzene	95.7	70-130		%Rec	1	11/2/2022 7:24:00 PM	R92260
Surr: Dibromofluoromethane	97.4	70-130		%Rec	1	11/2/2022 7:24:00 PM	R92260
Surr: Toluene-d8	91.2	70-130		%Rec	1	11/2/2022 7:24:00 PM	R92260

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-221025
Project: Joint Super Fund Project Monthly Analy
Collection Date: 10/25/2022 9:25:00 AM
Lab ID: 2210C84-004
Matrix: DRINKING W
Received Date: 10/26/2022 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
Toluene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
Ethylbenzene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
Naphthalene	ND	2.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
1-Methylnaphthalene	ND	4.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
2-Methylnaphthalene	ND	4.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
Acetone	ND	10		µg/L	1	11/2/2022 7:47:00 PM	R92260
Bromobenzene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
Bromodichloromethane	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
Bromoform	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
Bromomethane	ND	3.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
2-Butanone	ND	10		µg/L	1	11/2/2022 7:47:00 PM	R92260
Carbon disulfide	ND	10		µg/L	1	11/2/2022 7:47:00 PM	R92260
Carbon Tetrachloride	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
Chlorobenzene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
Chloroethane	ND	2.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
Chloroform	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
Chloromethane	ND	3.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
2-Chlorotoluene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
4-Chlorotoluene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
cis-1,2-DCE	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
Dibromochloromethane	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
Dibromomethane	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
1,1-Dichloroethane	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
1,1-Dichloroethene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
1,2-Dichloropropane	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
1,3-Dichloropropane	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
2,2-Dichloropropane	ND	2.0		µg/L	1	11/2/2022 7:47:00 PM	R92260

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-221025
Project: Joint Super Fund Project Monthly Analy
Collection Date: 10/25/2022 9:25:00 AM
Lab ID: 2210C84-004
Matrix: DRINKING W
Received Date: 10/26/2022 8:50:00 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	11/2/2022 7:47:00 PM	R92260
Hexachlorobutadiene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
2-Hexanone	ND	10		µg/L	1	11/2/2022 7:47:00 PM	R92260
Isopropylbenzene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
4-Isopropyltoluene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
4-Methyl-2-pentanone	ND	10		µg/L	1	11/2/2022 7:47:00 PM	R92260
Methylene Chloride	ND	3.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
n-Butylbenzene	ND	3.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
n-Propylbenzene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
sec-Butylbenzene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
Styrene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
tert-Butylbenzene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
Tetrachloroethene (PCE)	14	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
trans-1,2-DCE	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
Trichlorofluoromethane	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
Vinyl chloride	ND	1.0		µg/L	1	11/2/2022 7:47:00 PM	R92260
Xylenes, Total	ND	1.5		µg/L	1	11/2/2022 7:47:00 PM	R92260
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	11/2/2022 7:47:00 PM	R92260
Surr: 4-Bromofluorobenzene	94.7	70-130		%Rec	1	11/2/2022 7:47:00 PM	R92260
Surr: Dibromofluoromethane	98.1	70-130		%Rec	1	11/2/2022 7:47:00 PM	R92260
Surr: Toluene-d8	89.2	70-130		%Rec	1	11/2/2022 7:47:00 PM	R92260

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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-221025 (Dup)
Project: Joint Super Fund Project Monthly Analy
Collection Date: 10/25/2022 9:26:00 AM
Lab ID: 2210C84-005
Matrix: DRINKING W
Received Date: 10/26/2022 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
Toluene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
Ethylbenzene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
Naphthalene	ND	2.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
1-Methylnaphthalene	ND	4.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
2-Methylnaphthalene	ND	4.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
Acetone	ND	10		µg/L	1	11/2/2022 8:10:00 PM	R92260
Bromobenzene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
Bromodichloromethane	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
Bromoform	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
Bromomethane	ND	3.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
2-Butanone	ND	10		µg/L	1	11/2/2022 8:10:00 PM	R92260
Carbon disulfide	ND	10		µg/L	1	11/2/2022 8:10:00 PM	R92260
Carbon Tetrachloride	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
Chlorobenzene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
Chloroethane	ND	2.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
Chloroform	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
Chloromethane	ND	3.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
2-Chlorotoluene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
4-Chlorotoluene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
cis-1,2-DCE	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
Dibromochloromethane	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
Dibromomethane	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
1,1-Dichloroethane	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
1,1-Dichloroethene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
1,2-Dichloropropane	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
1,3-Dichloropropane	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
2,2-Dichloropropane	ND	2.0		µg/L	1	11/2/2022 8:10:00 PM	R92260

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-221025 (Dup)
Project: Joint Super Fund Project Monthly Analy
Collection Date: 10/25/2022 9:26:00 AM
Lab ID: 2210C84-005
Matrix: DRINKING W
Received Date: 10/26/2022 8:50:00 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	11/2/2022 8:10:00 PM	R92260
Hexachlorobutadiene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
2-Hexanone	ND	10		µg/L	1	11/2/2022 8:10:00 PM	R92260
Isopropylbenzene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
4-Isopropyltoluene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
4-Methyl-2-pentanone	ND	10		µg/L	1	11/2/2022 8:10:00 PM	R92260
Methylene Chloride	ND	3.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
n-Butylbenzene	ND	3.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
n-Propylbenzene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
sec-Butylbenzene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
Styrene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
tert-Butylbenzene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
Tetrachloroethene (PCE)	15	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
trans-1,2-DCE	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
Trichlorofluoromethane	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
Vinyl chloride	ND	1.0		µg/L	1	11/2/2022 8:10:00 PM	R92260
Xylenes, Total	ND	1.5		µg/L	1	11/2/2022 8:10:00 PM	R92260
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	11/2/2022 8:10:00 PM	R92260
Surr: 4-Bromofluorobenzene	93.9	70-130		%Rec	1	11/2/2022 8:10:00 PM	R92260
Surr: Dibromofluoromethane	97.8	70-130		%Rec	1	11/2/2022 8:10:00 PM	R92260
Surr: Toluene-d8	90.2	70-130		%Rec	1	11/2/2022 8:10:00 PM	R92260

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	Above Quantitation Range/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
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2210C84**

08-Nov-22

Client: City of Las Cruces

Project: Joint Super Fund Project Monthly Analysis

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R92260**	RunNo: **92260**
Prep Date:	Analysis Date: **11/2/2022**	SeqNo: **3315846** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.2	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Chlorobenzene	21	1.0	20.00	0	105	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	91.2	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	93.5	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.9	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.3	70	130			
Surr: Dibromofluoromethane	9.2		10.00		92.0	70	130			
Surr: Toluene-d8	9.2		10.00		91.8	70	130			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R92260**	RunNo: **92260**
Prep Date:	Analysis Date: **11/2/2022**	SeqNo: **3315848** 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 standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/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#: **2210C84**

08-Nov-22

Client: City of Las Cruces

Project: Joint Super Fund Project Monthly Analysis

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R92260**	RunNo: **92260**
Prep Date:	Analysis Date: **11/2/2022**	SeqNo: **3315848** 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2210C84**

08-Nov-22

Client: City of Las Cruces

Project: Joint Super Fund Project Monthly Analysis

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R92260**	RunNo: **92260**
Prep Date:	Analysis Date: **11/2/2022**	SeqNo: **3315848** 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	9.9		10.00		99.4	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		94.5	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.6	70	130			
Surr: Toluene-d8	9.2		10.00		92.1	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
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: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **City of Las Cruces** Work Order Number: **2210C84** RcptNo: **1**

Received By: **Desiree Dominguez** **10/26/2022 8:50:00 AM** DD

Completed By: **Cheyenne Cason** **10/26/2022 10:49:44 AM** CC

Reviewed By: JN 10/26/22

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: KPA 10.26.22

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	4.7	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)

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: Joint Super Fund 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): 4.5 + 0.2 = 4.7 (°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. 2210C84	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)
10/25/22	0909	Drinking water	CLC 18-221025	3-40mL Vials	HgCl2	001								X		
	0913		CLC IS1-221025			002								X		
	0916		CLC ES1-221025			003								X		
	0925		CLC 27-221025			004								X		
10/25/22	0926	Drinking water	CLC 27-221025 (Dup)	3-40mL Vials	HgCl2	005								X		

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
10/25/22	1300			FedEx	10/26/22	8:50
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Send results to:
Luis Guerra: lguerra@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: www.hallenvironmental.com

November 16, 2022

Luis Guerra

City of Las Cruces
PO Box 20000
Las Cruces, NM 88004
TEL: (575) 528-3604
FAX

RE: CLC Joint Superfund Project OrderNo.: 2211713

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 5 sample(s) on 11/11/2022 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 - 221110
Project: CLC Joint Superfund Project
Collection Date: 11/10/2022 9:05:00 AM
Lab ID: 2211713-001
Matrix: DRINKING W
Received Date: 11/11/2022 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Toluene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Ethylbenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Naphthalene	ND	2.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
2-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Acetone	ND	10		µg/L	1	11/14/2022 2:33:00 PM	R92552
Bromobenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Bromodichloromethane	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Bromoform	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Bromomethane	ND	3.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
2-Butanone	ND	10		µg/L	1	11/14/2022 2:33:00 PM	R92552
Carbon disulfide	ND	10		µg/L	1	11/14/2022 2:33:00 PM	R92552
Carbon Tetrachloride	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Chlorobenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Chloroethane	ND	2.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Chloroform	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Chloromethane	ND	3.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
2-Chlorotoluene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
4-Chlorotoluene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
cis-1,2-DCE	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Dibromochloromethane	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Dibromomethane	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,1-Dichloroethane	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,1-Dichloroethene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,2-Dichloropropane	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,3-Dichloropropane	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
2,2-Dichloropropane	ND	2.0		µg/L	1	11/14/2022 2:33:00 PM	R92552

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 18 - 221110
Project: CLC Joint Superfund Project
Collection Date: 11/10/2022 9:05:00 AM
Lab ID: 2211713-001
Matrix: DRINKING W
Received Date: 11/11/2022 8:45:00 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	11/14/2022 2:33:00 PM	R92552
Hexachlorobutadiene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
2-Hexanone	ND	10		µg/L	1	11/14/2022 2:33:00 PM	R92552
Isopropylbenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
4-Isopropyltoluene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
4-Methyl-2-pentanone	ND	10		µg/L	1	11/14/2022 2:33:00 PM	R92552
Methylene Chloride	ND	3.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
n-Butylbenzene	ND	3.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
n-Propylbenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
sec-Butylbenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Styrene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
tert-Butylbenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Tetrachloroethene (PCE)	3.8	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
trans-1,2-DCE	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Trichlorofluoromethane	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Vinyl chloride	ND	1.0		µg/L	1	11/14/2022 2:33:00 PM	R92552
Xylenes, Total	ND	1.5		µg/L	1	11/14/2022 2:33:00 PM	R92552
Surr: 1,2-Dichloroethane-d4	94.9	70-130		%Rec	1	11/14/2022 2:33:00 PM	R92552
Surr: 4-Bromofluorobenzene	94.2	70-130		%Rec	1	11/14/2022 2:33:00 PM	R92552
Surr: Dibromofluoromethane	97.3	70-130		%Rec	1	11/14/2022 2:33:00 PM	R92552
Surr: Toluene-d8	88.2	70-130		%Rec	1	11/14/2022 2:33:00 PM	R92552

