



ENTERPRISE PRODUCTS PARTNERS L.P.
ENTERPRISE PRODUCTS HOLDINGS LLC
(General Partner)

ENTERPRISE PRODUCTS OPERATING LLC

October 27, 2025

Submitted online via OCD E-Permitting:

<https://wwwapps.emnrd.state.nm.us/OCD/OCDPermitting/default.aspx>

Mr. Nelson Velez
New Mexico Energy, Minerals and Natural Resources Department
1220 South St Francis Dr
Santa Fe, NM 87505

Re: Chaco Plant Produced Water Stage 1 Abatement Plan (Ensolum, September 17, 2025)
Enterprise Field Services, LLC
P.O Box 4324, Houston TX 77210-4324
Chaco Plant, San Juan County, NM
Unit Letter E, Sec 16 T26N R12W
Incident Number: NAPP2202747264

Dear Mr. Velez:

Enterprise Products Operating LLC (Enterprise), on behalf of Enterprise Field Services, LLC, is pleased to submit to the New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD) an electronic copy of the above referenced report prepared by Ensolum, LLC (Ensolum). The report is associated with the Enterprise Chaco Plant produced water spill that was identified on January 6, 2022 from a frozen valve on a riser connected to the three-phase separator water tanks on the Chaco Plant in San Juan County, New Mexico (hereinafter referred to as "the Site").

A {Soil} Closure Report dated July 2, 2025 was submitted to the OCD and was approved on August 13, 2025. The Stage 1 Abatement Plan submitted herein proposes groundwater delineation activities.

Should you have any questions, comments, or concerns, or need additional information regarding this Site, please contact Valerie Phipps via email at vhipps@eprod.com, or via phone at 713-863-5060.

Sincerely,

Valerie Phipps
Staff Engineer, Environmental

Tucker Jacobson
Senior Manager, Environmental

ec: Ensolum – Mr. Dan Moir <dmoir@ensolum.com>



Stage 1 Abatement Plan

Property:

Chaco Plant Produced Water Spill
Unit Letter E, Sec 16 T26N R12W
San Juan County, New Mexico

New Mexico Oil Conservation Division (NMOCD) Incident Number NAPP2202747264


September 17, 2025

Ensolum Project No. 05B1226019

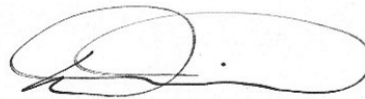
Prepared for:

Enterprise Field Services, LLC
P.O. Box 4324
Houston, Texas 77210-4324

Prepared by:



Hadlie Green
Project Geologist



Daniel R. Moir, PG (licensed in WY & TX)
Senior Managing Geologist

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1.0 INTRODUCTION

Ensolum, LLC (Ensolum) has prepared this *Stage 1 Abatement Plan* for Enterprise Field Services, LLC (Enterprise) as it relates to the Chaco Plant Produce Water Spill (Site). The Site is located within Unit Letter E of Section 16, Township 26 North, Range 12 West, in San Juan County, New Mexico (36.484021°, -108.117050°). The Site location is depicted on **Figure 1**, which was reproduced from a portion of a United States Geological Survey (USGS) 7.5-minute series topographic map.

Based on correspondence from the New Mexico Oil Conservation Division (NMOCD), dated September 15, 2023, Enterprise is required to submit a Stage 1 Abatement Plan. The purpose of the Stage 1 Abatement Plan is to define Site conditions in order to select an effective abatement option. Stage 2 Abatement Plans involve the implementation of the selected remedial option. This *Stage 1 Abatement Plan* provides an overview of the Site description and background, summarizes historical Site investigations and remediation efforts, and details the geologic and hydrogeologic characteristics. Additionally, it proposes further delineation and monitoring, and includes a proposed schedule to complete delineation activities in accordance with Title 19, Chapter 15, Part 30, Sections 14 and 17 (19.15.30.14 and 17) of the New Mexico Administrative Code (NMAC). Following the successful completion of these activities and agency approval, a Stage 2 Abatement Plan may be developed to address the remediation of constituents of concern (COCs) exceeding the applicable New Mexico Water Quality Control Commission (NMWQCC) groundwater standard(s) (GQSs) for groundwater impacts and/or NMOCD Closure Criteria for soil impacts at the Site.

1.1 Standards of Care, Limitations, and Reliance

Ensolum's services have been and will be performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Ensolum makes no warranties, express or implied, as to the services to be performed hereunder. Additionally, Ensolum does not warrant the work of third parties supplying information to be used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services will be performed in accordance with the scope of work agreed with Enterprise and regulatory agency, as detailed in our discussions.

Findings, conclusions, and recommendations resulting from these services will be based upon information derived from public information resources and it should be noted that this information is subject to change over time. Ensolum's findings are based solely upon data available to Ensolum at the time of these services.

This report has been prepared for the exclusive use of Enterprise, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the express written authorization Enterprise and Ensolum. Any unauthorized distribution or reuse is at Enterprise's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the Stage 1 Abatement Plan and Ensolum's Agreement with Enterprise. The limitation of liability defined in the agreement is the aggregate limit of Ensolum's liability to Enterprise.

2.0 SITE DESCRIPTION AND BACKGROUND

The Enterprise Chaco Plant is a natural gas processing plant, located near the town of Bloomfield in New Mexico. The plant is owned and operated by Enterprise and is within the Navajo Nation Off-Reservation Trust Land.

On January 6, 2022, Enterprise operations identified a produced water release caused by a frozen valve connected to the three-phase separator and produced water tanks. Initial excavation activities at the Site were overseen by Ensolum but were postponed due to the presence of asbestos in buried construction materials. Subsequently, environmental consulting oversight was transferred to Envirotech, Inc. (Envirotech), which collected 16 confirmation soil samples from the excavation. Analytical results indicated benzene, toluene, ethylbenzene, total xylenes (BTEX), and total combined total petroleum hydrocarbon (TPH) concentrations exceeding the NMOCD Closure Criteria for soil. Soil exhibiting COC exceedances were identified at the northeast portion of the north sidewall and at the west sidewall. Subsequent to sample collection, Enterprise received approval from the NMOCD, to treat the affected walls with a hydrogen peroxide solution and the excavation was backfilled with imported, clean soil.

Delineation activities were performed in June 2022 to assess potential groundwater impacts related to the January 2022 release. Results from the delineation activities indicated COC concentrations in soil were below the NMOCD Closure Criteria; however, COC concentrations in groundwater exceeded the applicable NMWQCC GQS. Based on remediation activities and groundwater delineation activities completed at the Site, Enterprise submitted a *Produced Water Spill Remediation and Groundwater Investigation Report* to the NMOCD on September 15, 2023. The NMOCD denied the report the same day stating the following deficiencies:

Content is Unsatisfactory 1. A separate groundwater stage 1 and/or stage 2 abatement plan is required to be submitted to NMOCD as per 19.15.30.13 of the NMAC. 2. Soil closure requests are required to be submitted under the original C-141 separately for which it was submitted, and shall not be part of groundwater abatement, nor co-mingled as one report. 3. Re-submit a site characterization report for groundwater and a stage 1 abatement plan as required by 19.15.30 of the NMAC.

On July 19, 2025, Enterprise submitted a *Closure Report* to the NMOCD, describing remedial actions associated with the excavation and removal of impacted soil and in-situ treatment of residual in-place impacted soil via hydrogen peroxide and requesting no additional soil investigation or correction and proposing groundwater assessment (*Chaco Plant Produced Water Spill Closure Report, Ensolum, June 5, 2025*). Approval of the *Closure Report* by the NMOCD was received on August 13, 2025.

3.0 SITE CHARACTERIZATION

3.1 Regional Geology and Hydrogeology

The Site is located within the San Juan Basin which is the major structural feature in the northwest corner of New Mexico. The San Juan Basin is classified as an arid region, as most of the area receives less than 10 inches of precipitation per year. Mean annual precipitation in the mountainous regions along the basin margin may be as much as 30 inches a year. Surface water is relatively scarce, with the exception of the San Juan River and its tributaries.

Based upon reference information from the New Mexico Bureau of Geology and Mineral Resources publication on the background geology of the San Juan Basin (Decision-Makers Field Conference 2002) "most of the aquifers in the San Juan Basin exist under confined or semi-confined hydrologic conditions. In Mesozoic rocks of the region, the confined sandstone aquifers are interbedded with shales that behave as aquitards. The Triassic mudrock sequence is the aquitard for the Permian Limestone. Groundwater in the alluvium along streams and in the shallow Tertiary sandstone aquifers is generally unconfined and is open to the atmosphere through pores in the overlying permeable rocks."

The major aquifer underlying the Site vicinity is listed as the Colorado Plateaus Aquifer, which is made up of four aquifers – Uinta-Anima, Mesa Verde, Dakota-Glen, and Coconino-De Chelly. The

Uinta-Animas is the shallowest of these aquifers and is present in the San Juan Basin. The general composition of the aquifers is moderate to well-consolidated sedimentary rocks of an age ranging from Permian to Tertiary. Each aquifer is separated from the others by an impermeable confining unit. Two of the confining units are completely impermeable and cover the entire area of the aquifers. The other two confining units are less extensive and are thinner. These units allow water to flow between the principal aquifers.

According to the New Mexico Bureau of Geology and Mineral Resource (Geologic Map of New Mexico 2003), the Site is located within the upper Nacimiento Formation. The Nacimiento Formation is a heterogeneous non-marine formation composed of sandstone, siltstone, and shale, comprised of sediment eroded from the San Juan and Brazos-Sangre de Cristo uplifts.

3.2 Local Geology and Hydrogeology

Borehole logs were prepared by Envirotech during the initial Site investigation activities. These logs documented observations of soil moisture, color, grain size, contaminant presence, and overall stratigraphy. The lithology encountered at the Site during drilling activities primarily consisted of Quaternary alluvial and fluvial deposits. Data collected from the soil boreholes indicated the lithology generally consists of brown to light tan to light gray sands, clayey sand, sandy clay, and clay. Detailed lithologic descriptions are presented on the monitoring well soil boring logs included in **Appendix A**.

The initial groundwater-bearing unit was encountered at a depth of 47.5 feet bgs, within a coarse sand bearing unit within monitoring well MW-4, which was absent at the terminus of the other four monitoring wells (refusal was observed within sandy clay and clayey sand at approximately 40 feet to 42.5 feet bgs). No impacts to surface water have been identified based on the Site investigation activities.

According to Domenico and Schwartz (1990), the estimated default hydraulic conductivity for the impacted sand unit at the Site ranges from 9×10^{-7} meters per second (m/sec) to 2×10^{-6} m/sec, equivalent to approximately 0.26 to 0.57 feet per day (ft/day). Additional Site-specific aquifer characterization is proposed as part of this Stage 1 Abatement Plan Proposal.

4.0 CLOSURE CRITERIA AND GROUNDWATER QUALITY STANDARDS

The Site is subject to regulatory oversight by the NMOCD. Ensolum referenced 19.15.29 NMAC (*Releases*) and 19.15.30 NMAC (*Remediation*), which establishes investigation and abatement action requirements for oil and gas release sites subject to reporting and/or corrective action. Additionally, Ensolum utilizes the NMWQCC GQS (20.6.2 NMAC *Ground and Surface Water Protection*) to evaluate groundwater conditions. The appropriate Closure Criteria for Sites are determined using the siting requirements outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC. Ensolum utilized the general Site characteristics and information available from New Mexico state agency databases and federal agency geospatial databases to determine the appropriate Closure Criteria for the Site. Results from the characterization are summarized below. Potential Site receptors are identified on **Figure 1**.