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC I51 - 221110
Project: CLC Joint Superfund Project
Collection Date: 11/10/2022 9:29:00 AM
Lab ID: 2211713-002
Matrix: DRINKING W
Received Date: 11/11/2022 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Toluene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Ethylbenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Naphthalene	ND	2.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
2-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Acetone	ND	10		µg/L	1	11/14/2022 3:42:00 PM	R92552
Bromobenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Bromodichloromethane	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Bromoform	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Bromomethane	ND	3.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
2-Butanone	ND	10		µg/L	1	11/14/2022 3:42:00 PM	R92552
Carbon disulfide	ND	10		µg/L	1	11/14/2022 3:42:00 PM	R92552
Carbon Tetrachloride	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Chlorobenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Chloroethane	ND	2.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Chloroform	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Chloromethane	ND	3.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
2-Chlorotoluene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
4-Chlorotoluene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
cis-1,2-DCE	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Dibromochloromethane	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Dibromomethane	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,1-Dichloroethane	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,1-Dichloroethene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,2-Dichloropropane	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,3-Dichloropropane	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
2,2-Dichloropropane	ND	2.0		µg/L	1	11/14/2022 3:42:00 PM	R92552

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC I51 - 221110
Project: CLC Joint Superfund Project
Collection Date: 11/10/2022 9:29:00 AM
Lab ID: 2211713-002
Matrix: DRINKING W
Received Date: 11/11/2022 8:45:00 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	11/14/2022 3:42:00 PM	R92552
Hexachlorobutadiene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
2-Hexanone	ND	10		µg/L	1	11/14/2022 3:42:00 PM	R92552
Isopropylbenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
4-Isopropyltoluene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
4-Methyl-2-pentanone	ND	10		µg/L	1	11/14/2022 3:42:00 PM	R92552
Methylene Chloride	ND	3.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
n-Butylbenzene	ND	3.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
n-Propylbenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
sec-Butylbenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Styrene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
tert-Butylbenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Tetrachloroethene (PCE)	10	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
trans-1,2-DCE	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Trichlorofluoromethane	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Vinyl chloride	ND	1.0		µg/L	1	11/14/2022 3:42:00 PM	R92552
Xylenes, Total	ND	1.5		µg/L	1	11/14/2022 3:42:00 PM	R92552
Surr: 1,2-Dichloroethane-d4	97.6	70-130		%Rec	1	11/14/2022 3:42:00 PM	R92552
Surr: 4-Bromofluorobenzene	94.8	70-130		%Rec	1	11/14/2022 3:42:00 PM	R92552
Surr: Dibromofluoromethane	99.8	70-130		%Rec	1	11/14/2022 3:42:00 PM	R92552
Surr: Toluene-d8	86.4	70-130		%Rec	1	11/14/2022 3:42:00 PM	R92552

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1 - 221110
Project: CLC Joint Superfund Project
Collection Date: 11/10/2022 9:31:00 AM
Lab ID: 2211713-003
Matrix: DRINKING W
Received Date: 11/11/2022 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Toluene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Ethylbenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Naphthalene	ND	2.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
2-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Acetone	ND	10		µg/L	1	11/14/2022 4:05:00 PM	R92552
Bromobenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Bromodichloromethane	1.4	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Bromoform	2.8	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Bromomethane	ND	3.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
2-Butanone	ND	10		µg/L	1	11/14/2022 4:05:00 PM	R92552
Carbon disulfide	ND	10		µg/L	1	11/14/2022 4:05:00 PM	R92552
Carbon Tetrachloride	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Chlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Chloroethane	ND	2.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Chloroform	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Chloromethane	ND	3.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
2-Chlorotoluene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
4-Chlorotoluene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
cis-1,2-DCE	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Dibromochloromethane	2.8	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Dibromomethane	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,1-Dichloroethane	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,1-Dichloroethene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,2-Dichloropropane	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,3-Dichloropropane	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
2,2-Dichloropropane	ND	2.0		µg/L	1	11/14/2022 4:05:00 PM	R92552

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1 - 221110
Project: CLC Joint Superfund Project
Collection Date: 11/10/2022 9:31:00 AM
Lab ID: 2211713-003
Matrix: DRINKING W
Received Date: 11/11/2022 8:45:00 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	11/14/2022 4:05:00 PM	R92552
Hexachlorobutadiene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
2-Hexanone	ND	10		µg/L	1	11/14/2022 4:05:00 PM	R92552
Isopropylbenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
4-Isopropyltoluene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
4-Methyl-2-pentanone	ND	10		µg/L	1	11/14/2022 4:05:00 PM	R92552
Methylene Chloride	ND	3.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
n-Butylbenzene	ND	3.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
n-Propylbenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
sec-Butylbenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Styrene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
tert-Butylbenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
trans-1,2-DCE	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Trichlorofluoromethane	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Vinyl chloride	ND	1.0		µg/L	1	11/14/2022 4:05:00 PM	R92552
Xylenes, Total	ND	1.5		µg/L	1	11/14/2022 4:05:00 PM	R92552
Surr: 1,2-Dichloroethane-d4	97.2	70-130		%Rec	1	11/14/2022 4:05:00 PM	R92552
Surr: 4-Bromofluorobenzene	93.6	70-130		%Rec	1	11/14/2022 4:05:00 PM	R92552
Surr: Dibromofluoromethane	100	70-130		%Rec	1	11/14/2022 4:05:00 PM	R92552
Surr: Toluene-d8	88.5	70-130		%Rec	1	11/14/2022 4:05:00 PM	R92552

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1 - 221110 (DUP)
Project: CLC Joint Superfund Project
Collection Date: 11/10/2022 9:32:00 AM
Lab ID: 2211713-004
Matrix: DRINKING W
Received Date: 11/11/2022 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Toluene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Ethylbenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Naphthalene	ND	2.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
2-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Acetone	ND	10		µg/L	1	11/14/2022 4:28:00 PM	R92552
Bromobenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Bromodichloromethane	1.8	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Bromoform	2.7	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Bromomethane	ND	3.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
2-Butanone	ND	10		µg/L	1	11/14/2022 4:28:00 PM	R92552
Carbon disulfide	ND	10		µg/L	1	11/14/2022 4:28:00 PM	R92552
Carbon Tetrachloride	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Chlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Chloroethane	ND	2.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Chloroform	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Chloromethane	ND	3.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
2-Chlorotoluene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
4-Chlorotoluene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
cis-1,2-DCE	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Dibromochloromethane	3.0	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Dibromomethane	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,1-Dichloroethane	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,1-Dichloroethene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,2-Dichloropropane	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,3-Dichloropropane	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
2,2-Dichloropropane	ND	2.0		µg/L	1	11/14/2022 4:28:00 PM	R92552

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1 - 221110 (DUP)
Project: CLC Joint Superfund Project
Collection Date: 11/10/2022 9:32:00 AM
Lab ID: 2211713-004
Matrix: DRINKING W
Received Date: 11/11/2022 8:45:00 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	11/14/2022 4:28:00 PM	R92552
Hexachlorobutadiene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
2-Hexanone	ND	10		µg/L	1	11/14/2022 4:28:00 PM	R92552
Isopropylbenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
4-Isopropyltoluene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
4-Methyl-2-pentanone	ND	10		µg/L	1	11/14/2022 4:28:00 PM	R92552
Methylene Chloride	ND	3.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
n-Butylbenzene	ND	3.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
n-Propylbenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
sec-Butylbenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Styrene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
tert-Butylbenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
trans-1,2-DCE	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Trichlorofluoromethane	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Vinyl chloride	ND	1.0		µg/L	1	11/14/2022 4:28:00 PM	R92552
Xylenes, Total	ND	1.5		µg/L	1	11/14/2022 4:28:00 PM	R92552
Surr: 1,2-Dichloroethane-d4	99.5	70-130		%Rec	1	11/14/2022 4:28:00 PM	R92552
Surr: 4-Bromofluorobenzene	93.4	70-130		%Rec	1	11/14/2022 4:28:00 PM	R92552
Surr: Dibromofluoromethane	98.8	70-130		%Rec	1	11/14/2022 4:28:00 PM	R92552
Surr: Toluene-d8	87.2	70-130		%Rec	1	11/14/2022 4:28:00 PM	R92552

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27 - 221110
Project: CLC Joint Superfund Project
Collection Date: 11/10/2022 9:39:00 AM
Lab ID: 2211713-005
Matrix: DRINKING W
Received Date: 11/11/2022 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Toluene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Ethylbenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Naphthalene	ND	2.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
2-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Acetone	ND	10		µg/L	1	11/14/2022 4:51:00 PM	R92552
Bromobenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Bromodichloromethane	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Bromoform	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Bromomethane	ND	3.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
2-Butanone	ND	10		µg/L	1	11/14/2022 4:51:00 PM	R92552
Carbon disulfide	ND	10		µg/L	1	11/14/2022 4:51:00 PM	R92552
Carbon Tetrachloride	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Chlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Chloroethane	ND	2.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Chloroform	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Chloromethane	ND	3.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
2-Chlorotoluene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
4-Chlorotoluene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
cis-1,2-DCE	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Dibromochloromethane	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Dibromomethane	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,1-Dichloroethane	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,1-Dichloroethene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,2-Dichloropropane	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,3-Dichloropropane	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
2,2-Dichloropropane	ND	2.0		µg/L	1	11/14/2022 4:51:00 PM	R92552

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27 - 221110
Project: CLC Joint Superfund Project
Collection Date: 11/10/2022 9:39:00 AM
Lab ID: 2211713-005 **Matrix:** DRINKING W **Received Date:** 11/11/2022 8:45:00 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	11/14/2022 4:51:00 PM	R92552
Hexachlorobutadiene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
2-Hexanone	ND	10		µg/L	1	11/14/2022 4:51:00 PM	R92552
Isopropylbenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
4-Isopropyltoluene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
4-Methyl-2-pentanone	ND	10		µg/L	1	11/14/2022 4:51:00 PM	R92552
Methylene Chloride	ND	3.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
n-Butylbenzene	ND	3.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
n-Propylbenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
sec-Butylbenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Styrene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
tert-Butylbenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Tetrachloroethene (PCE)	15	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
trans-1,2-DCE	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Trichlorofluoromethane	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Vinyl chloride	ND	1.0		µg/L	1	11/14/2022 4:51:00 PM	R92552
Xylenes, Total	ND	1.5		µg/L	1	11/14/2022 4:51:00 PM	R92552
Surr: 1,2-Dichloroethane-d4	97.4	70-130		%Rec	1	11/14/2022 4:51:00 PM	R92552
Surr: 4-Bromofluorobenzene	93.9	70-130		%Rec	1	11/14/2022 4:51:00 PM	R92552
Surr: Dibromofluoromethane	101	70-130		%Rec	1	11/14/2022 4:51:00 PM	R92552
Surr: Toluene-d8	86.5	70-130		%Rec	1	11/14/2022 4:51:00 PM	R92552

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211713**

16-Nov-22

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: **R92552**	RunNo: **92552**
Prep Date:	Analysis Date: **11/14/2022**	SeqNo: **3327744** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	21	1.0	20.00	0	104	70	130			
Chlorobenzene	22	1.0	20.00	0	109	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	105	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.9	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		96.2	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.3	70	130			
Surr: Toluene-d8	9.0		10.00		89.5	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R92552**	RunNo: **92552**
Prep Date:	Analysis Date: **11/14/2022**	SeqNo: **3328840** 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 standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/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#: **2211713**
16-Nov-22

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: **R92552**	RunNo: **92552**
Prep Date:	Analysis Date: **11/14/2022**	SeqNo: **3328840** 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211713**

16-Nov-22

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: **R92552**	RunNo: **92552**
Prep Date:	Analysis Date: **11/14/2022**	SeqNo: **3328840** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.4	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.5	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.7	70	130			
Surr: Toluene-d8	8.8		10.00		88.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: City of Las Cruces | Work Order Number: 2211713 | RcptNo: 1

Received By: Juan Rojas 11/11/2022 8:45:00 AM

Completed By: Sean Livingston 11/11/2022 10:16:21 AM

Reviewed By: TMC 11/11/22

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: TMC 11/11/22

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	2.5	Good				

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
Sampler: Yadira Reyna
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp (Including CF): 2.5+0=2.5 (°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. 2211713	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)
11/10/22	0905	Drinking water	CLC 18-221110	3-40ml Vials	HgCl2	001								X		
"	0909	"	CLC 151-221110	"	"	002								X		
"	0931	"	CLC ESI-221110	"	"	003								X		
"	0932	"	CLC ESI-221110 (Dup)	"	"	004								X		
11/10/22	0939	Drinking water	CLC 27-221110	3-40ml Vials	HgCl2	005								X		

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
11/10/22	1500	Yadira Reyna		FedEx	11/11/22	8:45
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Send results to:
Luis Guerra: lguerra@las-cruces.org
Send invoice to: ~~CLC~~ 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: www.hallenvironmental.com

January 05, 2023

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.: 2212E13

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 3 sample(s) on 12/28/2022 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 AS1-221227
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/27/2022 9:40:00 AM
Lab ID: 2212E13-001 **Matrix:** AIR
Received Date: 12/28/2022 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
Toluene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
Ethylbenzene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
Naphthalene	ND	0.20		µg/L	1	12/29/2022 2:20:00 PM	R93612
1-Methylnaphthalene	ND	0.40		µg/L	1	12/29/2022 2:20:00 PM	R93612
2-Methylnaphthalene	ND	0.40		µg/L	1	12/29/2022 2:20:00 PM	R93612
Acetone	ND	1.0		µg/L	1	12/29/2022 2:20:00 PM	R93612
Bromobenzene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
Bromodichloromethane	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
Bromoform	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
Bromomethane	ND	0.20		µg/L	1	12/29/2022 2:20:00 PM	R93612
2-Butanone	ND	1.0		µg/L	1	12/29/2022 2:20:00 PM	R93612
Carbon disulfide	ND	1.0		µg/L	1	12/29/2022 2:20:00 PM	R93612
Carbon tetrachloride	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
Chlorobenzene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
Chloroethane	ND	0.20		µg/L	1	12/29/2022 2:20:00 PM	R93612
Chloroform	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
Chloromethane	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
2-Chlorotoluene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
4-Chlorotoluene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
cis-1,2-DCE	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	12/29/2022 2:20:00 PM	R93612
Dibromochloromethane	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
Dibromomethane	ND	0.20		µg/L	1	12/29/2022 2:20:00 PM	R93612
1,2-Dichlorobenzene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
1,3-Dichlorobenzene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
1,4-Dichlorobenzene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
Dichlorodifluoromethane	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
1,1-Dichloroethane	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
1,1-Dichloroethene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
1,2-Dichloropropane	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
1,3-Dichloropropane	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
2,2-Dichloropropane	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC AS1-221227
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/27/2022 9:40:00 AM
Lab ID: 2212E13-001 **Matrix:** AIR
Received Date: 12/28/2022 9:05:00 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	12/29/2022 2:20:00 PM	R93612
Hexachlorobutadiene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
2-Hexanone	ND	1.0		µg/L	1	12/29/2022 2:20:00 PM	R93612
Isopropylbenzene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
4-Isopropyltoluene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
4-Methyl-2-pentanone	ND	1.0		µg/L	1	12/29/2022 2:20:00 PM	R93612
Methylene chloride	ND	0.30		µg/L	1	12/29/2022 2:20:00 PM	R93612
n-Butylbenzene	ND	0.30		µg/L	1	12/29/2022 2:20:00 PM	R93612
n-Propylbenzene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
sec-Butylbenzene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
Styrene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
tert-Butylbenzene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
Tetrachloroethene (PCE)	0.12	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
trans-1,2-DCE	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
1,1,1-Trichloroethane	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
1,1,2-Trichloroethane	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
Trichloroethene (TCE)	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
Trichlorofluoromethane	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
1,2,3-Trichloropropane	ND	0.20		µg/L	1	12/29/2022 2:20:00 PM	R93612
Vinyl chloride	ND	0.10		µg/L	1	12/29/2022 2:20:00 PM	R93612
Xylenes, Total	ND	0.15		µg/L	1	12/29/2022 2:20:00 PM	R93612
Surr: Dibromofluoromethane	109	70-130		%Rec	1	12/29/2022 2:20:00 PM	R93612
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	12/29/2022 2:20:00 PM	R93612
Surr: Toluene-d8	95.3	70-130		%Rec	1	12/29/2022 2:20:00 PM	R93612
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	1	12/29/2022 2:20:00 PM	R93612

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC AS2-221227
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/27/2022 9:41:00 AM
Lab ID: 2212E13-002 **Matrix:** AIR
Received Date: 12/28/2022 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
Toluene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
Ethylbenzene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
Naphthalene	ND	0.20		µg/L	1	12/29/2022 2:43:00 PM	R93612
1-Methylnaphthalene	ND	0.40		µg/L	1	12/29/2022 2:43:00 PM	R93612
2-Methylnaphthalene	ND	0.40		µg/L	1	12/29/2022 2:43:00 PM	R93612
Acetone	ND	1.0		µg/L	1	12/29/2022 2:43:00 PM	R93612
Bromobenzene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
Bromodichloromethane	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
Bromoform	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
Bromomethane	ND	0.20		µg/L	1	12/29/2022 2:43:00 PM	R93612
2-Butanone	ND	1.0		µg/L	1	12/29/2022 2:43:00 PM	R93612
Carbon disulfide	ND	1.0		µg/L	1	12/29/2022 2:43:00 PM	R93612
Carbon tetrachloride	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
Chlorobenzene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
Chloroethane	ND	0.20		µg/L	1	12/29/2022 2:43:00 PM	R93612
Chloroform	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
Chloromethane	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
2-Chlorotoluene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
4-Chlorotoluene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
cis-1,2-DCE	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	12/29/2022 2:43:00 PM	R93612
Dibromochloromethane	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
Dibromomethane	ND	0.20		µg/L	1	12/29/2022 2:43:00 PM	R93612
1,2-Dichlorobenzene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
1,3-Dichlorobenzene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
1,4-Dichlorobenzene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
Dichlorodifluoromethane	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
1,1-Dichloroethane	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
1,1-Dichloroethene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
1,2-Dichloropropane	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
1,3-Dichloropropane	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
2,2-Dichloropropane	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC AS2-221227
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/27/2022 9:41:00 AM
Lab ID: 2212E13-002 **Matrix:** AIR
Received Date: 12/28/2022 9:05:00 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	12/29/2022 2:43:00 PM	R93612
Hexachlorobutadiene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
2-Hexanone	ND	1.0		µg/L	1	12/29/2022 2:43:00 PM	R93612
Isopropylbenzene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
4-Isopropyltoluene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
4-Methyl-2-pentanone	ND	1.0		µg/L	1	12/29/2022 2:43:00 PM	R93612
Methylene chloride	ND	0.30		µg/L	1	12/29/2022 2:43:00 PM	R93612
n-Butylbenzene	ND	0.30		µg/L	1	12/29/2022 2:43:00 PM	R93612
n-Propylbenzene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
sec-Butylbenzene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
Styrene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
tert-Butylbenzene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
Tetrachloroethene (PCE)	0.13	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
trans-1,2-DCE	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
1,1,1-Trichloroethane	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
1,1,2-Trichloroethane	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
Trichloroethene (TCE)	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
Trichlorofluoromethane	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
1,2,3-Trichloropropane	ND	0.20		µg/L	1	12/29/2022 2:43:00 PM	R93612
Vinyl chloride	ND	0.10		µg/L	1	12/29/2022 2:43:00 PM	R93612
Xylenes, Total	ND	0.15		µg/L	1	12/29/2022 2:43:00 PM	R93612
Surr: Dibromofluoromethane	108	70-130		%Rec	1	12/29/2022 2:43:00 PM	R93612
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	12/29/2022 2:43:00 PM	R93612
Surr: Toluene-d8	103	70-130		%Rec	1	12/29/2022 2:43:00 PM	R93612
Surr: 4-Bromofluorobenzene	120	70-130		%Rec	1	12/29/2022 2:43:00 PM	R93612