The New Mexico Office of the State Engineer (NMOSE) tracks the usage and assignment of water rights and water well installations and records this information in the Water Rights Reporting System (WRRS) database. Water wells and other points of diversion (PODs) are each assigned POD numbers in the database (which is searchable and includes an interactive map). There are four PODs (SJ-04463-POD1/EW-1 through POD4/EW-4) located inside the Chaco Plant facility. The shallowest depth to water at the Site is approximately 12 feet bgs. Six PODs (SJ-04534-POD1 through POD6) associated with this Site were permitted. Groundwater was encountered

during drilling at approximately 47.5 feet bgs. All wells used for depth to groundwater determination are presented on **Figure 1**.

- No cathodic protection wells (CPWs) were identified in the NMOCD imaging database in the same Public Land Survey System (PLSS) section as the Site or in the adjacent PLSS sections.
- The Site is not located within 300 feet of a NMOCD-defined continuously flowing watercourse or significant watercourse.
- The Site is not located within 200 feet of a lakebed, sinkhole, or playa lake.
- The Site is not located within 300 feet of a permanent residence, school, hospital, institution, or church.
- No springs, or private domestic freshwater wells used by less than five households for domestic or stock watering purposes were identified within 500 feet of the Site.
- No freshwater wells or springs were identified within 1,000 feet of the Site.
- The Site is not located within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to New Mexico Statutes Annotated (NMSA) 1978, Section 3-27-3.
- Based on information identified in the U.S. Fish & Wildlife Service National Wetlands Inventory Wetlands Mapper, the Site is not within 300 feet of a wetland.
- Based on information identified in the New Mexico Mining and Minerals Division's Geographic Information System (GIS) Maps and Mine Data database, the Site is not within an area overlying a subsurface mine.
- The Site is not located within an unstable area per Paragraph (6) of Subsection U of 19.15.2.7 NMAC.
- Based on information provided by the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) geospatial database, the Site is not within a 100-year floodplain.

Based on available information, the depth to water at the Site is less than 50 feet bgs, resulting in a sensitive receptor within the Site and as such, the applicable Closure Criteria for soils remaining in place at the Site include: 10 milligrams per kilogram (mg/kg) for benzene, 50 mg/kg for combined total BTEX, 100 mg/kg for TPH gasoline range organics (GRO), diesel range organics (DRO) and motor oil/lube oil range organics (MRO), and 600 mg/kg for chloride.

In addition, cleanup/delineation goals for groundwater located at the Site include: 5 micrograms per liter ($\mu\text{g/L}$) for benzene, 1,000 $\mu\text{g/L}$ for toluene, 700 $\mu\text{g/L}$ for ethylbenzene, 620 $\mu\text{g/L}$ for total xylenes, 600 milligrams per liter (mg/L) for sulfate, and 1,000 mg/L for total dissolved solids (TDS). There is no established WQCC GQS for TPH. The chloride GQS is 250.0 milligrams per liter (mg/L) The pH range to be assessed is between 6.6 and 8.6.

5.0 SUMMARY OF SITE ASSESSMENT ACTIVITIES

On January 6, 2022, Enterprise discovered a produced water release from a frozen valve associated with the three-phase separator and produced water tanks. On January 24, 2022, Enterprise initiated activities to repair the pipeline and remediate potential petroleum hydrocarbon impact. On March 15, 2022, Ensolum performed the initial excavation activities at the Site; however, these activities were postponed due to possible asbestos associated with buried

construction materials. Asbestos was subsequently confirmed, and the environmental consulting oversight was transferred to Envirotech.

On April 18, 2022, Envirotech resumed remediation activities. Following the cessation of soil remediation activities and off-site disposal of the removed hydrocarbon and asbestos affected soil, Envirotech collected 16 confirmation soil samples from the excavation. Analytical results indicated BTEX and total combined TPH concentrations exceeding the NMOCD Closure Criteria for soil. Soil exhibiting COC exceedances was identified at the northeast portion of the north sidewall and at the west sidewall. On May 16, 2022, with approval from the NMOCD, the affected walls were treated with a hydrogen peroxide solution and the excavation was backfilled with imported, clean soils (*Chaco Plant Produced Water Spill Closure Report*, Ensolum, June 5, 2025).

5.1 Soil Boring Installation

During June 2022, five soil borings (SB-1 through SB-5) were advanced at the Site via hollow stem auger (4.25-inch augers and a 2-inch by 18-inch split-spoon sampling system) by Envirotech. Prior to drilling, the known subsurface utilities were “daylighted” and the initial 6 feet of the soil boring locations were cleared utilizing a hydro-excavator. The soil borings were advanced within the vicinity of the former remediation excavation. Auger refusal was encountered at approximately 40 feet to 42.5 feet bgs with the exception of SB-4. SB-4 was advanced to 54.04 feet bgs. Groundwater was encountered at approximately 47.5 feet bgs within SB-4. Analytical results for the soil samples collected from the soil borings indicated COC concentrations were in compliance with the applicable NMOCD Closure Criteria; although, subsequent groundwater analytical results identified benzene, sulfate, and TDS concentrations in the groundwater (soil boring SB-4 was converted to monitoring well MW-4) above the NM WQCC GQS. A Site Map is included as Figure 2. Soil and groundwater analytical results are presented in **Table 1 and Table 2**. Analytical laboratory reports are included in **Appendix B**.

5.2 Soil Sampling Program

Two soil samples were collected for laboratory analysis from each soil boring: one within the vadose zone based on highest volatile organic compound (VOC) concentrations utilizing a calibrated photoionization detector (PID), visible staining and/or odor and one from immediately above the static water level.