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC AS2-221227-DUP
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/27/2022 9:41:00 AM
Lab ID: 2212E13-003 **Matrix:** AIR
Received Date: 12/28/2022 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **CCM**	
Benzene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
Toluene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
Ethylbenzene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
Methyl tert-butyl ether (MTBE)	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
1,2,4-Trimethylbenzene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
1,3,5-Trimethylbenzene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
1,2-Dichloroethane (EDC)	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
1,2-Dibromoethane (EDB)	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
Naphthalene	ND	0.20		µg/L	1	12/29/2022 3:06:00 PM	R93612
1-Methylnaphthalene	ND	0.40		µg/L	1	12/29/2022 3:06:00 PM	R93612
2-Methylnaphthalene	ND	0.40		µg/L	1	12/29/2022 3:06:00 PM	R93612
Acetone	ND	1.0		µg/L	1	12/29/2022 3:06:00 PM	R93612
Bromobenzene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
Bromodichloromethane	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
Bromoform	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
Bromomethane	ND	0.20		µg/L	1	12/29/2022 3:06:00 PM	R93612
2-Butanone	ND	1.0		µg/L	1	12/29/2022 3:06:00 PM	R93612
Carbon disulfide	ND	1.0		µg/L	1	12/29/2022 3:06:00 PM	R93612
Carbon tetrachloride	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
Chlorobenzene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
Chloroethane	ND	0.20		µg/L	1	12/29/2022 3:06:00 PM	R93612
Chloroform	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
Chloromethane	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
2-Chlorotoluene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
4-Chlorotoluene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
cis-1,2-DCE	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
cis-1,3-Dichloropropene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
1,2-Dibromo-3-chloropropane	ND	0.20		µg/L	1	12/29/2022 3:06:00 PM	R93612
Dibromochloromethane	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
Dibromomethane	ND	0.20		µg/L	1	12/29/2022 3:06:00 PM	R93612
1,2-Dichlorobenzene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
1,3-Dichlorobenzene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
1,4-Dichlorobenzene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
Dichlorodifluoromethane	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
1,1-Dichloroethane	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
1,1-Dichloroethene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
1,2-Dichloropropane	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
1,3-Dichloropropane	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
2,2-Dichloropropane	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC AS2-221227-DUP
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/27/2022 9:41:00 AM
Lab ID: 2212E13-003 **Matrix:** AIR
Received Date: 12/28/2022 9:05:00 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	12/29/2022 3:06:00 PM	R93612
Hexachlorobutadiene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
2-Hexanone	ND	1.0		µg/L	1	12/29/2022 3:06:00 PM	R93612
Isopropylbenzene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
4-Isopropyltoluene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
4-Methyl-2-pentanone	ND	1.0		µg/L	1	12/29/2022 3:06:00 PM	R93612
Methylene chloride	ND	0.30		µg/L	1	12/29/2022 3:06:00 PM	R93612
n-Butylbenzene	ND	0.30		µg/L	1	12/29/2022 3:06:00 PM	R93612
n-Propylbenzene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
sec-Butylbenzene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
Styrene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
tert-Butylbenzene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
1,1,1,2-Tetrachloroethane	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
1,1,2,2-Tetrachloroethane	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
Tetrachloroethene (PCE)	0.13	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
trans-1,2-DCE	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
trans-1,3-Dichloropropene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
1,2,3-Trichlorobenzene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
1,2,4-Trichlorobenzene	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
1,1,1-Trichloroethane	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
1,1,2-Trichloroethane	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
Trichloroethene (TCE)	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
Trichlorofluoromethane	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
1,2,3-Trichloropropane	ND	0.20		µg/L	1	12/29/2022 3:06:00 PM	R93612
Vinyl chloride	ND	0.10		µg/L	1	12/29/2022 3:06:00 PM	R93612
Xylenes, Total	ND	0.15		µg/L	1	12/29/2022 3:06:00 PM	R93612
Surr: Dibromofluoromethane	106	70-130		%Rec	1	12/29/2022 3:06:00 PM	R93612
Surr: 1,2-Dichloroethane-d4	81.3	70-130		%Rec	1	12/29/2022 3:06:00 PM	R93612
Surr: Toluene-d8	89.2	70-130		%Rec	1	12/29/2022 3:06:00 PM	R93612
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	12/29/2022 3:06:00 PM	R93612

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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
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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: www.hallenvironmental.com

Sample Log-In Check List

Client Name: City of Las Cruces Work Order Number: 2212E13 RcptNo: 1

Received By: Tracy Casarrubias 12/28/2022 9:05:00 AM

Completed By: Tracy Casarrubias 12/28/2022 9:33:49 AM

Reviewed By: JA 12-28-22

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 ☐ (Not required)
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: SCA 12/28/22

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	N/A	Good	Yes			

Chain-of-Custody Record

Client: City of Las Cruces
Water Quality Laboratory
Mailing Address: P.O. Box 20000
Las Cruces, N.M. 88004
Phone #: (575) 528-3609
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 i.R.-YOGI
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. 2212E13	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)
12/27/22	0940	AIR	CLC JSP-221227	Tedlar Bag	N/A	001								X		
	0941	AIR	CLC JSP-221227	Tedlar Bag	N/A	002								X		
12/27/22	0941	AIR	CLC JSP-221227-DUP	Tedlar Bag	N/A	003								X		

Date:	Time:	Relinquished by:	Received by:	Via: ~~FedEx~~	Date	Time
12/27/22	1400	Yadira Reyna			12/28/22	9:05
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Send Results to: Seal on cooler - TMC 12/28/22
Luis Guerra: lguerra@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: www.hallenvironmental.com

January 10, 2023

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.: 2212E25

Dear Luis Guerra:

Hall Environmental Analysis Laboratory received 7 sample(s) on 12/28/2022 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 18-221227
Project: Joint Superfund Project Monthly Analysi **Collection Date:** 12/27/2022 9:06:00 AM
Lab ID: 2212E25-001 **Matrix:** DRINKING W **Received Date:** 12/28/2022 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
Toluene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
Ethylbenzene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
Naphthalene	ND	2.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
Acetone	ND	10		µg/L	1	1/4/2023 2:54:51 PM	R93727
Bromobenzene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
Bromoform	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
Bromomethane	ND	3.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
2-Butanone	ND	10		µg/L	1	1/4/2023 2:54:51 PM	R93727
Carbon disulfide	ND	10		µg/L	1	1/4/2023 2:54:51 PM	R93727
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
Chlorobenzene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
Chloroethane	ND	2.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
Chloroform	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
Chloromethane	ND	3.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
Dibromomethane	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2023 2:54:51 PM	R93727

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

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Project: Joint Superfund Project Monthly Analysi **Collection Date:** 12/27/2022 9:06:00 AM
Lab ID: 2212E25-001 **Matrix:** DRINKING W **Received Date:** 12/28/2022 9:05:00 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	1/4/2023 2:54:51 PM	R93727
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
2-Hexanone	ND	10		µg/L	1	1/4/2023 2:54:51 PM	R93727
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2023 2:54:51 PM	R93727
Methylene Chloride	ND	3.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
Styrene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
Tetrachloroethene (PCE)	3.3	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
Vinyl chloride	ND	1.0		µg/L	1	1/4/2023 2:54:51 PM	R93727
Xylenes, Total	ND	1.5		µg/L	1	1/4/2023 2:54:51 PM	R93727
Surr: 1,2-Dichloroethane-d4	94.2	70-130		%Rec	1	1/4/2023 2:54:51 PM	R93727
Surr: 4-Bromofluorobenzene	99.9	70-130		%Rec	1	1/4/2023 2:54:51 PM	R93727
Surr: Dibromofluoromethane	86.5	70-130		%Rec	1	1/4/2023 2:54:51 PM	R93727
Surr: Toluene-d8	93.9	70-130		%Rec	1	1/4/2023 2:54:51 PM	R93727

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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces **Client Sample ID:** CLC 27-221227
Project: Joint Superfund Project Monthly Analysi **Collection Date:** 12/27/2022 8:38:00 AM
Lab ID: 2212E25-002 **Matrix:** DRINKING W **Received Date:** 12/28/2022 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
Toluene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
Ethylbenzene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
Naphthalene	ND	2.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
Acetone	ND	10		µg/L	1	1/4/2023 3:21:50 PM	R93727
Bromobenzene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
Bromoform	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
Bromomethane	ND	3.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
2-Butanone	ND	10		µg/L	1	1/4/2023 3:21:50 PM	R93727
Carbon disulfide	ND	10		µg/L	1	1/4/2023 3:21:50 PM	R93727
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
Chlorobenzene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
Chloroethane	ND	2.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
Chloroform	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
Chloromethane	ND	3.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
Dibromomethane	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2023 3:21:50 PM	R93727

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC 27-221227
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/27/2022 8:38:00 AM
Lab ID: 2212E25-002
Matrix: DRINKING W
Received Date: 12/28/2022 9:05:00 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	1/4/2023 3:21:50 PM	R93727
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
2-Hexanone	ND	10		µg/L	1	1/4/2023 3:21:50 PM	R93727
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2023 3:21:50 PM	R93727
Methylene Chloride	ND	3.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
Styrene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
Tetrachloroethene (PCE)	14	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
Vinyl chloride	ND	1.0		µg/L	1	1/4/2023 3:21:50 PM	R93727
Xylenes, Total	ND	1.5		µg/L	1	1/4/2023 3:21:50 PM	R93727
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	1/4/2023 3:21:50 PM	R93727
Surr: 4-Bromofluorobenzene	96.8	70-130		%Rec	1	1/4/2023 3:21:50 PM	R93727
Surr: Dibromofluoromethane	104	70-130		%Rec	1	1/4/2023 3:21:50 PM	R93727
Surr: Toluene-d8	98.7	70-130		%Rec	1	1/4/2023 3:21:50 PM	R93727

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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-221227
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/27/2022 9:26:00 AM
Lab ID: 2212E25-003
Matrix: DRINKING W
Received Date: 12/28/2022 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
Toluene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
Ethylbenzene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
Naphthalene	ND	2.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
Acetone	ND	10		µg/L	1	1/4/2023 3:48:55 PM	R93727
Bromobenzene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
Bromoform	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
Bromomethane	ND	3.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
2-Butanone	ND	10		µg/L	1	1/4/2023 3:48:55 PM	R93727
Carbon disulfide	ND	10		µg/L	1	1/4/2023 3:48:55 PM	R93727
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
Chlorobenzene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
Chloroethane	ND	2.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
Chloroform	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
Chloromethane	ND	3.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
Dibromomethane	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2023 3:48:55 PM	R93727

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC IS1-221227
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/27/2022 9:26:00 AM
Lab ID: 2212E25-003
Matrix: DRINKING W
Received Date: 12/28/2022 9:05:00 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	1/4/2023 3:48:55 PM	R93727
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
2-Hexanone	ND	10		µg/L	1	1/4/2023 3:48:55 PM	R93727
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2023 3:48:55 PM	R93727
Methylene Chloride	ND	3.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
Styrene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
Tetrachloroethene (PCE)	9.2	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
Vinyl chloride	ND	1.0		µg/L	1	1/4/2023 3:48:55 PM	R93727
Xylenes, Total	ND	1.5		µg/L	1	1/4/2023 3:48:55 PM	R93727
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	1/4/2023 3:48:55 PM	R93727
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	1/4/2023 3:48:55 PM	R93727
Surr: Dibromofluoromethane	99.7	70-130		%Rec	1	1/4/2023 3:48:55 PM	R93727
Surr: Toluene-d8	98.1	70-130		%Rec	1	1/4/2023 3:48:55 PM	R93727

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces **Client Sample ID:** CLC C1-221227
Project: Joint Superfund Project Monthly Analysi **Collection Date:** 12/27/2022 9:29:00 AM
Lab ID: 2212E25-004 **Matrix:** DRINKING W **Received Date:** 12/28/2022 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
Toluene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
Ethylbenzene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
Naphthalene	ND	2.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
Acetone	ND	10		µg/L	1	1/4/2023 4:16:00 PM	R93727
Bromobenzene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
Bromoform	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
Bromomethane	ND	3.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
2-Butanone	ND	10		µg/L	1	1/4/2023 4:16:00 PM	R93727
Carbon disulfide	ND	10		µg/L	1	1/4/2023 4:16:00 PM	R93727
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
Chlorobenzene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
Chloroethane	ND	2.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
Chloroform	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
Chloromethane	ND	3.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
Dibromomethane	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2023 4:16:00 PM	R93727