The soil samples were collected in laboratory supplied 4-ounce glass jars, capped head space free, and transported on ice under strict chain-of-custody procedures to Envirotech Analytical Laboratory in Farmington, New Mexico for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-motor oil range organics (MOR) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

5.3 Monitoring Well Completion and Development

One soil boring (SB-4) was completed as a groundwater monitoring well (MW-4) using 2-inch schedule 40 polyvinyl chloride (PVC) threaded flush joint casing with 10 feet of 0.010 slot screen. The annulus of the well was filled with 10-20 Colorado silica sand to at least 2 feet above the screened interval, followed by 3 feet of bentonite chips hydrated with fresh water, and completed with cement grout to the ground surface. A flush mount, traffic rated meter box completion was cemented in place at the surface. A watertight j-plug with capabilities of being locked was placed on the top of the casing.

On July 5, 2022, Envirotech personnel developed the new well utilizing an alternating pumping and surging technique using a disposable bailer and pump. The development was completed until

water quality parameters stabilized within acceptable parameters per Envirotech's Standard Operating Procedure (SOP) for monitoring well development and sampling. Purged water was discharged into a barrel, labeled appropriately, and staged onsite for later disposal.

5.4 Groundwater Monitoring and Sampling

On July 7, 2022, Envirotech personnel gauged the depth to fluid using an interface probe capable of detecting light non-aqueous phase liquid (LNAPL). Once depth-to-water measurements were collected, the well was purged using a new disposable bailer and a minimum of three well volumes were removed from the well prior to sampling. Low-flow ground water sampling was not used due to issues with the pump. A calibrated YSI Multi-Parameter system, conductivity, pH, dissolved oxygen, and temperature were measured and recorded after stabilization. A groundwater sample was collected in laboratory-supplied containers preserved with hydrochloric acid (HCL), labeled, and sealed using the laboratory supplied labels and custody seals, and stored on ice in a cooler. The groundwater samples were transported under strict chain-of-custody procedures to Envirotech Analytical Laboratory in Farmington, New Mexico for analysis of VOCs following EPA Method 8260; cations and anions following EPA Method 6010 (dissolved); and chloride following EPA Method 300.0.

Laboratory analytical results indicated benzene, sulfate, and TDS concentrations in the groundwater (MW-4) exceeded the NM WQCC GQS. A Site Map with soil boring and monitoring well locations is included as **Figure 3**.

Semi-annual groundwater monitoring events have been going on at the Site between September 2022 and April 2025. Laboratory analytical results indicate benzene, sulfate, and TDS concentrations have exceeded the NM WQCC GQS during each event. Dissolved benzene has just exceeded the NM WQCC GQS of 5µg/L over the last two sampling events at concentrations of 5.6 µg/L and 5.9 µg/L, respectively. Groundwater analytical results are presented in **Tables 2A and 2B**. Analytical laboratory reports are included in **Appendix B**.

6.0 PROPOSED GROUNDWATER DELINEATION ACTIVITIES

Based on Site conditions, soil impacts appear to have been adequately remediated through excavation and application of hydrogen peroxide to residual sidewall impacts. Due to the presence of COCs exceeding the NMWQCC GQS within groundwater from monitoring well MW-4, additional groundwater delineation appears warranted at this time.

6.1 Soil Boring Installation

Four soil borings (PSB-6 through PSB-9) will be advanced utilizing a hollow stem auger, air-rotary, or sonic drilling rig, following the same procedures described above. Proposed borehole locations are presented on **Figure 3**. The soil borings will be advanced to a maximum depth of approximately 55 feet bgs, 5 feet below the initial water table, or auger refusal, whichever is shallower. The exact monitoring well locations may be altered by utility or facility infrastructure or access restrictions. Soil borings PSB-6 through PSB-9 will subsequently be completed as monitoring wells.

6.2 Soil Sampling Program

A minimum of two soil samples will be collected for laboratory analysis from each soil borehole. Samples will be selected for analysis from:

- The depth interval exhibiting the highest concentration of VOCs based on PID screening or observed contamination;

- From the terminus of the boring.

All soil samples will be collected in laboratory prepared containers. The containers will be labeled and sealed using laboratory supplied labels and custody seals and will be stored on ice in a cooler. The samples will be relinquished to the courier to an accredited analytical laboratory under proper chain-of-custody procedures.

6.3 Soil Laboratory Analytical Methods

A summary of the analytes, sample type, number of samples, and EPA-approved methods is presented in the following table:

Analytes	Sample Type	Number of Samples	Method
BTEX	Soil	8	SW-846 8021/8260
TPH GRO/DRO/MRO	Soil	8	SW-846 8015
Chloride	Soil	8	Method 300.0

6.4 Monitoring Well Installation and Construction

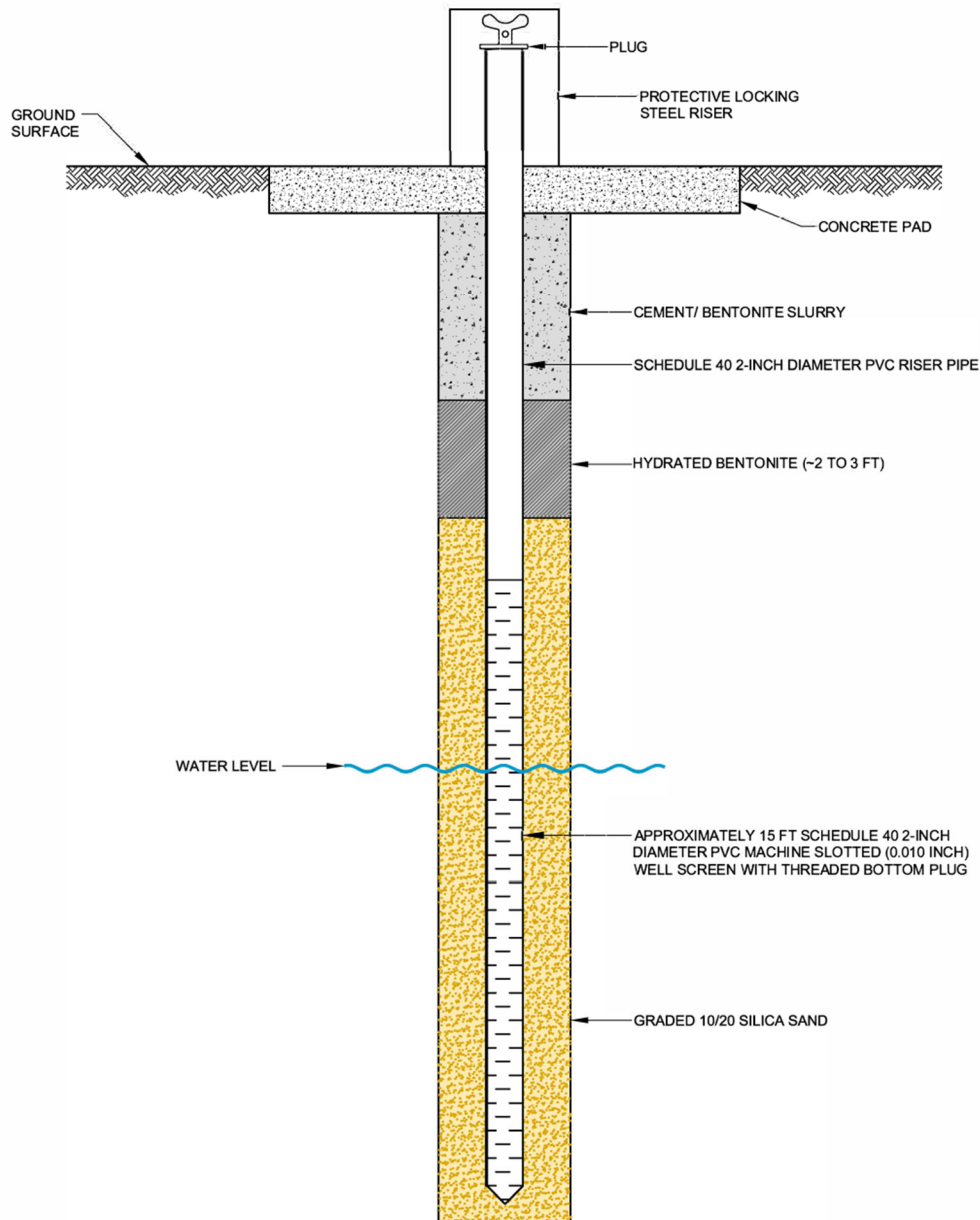
Subsequent to advancement and barring lithologic refusal in any of the soil borings, the soil boreholes will be completed as a 2-inch diameter groundwater monitoring wells, following the same procedures described above. If lithology allows, at least 5 feet of screened PVC will be set within the groundwater table. Depth to groundwater measurements from monitoring well MW-4 indicates groundwater will likely be encountered at approximately 45 feet bgs.

More specifically the monitoring wells will be completed as follows:

- Installation of 10 to 15 feet of 2-inch diameter, machine slotted (0.010-inch) schedule 40 polyvinyl chloride (PVC) well screen assembly with a threaded bottom plug;
- The target interval for the screen will exhibit at least 5 feet of screen below the static water level with 5 feet of screen above the static water level;
- Installation of Schedule 40 PVC riser pipe to surface;
- Addition of graded silica sand for annular sand pack around the well screen from the bottom of the well to approximately 2 feet above the top of the screen;
- Placement of approximately 2 feet of hydrated bentonite above the sand;
- Addition of cement/bentonite slurry to the surface; and
- Installation of an above-grade steel riser with an integrated padlock hasp.

Below is a schematic of the well construction for each proposed monitoring well at the Site.

Well Construction Schematic



The monitoring wells will be developed by surging and purging groundwater until 10 casing volumes have been removed and the fluid appears relatively free of fine-grained sediment.

6.5 Groundwater Hydraulics

Following installation, the monitoring wells will be professionally surveyed to determine the top of casing (TOC) and ground surface elevations. The TOC elevations will allow the calculation of the groundwater elevations at each well. This information will facilitate the creation of groundwater potentiometric surface maps, which will indicate the groundwater flow direction and hydraulic gradient. The relative ground elevations will facilitate the creation of lithologic and/or hydrogeologic cross-sections, if deemed necessary.

6.6 Groundwater Sampling Program

Once the new monitoring wells are installed and developed, Ensolum will collect one groundwater sample from each monitoring well. Ensolum's groundwater sampling program will consist of the following:

- Ensolum will gauge the depth to fluids in each monitoring well using an interface probe capable of detecting LNAPL.

The monitoring wells will be sampled utilizing micro-purge low-flow sampling techniques. Low-flow or low-stress sampling refers to sampling methods that are intended to minimize the stress that is imparted to the formation pore water in the vicinity of the well screen. Water level drawdown provides the best indication of the stress that is imparted by a given flow rate for a given hydrological situation. Pumping rates of 0.1 to 0.5 liters per minute (L/min) are typically maintained during the low-flow/low-stress sampling activities, using dedicated or decontaminated sampling equipment. Following the completion of the micro-purge process, one groundwater sample will be collected from each monitoring well.

- During low-flow sampling, the groundwater samples will be collected from each monitoring well once produced groundwater is consistent in color, clarity, pH, temperature, and conductivity. Measurements are typically observed every three to five minutes while purging. Purging is considered complete once key parameters (especially pH and conductivity) have stabilized for at least three consecutive readings.