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C1-221227
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/27/2022 9:29:00 AM
Lab ID: 2212E25-004
Matrix: DRINKING W
Received Date: 12/28/2022 9:05:00 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	1/4/2023 4:16:00 PM	R93727
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
2-Hexanone	ND	10		µg/L	1	1/4/2023 4:16:00 PM	R93727
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2023 4:16:00 PM	R93727
Methylene Chloride	ND	3.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
Styrene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
Vinyl chloride	ND	1.0		µg/L	1	1/4/2023 4:16:00 PM	R93727
Xylenes, Total	ND	1.5		µg/L	1	1/4/2023 4:16:00 PM	R93727
Surr: 1,2-Dichloroethane-d4	93.8	70-130		%Rec	1	1/4/2023 4:16:00 PM	R93727
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	1/4/2023 4:16:00 PM	R93727
Surr: Dibromofluoromethane	96.0	70-130		%Rec	1	1/4/2023 4:16:00 PM	R93727
Surr: Toluene-d8	93.7	70-130		%Rec	1	1/4/2023 4:16:00 PM	R93727

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C1-221227-DUP
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/27/2022 9:30:00 AM
Lab ID: 2212E25-005
Matrix: DRINKING W
Received Date: 12/28/2022 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
Toluene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
Ethylbenzene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
Naphthalene	ND	2.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
Acetone	ND	10		µg/L	1	1/4/2023 4:43:05 PM	R93727
Bromobenzene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
Bromoform	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
Bromomethane	ND	3.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
2-Butanone	ND	10		µg/L	1	1/4/2023 4:43:05 PM	R93727
Carbon disulfide	ND	10		µg/L	1	1/4/2023 4:43:05 PM	R93727
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
Chlorobenzene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
Chloroethane	ND	2.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
Chloroform	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
Chloromethane	ND	3.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
Dibromomethane	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2023 4:43:05 PM	R93727

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C1-221227-DUP
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/27/2022 9:30:00 AM
Lab ID: 2212E25-005
Matrix: DRINKING W
Received Date: 12/28/2022 9:05:00 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	1/4/2023 4:43:05 PM	R93727
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
2-Hexanone	ND	10		µg/L	1	1/4/2023 4:43:05 PM	R93727
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2023 4:43:05 PM	R93727
Methylene Chloride	ND	3.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
Styrene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
Vinyl chloride	ND	1.0		µg/L	1	1/4/2023 4:43:05 PM	R93727
Xylenes, Total	ND	1.5		µg/L	1	1/4/2023 4:43:05 PM	R93727
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	1/4/2023 4:43:05 PM	R93727
Surr: 4-Bromofluorobenzene	97.3	70-130		%Rec	1	1/4/2023 4:43:05 PM	R93727
Surr: Dibromofluoromethane	97.6	70-130		%Rec	1	1/4/2023 4:43:05 PM	R93727
Surr: Toluene-d8	97.1	70-130		%Rec	1	1/4/2023 4:43:05 PM	R93727

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C2- 221227
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/27/2022 9:33:00 AM
Lab ID: 2212E25-006
Matrix: DRINKING W
Received Date: 12/28/2022 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
Toluene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
Ethylbenzene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
Naphthalene	ND	2.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
Acetone	ND	10		µg/L	1	1/4/2023 5:10:09 PM	R93727
Bromobenzene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
Bromodichloromethane	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
Bromoform	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
Bromomethane	ND	3.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
2-Butanone	ND	10		µg/L	1	1/4/2023 5:10:09 PM	R93727
Carbon disulfide	ND	10		µg/L	1	1/4/2023 5:10:09 PM	R93727
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
Chlorobenzene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
Chloroethane	ND	2.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
Chloroform	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
Chloromethane	ND	3.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
Dibromochloromethane	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
Dibromomethane	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2023 5:10:09 PM	R93727

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC C2- 221227
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/27/2022 9:33:00 AM
Lab ID: 2212E25-006
Matrix: DRINKING W
Received Date: 12/28/2022 9:05:00 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	1/4/2023 5:10:09 PM	R93727
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
2-Hexanone	ND	10		µg/L	1	1/4/2023 5:10:09 PM	R93727
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2023 5:10:09 PM	R93727
Methylene Chloride	ND	3.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
Styrene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
Vinyl chloride	ND	1.0		µg/L	1	1/4/2023 5:10:09 PM	R93727
Xylenes, Total	ND	1.5		µg/L	1	1/4/2023 5:10:09 PM	R93727
Surr: 1,2-Dichloroethane-d4	92.5	70-130		%Rec	1	1/4/2023 5:10:09 PM	R93727
Surr: 4-Bromofluorobenzene	96.3	70-130		%Rec	1	1/4/2023 5:10:09 PM	R93727
Surr: Dibromofluoromethane	87.9	70-130		%Rec	1	1/4/2023 5:10:09 PM	R93727
Surr: Toluene-d8	93.4	70-130		%Rec	1	1/4/2023 5:10:09 PM	R93727

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-221227
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/27/2022 9:37:00 AM
Lab ID: 2212E25-007
Matrix: DRINKING W
Received Date: 12/28/2022 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
Toluene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
Ethylbenzene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
Naphthalene	ND	2.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
1-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
2-Methylnaphthalene	ND	4.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
Acetone	ND	10		µg/L	1	1/4/2023 5:37:14 PM	R93727
Bromobenzene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
Bromodichloromethane	2.3	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
Bromoform	2.9	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
Bromomethane	ND	3.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
2-Butanone	ND	10		µg/L	1	1/4/2023 5:37:14 PM	R93727
Carbon disulfide	ND	10		µg/L	1	1/4/2023 5:37:14 PM	R93727
Carbon Tetrachloride	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
Chlorobenzene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
Chloroethane	ND	2.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
Chloroform	1.1	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
Chloromethane	ND	3.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
2-Chlorotoluene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
4-Chlorotoluene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
cis-1,2-DCE	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
Dibromochloromethane	4.0	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
Dibromomethane	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
1,1-Dichloroethane	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
1,1-Dichloroethene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
1,2-Dichloropropane	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
1,3-Dichloropropane	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
2,2-Dichloropropane	ND	2.0		µg/L	1	1/4/2023 5:37:14 PM	R93727

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: City of Las Cruces
Client Sample ID: CLC ES1-221227
Project: Joint Superfund Project Monthly Analysi
Collection Date: 12/27/2022 9:37:00 AM
Lab ID: 2212E25-007
Matrix: DRINKING W
Received Date: 12/28/2022 9:05:00 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	1/4/2023 5:37:14 PM	R93727
Hexachlorobutadiene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
2-Hexanone	ND	10		µg/L	1	1/4/2023 5:37:14 PM	R93727
Isopropylbenzene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
4-Isopropyltoluene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
4-Methyl-2-pentanone	ND	10		µg/L	1	1/4/2023 5:37:14 PM	R93727
Methylene Chloride	ND	3.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
n-Butylbenzene	ND	3.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
n-Propylbenzene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
sec-Butylbenzene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
Styrene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
tert-Butylbenzene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
trans-1,2-DCE	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
Trichlorofluoromethane	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
Vinyl chloride	ND	1.0		µg/L	1	1/4/2023 5:37:14 PM	R93727
Xylenes, Total	ND	1.5		µg/L	1	1/4/2023 5:37:14 PM	R93727
Surr: 1,2-Dichloroethane-d4	95.8	70-130		%Rec	1	1/4/2023 5:37:14 PM	R93727
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	1/4/2023 5:37:14 PM	R93727
Surr: Dibromofluoromethane	89.9	70-130		%Rec	1	1/4/2023 5:37:14 PM	R93727
Surr: Toluene-d8	101	70-130		%Rec	1	1/4/2023 5:37:14 PM	R93727

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212E25**

10-Jan-23

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: **R93727**	RunNo: **93727**
Prep Date:	Analysis Date: **1/4/2023**	SeqNo: **3383251** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	114	70	130			
Toluene	20	1.0	20.00	0	98.3	70	130			
Chlorobenzene	19	1.0	20.00	0	95.1	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	98.2	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	12		10.00		124	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	9.7		10.00		97.1	70	130			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R93727**	RunNo: **93727**
Prep Date:	Analysis Date: **1/4/2023**	SeqNo: **3383268** 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								

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PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
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RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212E25**

10-Jan-23

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: **R93727**	RunNo: **93727**
Prep Date:	Analysis Date: **1/4/2023**	SeqNo: **3383268** 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:

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D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
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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#: **2212E25**

10-Jan-23

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: **R93727**	RunNo: **93727**
Prep Date:	Analysis Date: **1/4/2023**	SeqNo: **3383268** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.0		10.00		89.7	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.2	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.5	70	130			
Surr: Toluene-d8	9.9		10.00		98.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
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ND	Not Detected at the Reporting Limit
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B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
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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: www.hallenvironmental.com

Sample Log-In Check List

Client Name: City of Las Cruces | Work Order Number: 2212E25 | RcptNo: 1

Received By: Tracy Casarrubias 12/28/2022 9:05:00 AM

Completed By: Tracy Casarrubias 12/28/2022 11:00:58 AM

Reviewed By: TMc 12/28/22

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: SLL 12/28/22

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	1.9	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)

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 Bynum
On Ice: ☒ Yes ☐ No
# of Coolers: 1 I.R - Y061
Cooler Temp(including CF): 1.9 - 0 = 1.9 (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2212E25	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)
12/27/22	0906	Drinking Water	CLC 18-221227	3-40ml Vials	$HgCl_2$	001								X		
	0838		CLC 27-221227			002								X		
	0924		CLC IS1-221227			003								X		
	0929		CLC C1-221227			004								X		
	0930		CLC C1-221227-DUP			005								X		
	0933		CLC C2-221227			006								X		
12/27/22	0937	Drinking Water	CLC ES1-221227	3-40ml Vials	$HgCl_2$	007								X		

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
12/27/22	1400	Yadira Bynum		FedEx	12/28/22	9:05
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Send Results to:
Luis Guerra: lguerra@las-cruces.org
Send invoice to: CLC c/o Luis Guerra.
Seals on cooler TMC 12/28

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

Analysis Request

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

Appendix F

Letters Sent to Agencies and Agency Responses

DBS&A
a Geo-Logic Company

New Mexico
Environment Department
Ground Water Quality Bureau
Superfund Oversight Section

DBS&A
a Geo-Logic Company

Joint Superfund Project

City of Las Cruces and Doña Ana County

April 11, 2023

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 2021. We are requesting any information related to releases during 2022 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 9, 2023, 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.