Groundwater samples will be collected in laboratory-supplied containers preserved with HCL, labeled, and sealed using the laboratory supplied labels and custody seals, and stored on ice in a cooler. The groundwater samples will be relinquished to the courier for Eurofins of Albuquerque, New Mexico under proper chain-of-custody procedures.

6.7 Groundwater Laboratory Analytical Methods

The groundwater samples collected from the new monitoring wells and current monitoring well (MW-4) will be analyzed for the following analytes, sample type, number of samples, and EPA-approved methods is presented in the following table:

Analyte	Sample Type	No. of Samples	Method
BTEX	Water	5	SW-846 8260
Sulfate	Water	5	EPA 300.0
TDS	Water	5	SM-2540C MOD
Chloride	Water	5	Method 300.0
TPH GRO/DRO/MRO	Water	5	SW-846 8015
pH	Water	5	EPA 150.1 or 150.3

7.0 AQUIFER CHARACTERIZATION

Ensolum will assess the applicability of a detailed evaluation of Site-specific groundwater characteristics at the Site as part of the Stage 1 Abatement process. This assessment could include the characterization of the groundwater bearing unit and estimation of hydraulic

conductivity using slug testing methods. Slug testing involves the controlled introduction or removal of a physical slug, representing a known water volume, into the well to create a temporary rising or falling head condition. The subsequent recovery of the water level is precisely monitored using a high-resolution pressure transducer, which records continuous water level data that will be used to estimate the hydraulic conductivity. The test will be considered complete once water levels stabilize or when the test duration reaches 4 hours, ensuring reliable and representative results for hydrogeologic characterization.

While LNAPL has not been detected in monitoring well MW-4, if LNAPL is encountered within any of the newly installed monitoring wells at the Site, Ensolum will conduct bail-down testing to evaluate LNAPL transmissivity. This method involves removing a known volume of LNAPL from the well and measuring the rate of LNAPL recharge using an interface probe. The collected data will be analyzed to estimate the transmissivity of the LNAPL, providing critical information for assessing recoverability and guiding future remediation strategies.

8.0 QUALITY ASSURANCE

Sampling and analytical techniques described in previous Sections herein conform with the references identified in Subsection B of 20.6.2.3107 NMAC and with 20.6.4.14 NMAC of the water quality standards for interstate and intrastate surface waters in New Mexico.

9.0 PROPOSED SCHEDULE

Public Notice

Enterprise will provide Public Notice within 15 days of notice from NMOCD that this Abatement Plan is administratively complete as required per 19.15.30.15 NMAC. Enterprise will provide written notice of the Stage 1 Abatement Plan to the following parties:

- Surface owners of record within a 1-mile perimeter of the identified impacted area as currently delineated in the Stage 1 Abatement Plan. The list of Landowners is provided in **(Appendix C)**.
- The County Commission of San Juan County, New Mexico.
- The Office of Natural Resources Trustee for the State of New Mexico.

Please note the release was not identified to be within 1-mile of any city limits; however, the release was identified to be adjacent to the Navajo Tribal Trust (listed as USA in Trust for Navajo Tribe and Indian Allotment), which is the only entity within 1-mile of the Site.

Enterprise understands the NMOCD may request additional notification to persons or entities that have requested such, as well as other local, state, or federal governmental agencies upon approval of the Stage 1 Abatement Plan.

Once approval is received, Enterprise will publish the NMOCD approved notice in the Farmington Daily Times, a newspaper circulated in San Juan County, New Mexico, and in the Albuquerque Journal, a newspaper of general circulation across the state of New Mexico. The newspaper publications will run for a cycle of one business day.

Enterprise will issue the public notice via the newspapers and certified mailings within 15 days after the NMOCD has provided determination that the Stage 1 Abatement Plan is administratively complete. Proposed verbiage for the public notice is provided in **Appendix D**.

If no public comments are received within 30 days of posting public notice, Ensolum will proceed with permitting and scheduling supplemental Site investigation activities.

Field Activities

Enterprise proposes to continue semi-annual groundwater monitoring activities at the Site until the additional aquifer testing activities are evaluated and remedial options are presented to NMOCD for initial approval. The additional aquifer testing activities are proposed to be completed following the installation of the four proposed monitoring wells. Prior to any field work, Ensolum and/or Enterprise will provide the NMOCD with 48-hour notification.

If soil and/or groundwater analytical data indicates impacted soil and/or groundwater is present in any of the lateral extent monitoring wells, additional delineation soil borings/monitoring wells will be advanced within 120 days of laboratory analytical receipt and notifications to the NMOCD of exceedances. This timeline allows for well permit approvals from the NMOSE, coordination with drilling subcontractors, well development and sampling, and additional data review and evaluation for potential next steps in assessing and proposing remedial options for the Site.

Annual Progress Reports

In accordance with NMAC 19.15.30.13 C. (5), Enterprise will provide the NMOCD with annual progress reports of the Stage 1 Abatement Plan implementation beginning 30 days after the approval and initiation of the Stage 1 activities. At this time the summary annual progress reports are anticipated to begin in April 1, 2026.

10.0 REFERENCES

Chaco Plant Produced Water Spill Closure Report. Ensolum, June 5, 2025.

Chaco Plant Produced Water Spill Remediation and Groundwater Investigation Report. Envirotech, July 27, 2022.