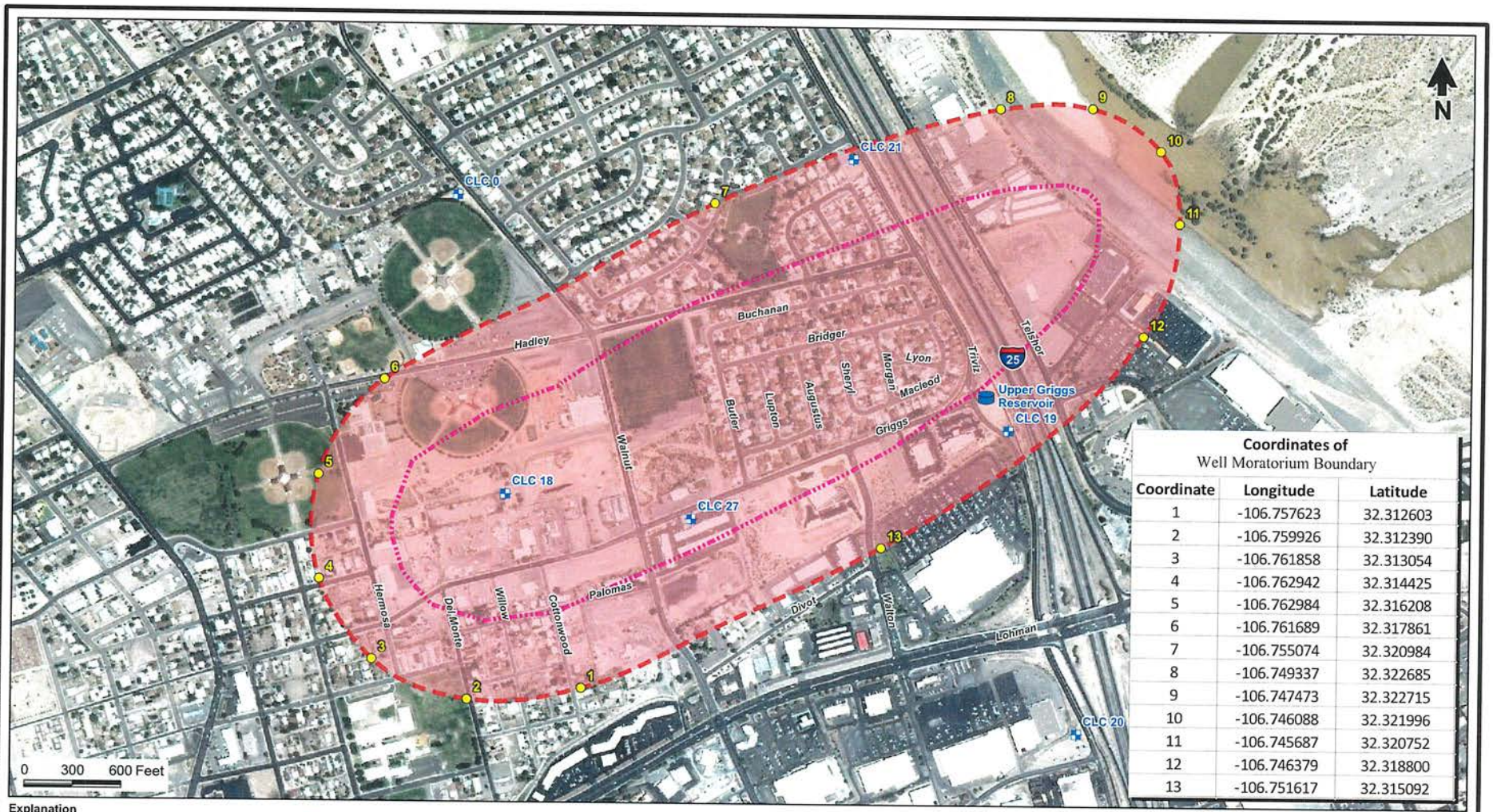
Adrienne L. Widmer, P.E.
Las Cruces Utilities
680 N. Motel Boulevard
Las Cruces, NM 88007

Sincerely,

Adrienne L. Widmer, P.E.
Project Coordinator, Griggs and Walnut Groundwater Plume Superfund Site
Utilities Director, City of Las Cruces Utilities

Attachment: As noted

cc: Dave Medeiros, Attorney Contract Attorney, Dona Ana County and JSP, via email
Justin Ball, Bureau Chief, NMED Ground Water Quality Bureau, via email
Karen Menetrey, Remediation Oversight Section, via email
Martyne Kieling, NMED Superfund Oversight Section, via email
Anthony McGlown, NMED Superfund Oversight Section, via email
Lorena Goerger, Bureau Chief, NMED Petroleum Storage Tank Bureau, 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

Daniel B. Stephens & Associates, Inc.
2/14/2019
JN ES09.0306

GRIGGS-WALNUT GROUND WATER PLUME SITE
Well Moratorium Boundary

Figure 1

\\ss6abq\Data5\Projects\ES09.0306 Griggs-Walnut\GIS\MXDs\Site maps\Well moratorium.mxd

Herrmann, Grace

From: Garman, Mark, ENV <Mark.Garman@env.nm.gov>
Sent: Monday, April 17, 2023 11:35 AM
To: Widmer, Adrienne
Cc: Medeiros, David; Ball, Justin, ENV; Menetrey, Karen, ENV; Menetrey, Karen, ENV; Kieling, Martyne, ENV; Kieling, Martyne, ENV; McGlown, Anthony, ENV; McGlown, Anthony, ENV; Goerger, Lorena, ENV; Herrmann, Grace
Subject: RE: [EXTERNAL] Griggs and Walnut Ground Water Plume Superfund Site - Institutional Control Implementation and Assurance

Hello Adrienne,

I can't believe another year has passed already! 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 April 2022.

Thank you,

Mark Garman, Manager
Superfund Oversight Section
New Mexico Environment Department
Ground Water Quality Bureau
1190 St Francis Drive, Santa Fe, NM 87505
(Phone) 505-660-8464
mark.garman@env.nm.gov **Note new email address!**
www.env.nm.gov

From: Adrienne Widmer <awidmer@las-cruces.org>
Sent: Tuesday, April 11, 2023 9:21 AM
To: Garman, Mark, ENV <Mark.Garman@env.nm.gov>; Garman, Mark, ENV <Mark.Garman@env.nm.gov>
Cc: Medeiros, David <davem@donaanacounty.org>; Ball, Justin, ENV <Justin.Ball@env.nm.gov>; Menetrey, Karen, ENV <karen.menetrey@env.nm.gov>; Menetrey, Karen, ENV <karen.menetrey@env.nm.gov>; Kieling, Martyne, ENV <Martyne.Kieling@env.nm.gov>; Kieling, Martyne, ENV <Martyne.Kieling@env.nm.gov>; McGlown, Anthony, ENV <Anthony.McGlown@env.nm.gov>; McGlown, Anthony, ENV <Anthony.McGlown@env.nm.gov>; Goerger, Lorena, ENV <lorena.goerger@env.nm.gov>; 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 Mark,

Hope all continues to be well with you, and it is that time of year again for us to mail out the attached letter 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 us know.

Look forward to hearing from you and thank you!

Adrienne L. Widmer, P.E.
Director/Las Cruces Utilities/Administration
Direct: 575-528-3524 Main: 575-528-3512, awidmer@las-cruces.org or awidmer@las-cruces.gov



NOTE: Over the coming months, The City of Las Cruces is transitioning our email domain to lascruces.gov. Please make sure you update your email systems to accommodate my new email address which will end in @lascruces.gov. My current email address will continue to work for a limited time.

CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

New Mexico
Environment Department
Petroleum Storage Tank Bureau

DBS&A
a Geo-Logic Company

Joint Superfund Project

City of Las Cruces and Doña Ana County

April 11, 2023

Ms. Lorena Goerger, Bureau Chief
New Mexico Environment Department
Petroleum Storage Tank Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe NM, 87505

Dear Ms. Goerger:

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.

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  - contact person and information so that the JSP can coordinate data sharing

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Adrienne L. Widmer, P.E.
Las Cruces Utilities
680 N. Motel Boulevard
Las Cruces, NM 88007

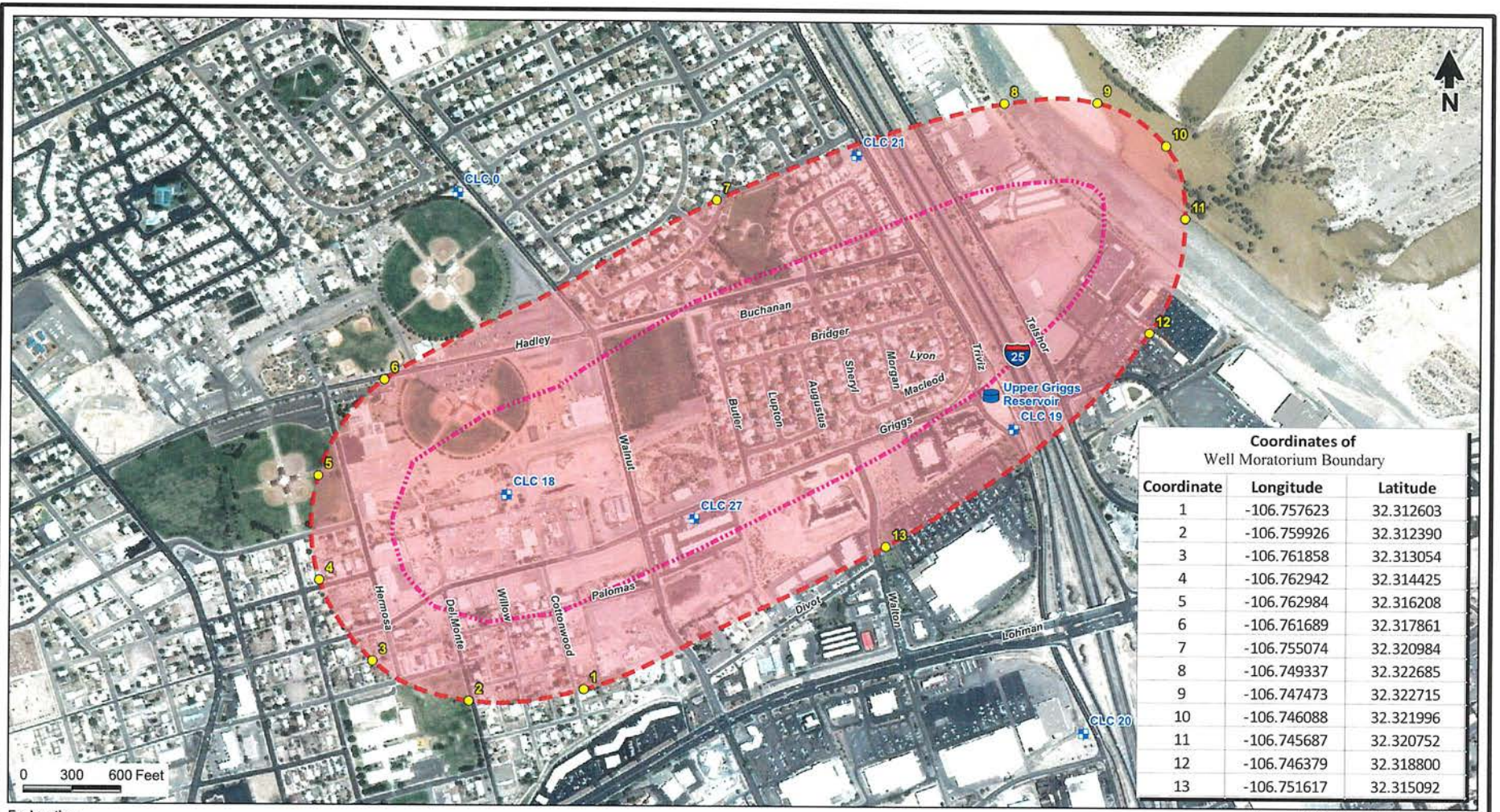
Sincerely,



Adrienne L. Widmer, P.E.
Project Coordinator, Griggs and Walnut Groundwater Plume Superfund Site
Utilities Director, City of Las Cruces Utilities

Attachment: As noted

cc: 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, Remediation Oversight Section, via email
Mark Garman, 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
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August 2009
Downloaded from RGIS
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\\ss6abq\Data5\Projects\ES09.0306 Griggs-Walnut\GIS\MXDs\Site maps\Well moratorium.mxd

Daniel B. Stephens & Associates, Inc.
2/14/2019
JN ES09.0306

GRIGGS-WALNUT GROUND WATER PLUME SITE
Well Moratorium Boundary

Figure 1

Herrmann, Grace

From: Goerger, Lorena, ENV <lorena.goerger@env.nm.gov>
Sent: Monday, April 17, 2023 12:20 PM
To: Widmer, Adrienne
Cc: Medeiros, David; Cooke, Gail, ENV; Michelle Hunter; Garman, Mark, ENV; McGlown, Anthony, ENV; Herrmann, Grace
Subject: RE: [EXTERNAL] Griggs and Walnut Ground Water Plume Superfund Site - Institutional Control Implementation and Assurance

Hello Adrienne,

PSTB has not new releases within the area or any new updates on the release that is there.

Please let me know if you need anything other information,
Lorena

Lorena Goerger
Bureau Chief - PSTB
cell: (505) 670-9618
lorena.goerger@env.nm.gov

From: Adrienne Widmer <awidmer@las-cruces.org>
Sent: Tuesday, April 11, 2023 9:39 AM
To: Goerger, Lorena, ENV <lorena.goerger@env.nm.gov>
Cc: Medeiros, David <davem@donaanacounty.org>; Cooke, Gail, ENV <Gail.Cooke2@env.nm.gov>; Michelle Hunter <michelle.hunter@env.nm.gov>; Garman, Mark, ENV <Mark.Garman@env.nm.gov>; McGlown, Anthony, ENV <Anthony.McGlown@env.nm.gov>; Herrmann, Grace <gherrmann@geo-logic.com>
Subject: [EXTERNAL] Griggs and Walnut Ground Water Plume Superfund Site - Institutional Control Implementation and Assurance
Importance: High

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Hi Lorena,

Hope all continues to be well with you, and it is that time of year again for us to mail out the attached letter 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 us know.

Look forward to hearing from you and thank you!

Adrienne L. Widmer, P.E.
Director/Las Cruces Utilities/Administration
Direct: 575-528-3524 Main: 575-528-3512, awidmer@las-cruces.org or awidmer@las-cruces.gov
City of Las Cruces
P.O. BOX 20000 • LAS CRUCES, NM 88004

NOTE: Over the coming months, The City of Las Cruces is transitioning our email domain to lascruces.gov. Please make sure you update your email systems to accommodate my new email address which will end in @lascruces.gov. My current email address will continue to work for a limited time.

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New Mexico
Office of the State Engineer
District IV

DBS&A
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Joint Superfund Project

City of Las Cruces and Doña Ana County

April 11, 2023

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 2021. We are requesting if any activities related to the Order inside the plume footprint during 2022 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 9, 2023, 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

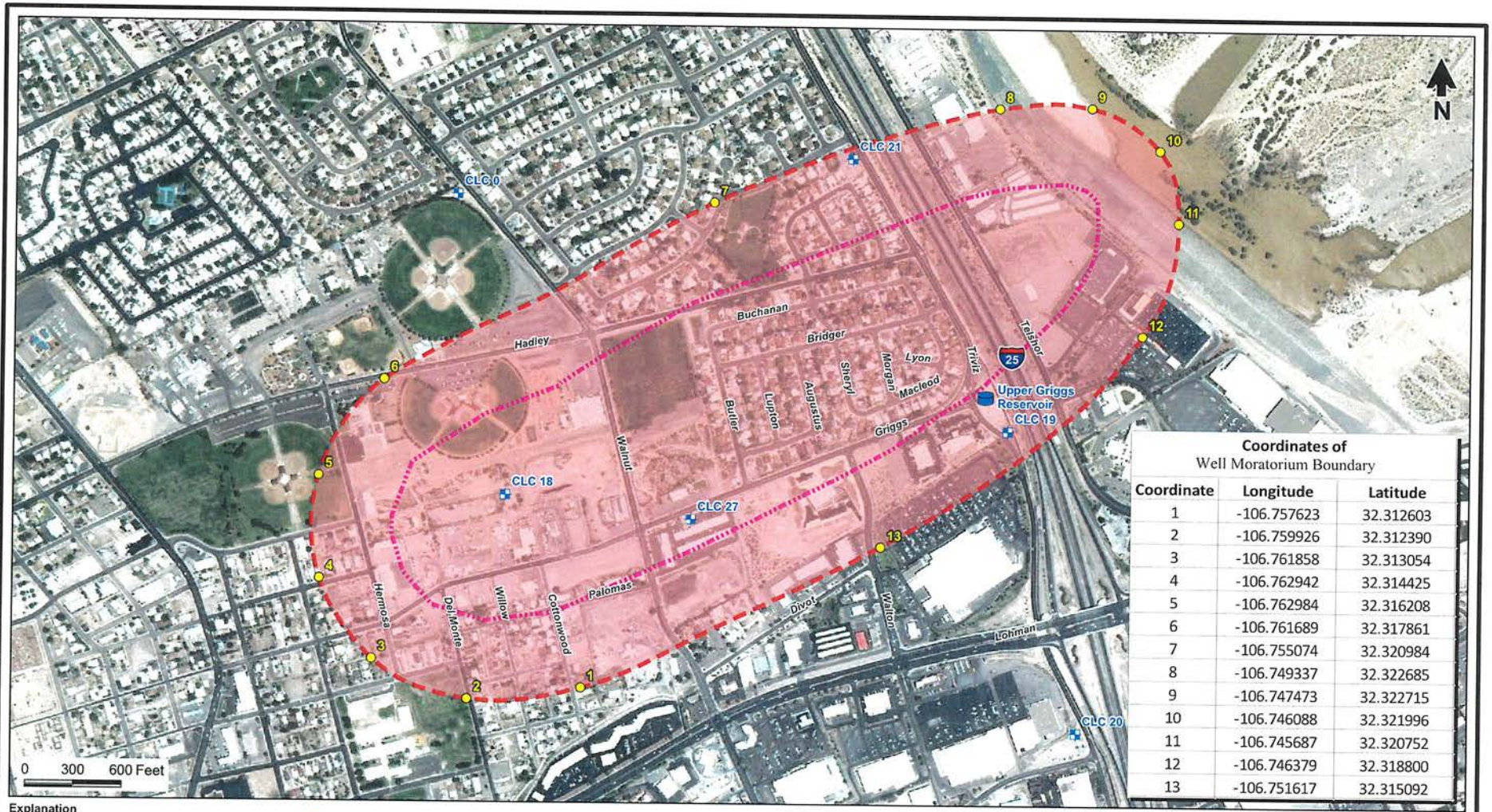
Sincerely,



Adrienne L. Widmer, P.E.
Project Coordinator, Griggs and Walnut Groundwater Plume Superfund Site
Utilities Director, City of Las Cruces Utilities

Attachment: As noted

cc: 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
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

Daniel B. Stephens & Associates, Inc.
2/14/2019
JN ES09.0306

GRIGGS-WALNUT GROUND WATER PLUME SITE
Well Moratorium Boundary

Figure 1

\\ss6abq\Data5\Projects\ES09.0306 Griggs-Walnut\GIS\MXDs\Site maps\Well moratorium.mxd

Herrmann, Grace

From: Cathey, Craig D., OSE <craig.cathey@ose.nm.gov>
Sent: Tuesday, April 11, 2023 12:17 PM
To: Widmer, Adrienne
Cc: Medeiros, David; Pohl, Jerri, OSE; Herrmann, Grace
Subject: RE: [EXTERNAL] Griggs and Walnut Ground Water Plume Superfund Site - Institutional Control Implementation and Assurance

Hi Adrienne,

Nothing has changed from this time last year. A search of our records did not find any new appropriations of groundwater including Section 72-12-1.1, 72-12-1.2 or 72-12-1.3 (NMSA) wells within the plume footprint during 2022. There have also been no transfers of water to existing wells within the plume footprint during 2022.

Sincerely,

Craig Cathey
New Mexico Office of the State Engineer
Las Cruces, District IV Manager
1680 Hickory Loop, Suite J
Las Cruces, NM 88005
Office (575) 524-6161
Fax (575) 524-6160
www.ose.state.nm.us

find your well online using the New Mexico Water Rights Reporting System:
https://nmwrrs.ose.state.nm.us/nmwrrs/index.html

find your well online using GIS:
https://gis.ose.state.nm.us/gisapps/ose_pod_locations/

view notices for publication:
https://www.ose.state.nm.us/NFP/nfp.php

enter your meter readings:
https://www.ose.state.nm.us/Meter/

From: Adrienne Widmer <awidmer@las-cruces.org>
Sent: Tuesday, April 11, 2023 9:43 AM
To: Cathey, Craig D., OSE <craig.cathey@ose.nm.gov>
Cc: Medeiros, David <davem@donaanacounty.org>; Pohl, Jerri, OSE <Jerri.Pohl@ose.nm.gov>; Herrmann, Grace <gherrmann@geo-logic.com>
Subject: [EXTERNAL] Griggs and Walnut Ground Water Plume Superfund Site - Institutional Control Implementation and Assurance
Importance: High

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Hi Craig,

Hope all continues to be well with you, and it is that time of year again for us to mail out the attached letter 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 us know.

Look forward to hearing from you and thank you!

Adrienne L. Widmer, P.E.
Director/Las Cruces Utilities/Administration
Direct: 575-528-3524 Main: 575-528-3512, awidmer@las-cruces.org or awidmer@las-cruces.gov
City of Las Cruces
P.O. BOX 20000 • LAS CRUCES, NM 88004

NOTE: Over the coming months, The City of Las Cruces is transitioning our email domain to lascruces.gov. Please make sure you update your email systems to accommodate my new email address which will end in @lascruces.gov. My current email address will continue to work for a limited time.