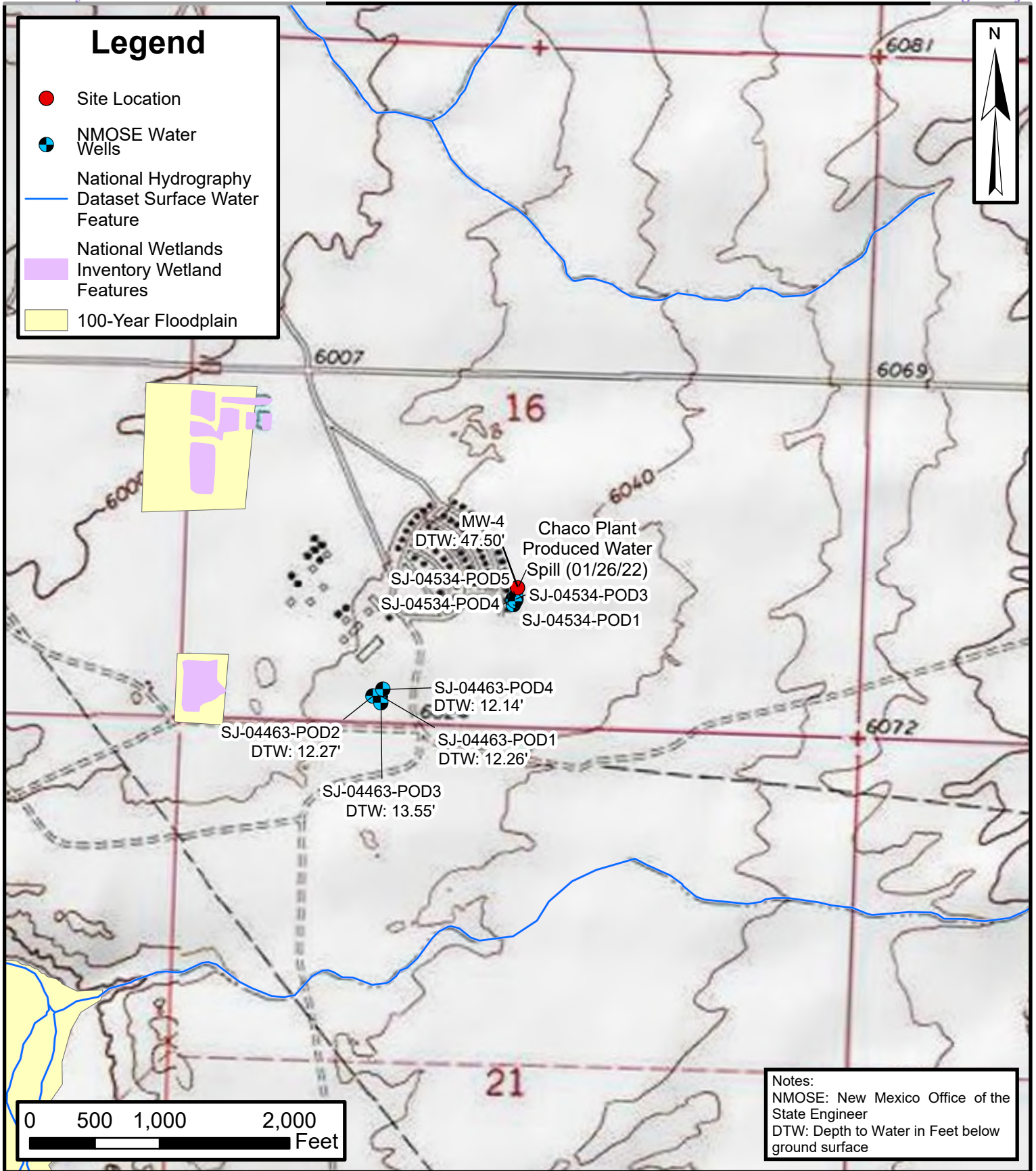
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Domenico, P. A., and Schwartz, F. W. Physical and Chemical Hydrogeology. 2nd ed., John Wiley & Sons, 1990.

Geologic Map of New Mexico. New Mexico Bureau of Geology and Mineral Resources, 2003.



Figures

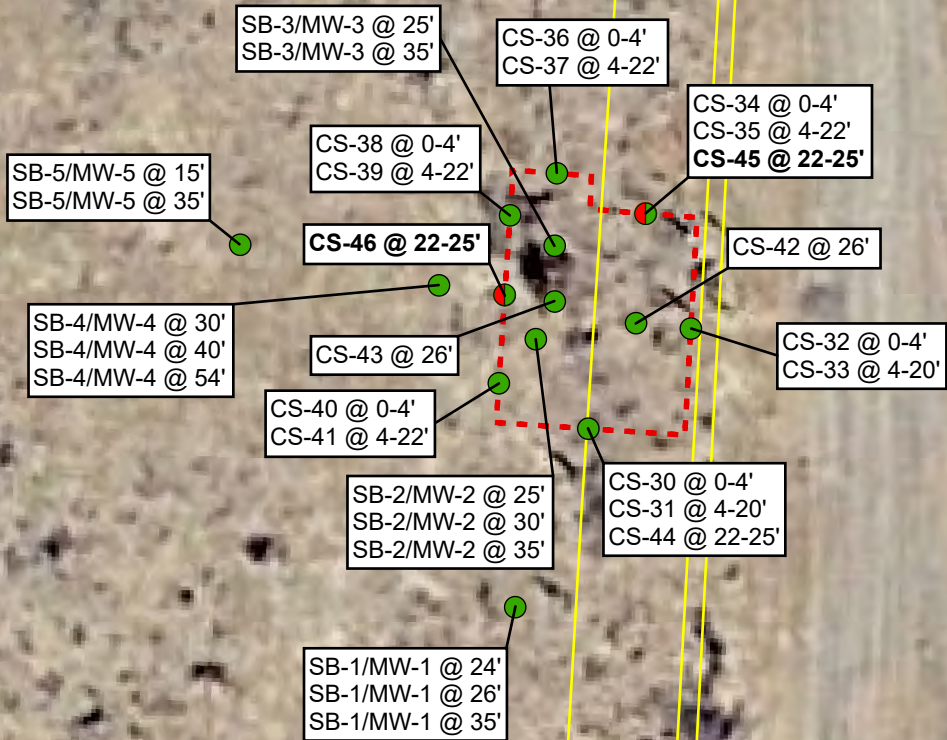


Site Receptor Map
 Chaco Plant Produced Water Spill
 Enterprise Field Services, LLC
 Unit Letter E, S16 T26N R12W
 San Juan County, New Mexico