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Appendix G

Data Validation Report

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Appendix G. Data Validation Report

A total of 114 samples were collected between January 27 and December 27, 2022 as part of the Griggs-Walnut Ground Water Plume Superfund Site (GWP site) remedial action. These samples include 80 remediation system (process) samples collected by City of Las Cruces (CLC) staff and 34 samples associated with the annual sampling event completed between November 15 and 16, 2022 collected by Daniel B. Stephens & Associates, Inc. (DBS&A). During the annual event, samples were collected using dedicated Hydrasleeves. 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 7 percent of the primary samples collected during the annual sampling event. A total of 19 field duplicate samples were analyzed, including 1 per month for process sampling along with quarterly air samples, and at a frequency of approximately 12 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 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 air samples collected December 27, 2022. 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 16) 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 17 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 87 and 107 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 78 to 115 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 86 to 112 percent (compared to control limits of 70 to 130 percent). The maximum relative percent difference (RPD) between MS and MSD recoveries was 6 percent for 1,1-DCE a (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. Only dedicated sampling equipment was used during the annual sampling event; therefore, no equipment blanks were submitted for analysis.
- Field blanks were required to be collected at a frequency of 10 percent during the annual sampling event. Results from 3 field blanks were provided for 29 primary samples, which meets the minimum frequency 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 18 sets of field duplicate samples were submitted to HEAL as part of the QC criteria, including 15 groundwater samples and 3 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, 12 sets of process sample duplicates were submitted, which is the appropriate rate of 1 per month. For vapor sampling, 4 duplicate samples were submitted, which meets the requirement of 1 per quarter. 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-4. Of the 18 duplicate sets of samples, 17 met the QC criteria. An RPD value greater than 50 percent was calculated for 1 analyte associated with sample AS1-220224 Dup. The primary sample result was just above the reporting limit, and the

duplicate sample was a non-detect. Therefore, the RPD was calculated using a concentration value of one-half the reporting limit, which resulted in an RPD greater than 50 percent. 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, five different identifiers for duplicate samples were submitted. 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.

Appendix G Tables

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Table G-1. Groundwater Samples Collected

Well Name	Required Number of Samples	Actual Number of Samples
CLC 18	1	1
CLC 27	1	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
CLC18-220127	1/27/2022	2201b09-001a	No dilution
CLCIS1-220127	1/27/2022	2201b09-003a	No dilution
CLCIS1-220127 Dup	1/27/2022	2201b09-004a	No dilution/field duplicate
CLCES1-220127	1/27/2022	2201b09-005a	No dilution
CLC27-220127	1/27/2022	2201b09-002a	No dilution
CLC 18-220224	2/24/2022	2202C68-001a	No dilution
CLC IS1-220224	2/24/2022	2202C68-003a	No dilution
CLC C1-220224	2/24/2022	2202C68-004a	No dilution
CLC C1-220224 DUP	2/24/2022	2202C68-005a	No dilution/field duplicate
CLC C2-220224	2/24/2022	2202C68-006a	No dilution
CLC ES1-220224	2/24/2022	2202C68-007a	No dilution
AS1-220224	2/24/2022	2202C65-001a	No dilution
AS1-220224 Dup	2/24/2022	2202C65-002a	No dilution/field duplicate
AS2-220224	2/24/2022	2202C65-003a	No dilution
CLC 27-220224	2/24/2022	2202C68-002a	No dilution
CLC 27-220331	3/31/2022	2204020-003a	No dilution
CLC 18-220331	3/31/2022	2204020-001a	No dilution
CLC 18-220331 (Dup)	3/31/2022	2204020-002a	No dilution/field duplicate
CLC IS1-220331	3/31/2022	2204020-004a	No dilution
CLC ES1-220331	3/31/2022	2204020-005a	No dilution
CLC 18-220428	4/28/2022	2204D07-001a	No dilution
CLC IS1-220428	4/28/2022	2204D07-004a	No dilution
CLC ES1-220428	4/28/2022	2204D07-005a	No dilution
CLC 27-220428	4/28/2022	2204D07-003a	No dilution
CLC 27-220428 (Dup)	4/28/2022	2204D07-002a	No dilution/field duplicate
CLC 18-220524	5/24/2022	2205B19-001a	No dilution
CLC IS1-220524	5/24/2022	2205B19-003a	No dilution
CLC C1-220524	5/24/2022	2205B19-004a	No dilution
CLC C2-220524	5/24/2022	2205B19-005a	No dilution
CLC C2-220524 (DUP)	5/24/2022	2205B19-006a	No dilution/field duplicate
CLC ES1-220524	5/24/2022	2205B19-007a	No dilution
AS1-220524	5/24/2022	2205D02-001a	No dilution
AS2-220524	5/24/2022	2205D02-002a	No dilution

Table G-2. Sample Information
Page 2 of 4

Client Sample ID	Sample Date	Lab Sample ID	Dilutions/Comments
AS2-220524 DUP	5/24/2022	2205D02-003a	No dilution/field duplicate
CLC 27-220524	5/24/2022	2205B19-002a	No dilution
CLC 18-220616	6/16/2022	2206981-001a	No dilution
CLC IS1-220616	6/16/2022	2206981-003a	No dilution
CLC ES1-220616	6/16/2022	2206981-004a	No dilution
CLC ES1-220616(DUP)	6/16/2022	2206981-005a	No dilution/field duplicate
CLC 27-220616	6/16/2022	2206981-002a	No dilution
CLC 18-220728	7/28/2022	2207f21-001a	No dilution
CLC 27-220728	7/28/2022	2207f21-002a	No dilution
CLC IS1-220728	7/28/2022	2207f21-003a	No dilution
CLC IS1-220728 Dup	7/28/2022	2207f21-004a	No dilution/field duplicate
CLC ES1-220728	7/28/2022	2207f21-005a	No dilution
CLC 18- 220830	8/30/2022	2208i20-001a	No dilution
CLC IS1- 220830	8/30/2022	2208i20-003a	No dilution
CLC C1- 220830	8/30/2022	2208i20-004a	No dilution
CLC C2- 220830	8/30/2022	2208i20-005a	No dilution
CLC C2- 220830 DUP	8/30/2022	2208i20-006a	No dilution/field duplicate
CLC ES 1-220830	8/30/2022	2208i20-007a	No dilution
CLC 27- 220830	8/30/2022	2208i20-002a	No dilution
AS1-220830	8/31/2022	2208i21-001a	No dilution
AS1-220830 DUP	9/1/2022	2208i21-002a	No dilution
AS2-220830	9/2/2022	2208i21-003a	No dilution
CLC-18-220927	9/27/2022	2209f18-001a	No dilution
CLC-18-220927 (Dup)	9/27/2022	2209f18-002a	No dilution/field duplicate
CLC-IS1-220927	9/27/2022	2209f18-004a	No dilution
CLC-ES1-220927	9/27/2022	2209f18-005a	No dilution
CLC-27-220927	9/27/2022	2209f18-003a	No dilution
CLC 18-221025	10/25/2022	2210C84-001a	No dilution
CLC IS1-221025	10/25/2022	2210C84-002a	No dilution
CLC ES1-221025	10/25/2022	2210C84-003a	No dilution
CLC 27-221025	10/25/2022	2210C84-004a	No dilution
CLC 27-221025 (Dup)	10/25/2022	2210C84-005a	No dilution/field duplicate
CLC 18 - 221110	11/10/2022	2211713-001a	No dilution

Table G-2. Sample Information
Page 3 of 4

Client Sample ID	Sample Date	Lab Sample ID	Dilutions/Comments
CLC I51 - 221110	11/10/2022	2211713-002a	No dilution
CLC ES1 - 221110	11/10/2022	2211713-003a	No dilution
CLC ES1 - 221110 (DUP)	11/10/2022	2211713-004a	No dilution/field duplicate
CLC 27 - 221110	11/10/2022	2211713-005a	No dilution
FB1	11/15/2022	2211B57-031a	No dilution
GWMW01-D	11/15/2022	2211B57-006a	No dilution
GWMW01-I	11/15/2022	2211B57-004a	No dilution
GWMW01-I_Dup	11/15/2022	2211B57-005a	No dilution/field duplicate
GWMW01-S	11/15/2022	2211B57-003a	No dilution
MWSF2	11/15/2022	2211B57-024a	No dilution
GWMW08-S	11/15/2022	2211B57-007a	No dilution
GWMW08-D	11/15/2022	2211B57-008a	No dilution
MWSF5	11/15/2022	2211B57-025a	No dilution
NGMW02	11/15/2022	2211B57-029a	No dilution
FB2	11/16/2022	2211B57-032a	No dilution
GWMW16-D	11/16/2022	2211B57-022a	No dilution
GWMW16-D_Dup	11/16/2022	2211B57-023a	No dilution/field duplicate
GWMW16-S	11/16/2022	2211B57-021a	No dilution
MWSF9	11/16/2022	2211B57-026a	No dilution
NGMW03	11/16/2022	2211B57-030a	No dilution
MWSF10	11/16/2022	2211B57-027a	No dilution
GWMW09-D1	11/16/2022	2211B57-010a	No dilution
GWMW09-D1_Dup	11/16/2022	2211B57-036a	No dilution/field duplicate
GWMW09-D2	11/16/2022	2211B57-011a	No dilution
GWMW09-S	11/16/2022	2211B57-009a	No dilution
NGMW01	11/16/2022	2211B57-028a	No dilution
GWMW10-S	11/16/2022	2211B57-012a	No dilution
FB3	11/16/2022	2211B57-033a	No dilution
GWMW10-I	11/16/2022	2211B57-013a	No dilution
GWMW10-D	11/16/2022	2211B57-014a	No dilution
GWMW11-S	11/16/2022	2211B57-015a	No dilution
GWMW11-I	11/16/2022	2211B57-016a	No dilution
GWMW11-D	11/16/2022	2211B57-017a	No dilution

Table G-2. Sample Information
Page 4 of 4

Client Sample ID	Sample Date	Lab Sample ID	Dilutions/Comments
GWMW15-S	11/16/2022	2211B57-018a	No dilution
GWMW15-I	11/16/2022	2211B57-019a	No dilution
GWMW15-D	11/16/2022	2211B57-020a	No dilution
CLC 27-221227	12/27/2022	2212e25-002a	No dilution
CLC 18-221227	12/27/2022	2212e25-001a	No dilution
CLC IS1-221227	12/27/2022	2212e25-003a	No dilution
CLC C1-221227	12/27/2022	2212e25-004a	No dilution
CLC C1-221227-DUP	12/27/2022	2212e25-005a	No dilution/field duplicate
CLC C2- 221227	12/27/2022	2212e25-006a	No dilution
CLC ES1-221227	12/27/2022	2212e25-007a	No dilution
CLC AS1-221227	12/27/2022	2212E13-001a	No dilution
CLC AS2-221227	12/27/2022	2212E13-002a	No dilution
CLC AS2-221227-DUP	12/27/2022	2212E13-003a	No dilution
Trip Blank-1		2211B57-034a	No dilution
Trip Blank-2		2211B57-035a	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. RPD Results for All Duplicate Samples

Duplicate Sample ID	Maximum RPD (%)
AS1-220224 Dup	88.9 [a]
AS1-220830 DUP	26.7
CLC ES1 - 221110 (DUP)	25.0
CLC ES1-220616(DUP)	19.6
CLC ES1-220616(DUP)	8.0
CLC 27-221025 (Dup)	6.9
CLC IS1-220728 Dup	6.5
AS2-220524 DUP	6.1
CLC 18-220331 (Dup)	5.3
CLC ES1 - 221110 (DUP)	3.6
CLCIS1-220127 Dup	0.0
CLC 27-220428 (Dup)	0.0
CLC IS1-220728 Dup	0.0
CLC-18-220927 (Dup)	0.0
CLC AS2-221227-DUP	0.0

[a] One of the samples had a non-detect result, and the RPD was calculated using one-half the detection limit.
RPD = Relative percent difference