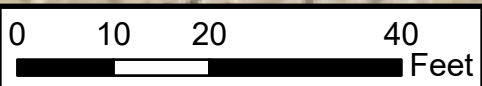
FIGURE
1

Legend

- 2022 Envirotech Soil Samples in Compliance with NMOCD Closure Criteria
- 2022 Envirotech Soil Samples Initially Exceeding NMOCD Closure Criteria
- Utilities
- Excavation Extent



Notes:
 Sample ID @ Depth Below Ground Surface in Feet
Bold: Indicates Results Initially Exceeded NMOCD Closure Criteria, Areas Treated With Hydrogen Peroxide Solution
 NMOCD: New Mexico Oil Conservation Division



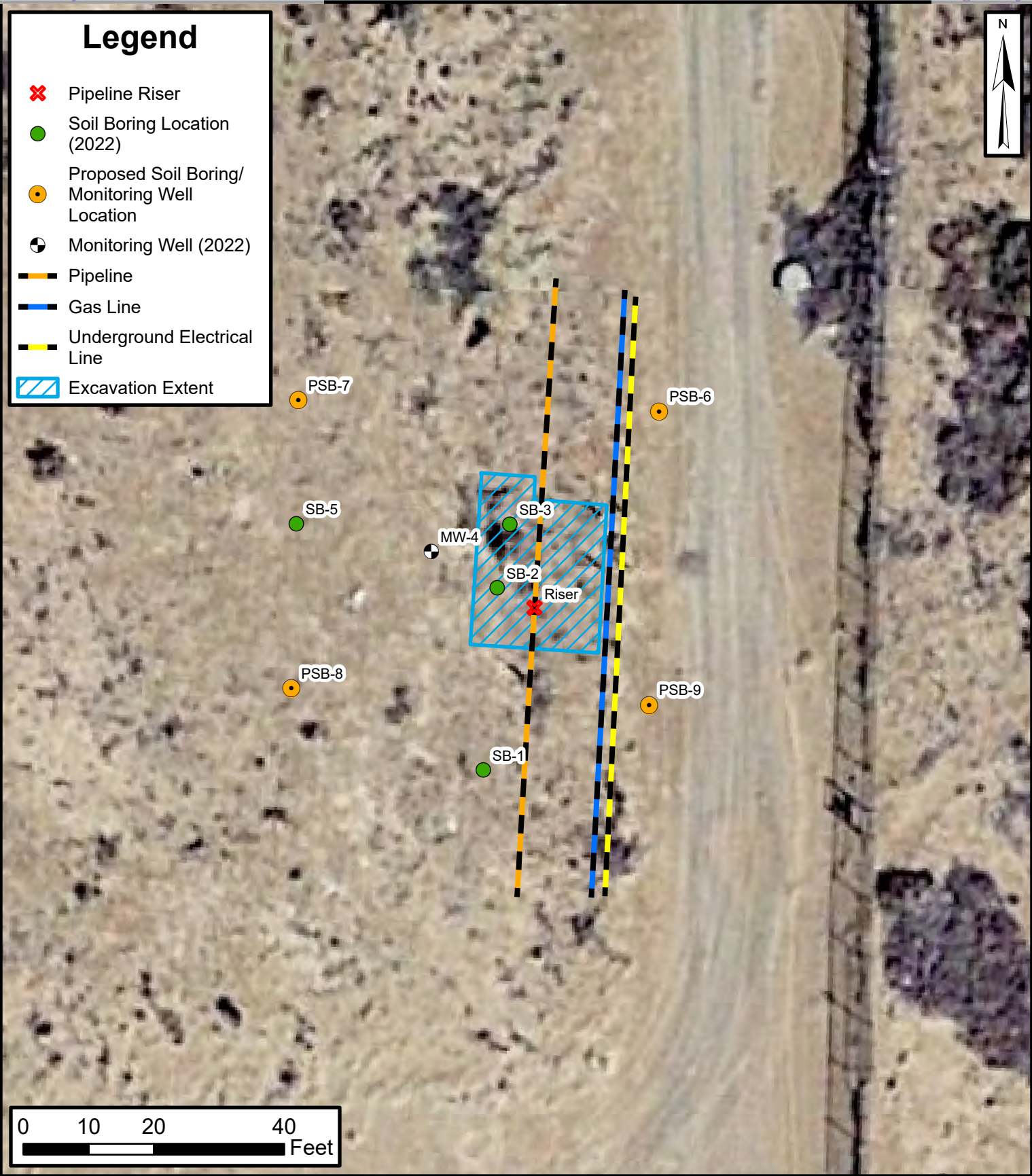
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Site Map

Chaco Plant Produced Water Spill
 Enterprise Field Services, LLC
 Unit Letter E, S16 T26N R12W
 San Juan County, New Mexico

FIGURE
2



Default Folder: C:\Users\Greg Palese\OneDrive - ENSOLUM, LLC\Desktop\Enterprise\Chaco Plant Produced Water Spill

**Site Map with Proposed Soil Boring/
Monitoring Well Locations**
 Chaco Plant Produced Water Spill
 Enterprise Field Services, LLC
 36.484021, -108.11705
 San Juan County, New Mexico

**FIGURE
3**



Tables



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
 Chaco Plant Produced Water Spill
 Enterprise Field Services, LLC
 San Juan County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Excavation Composite Soil Samples Collected by Envirotech, Inc (2022)										
CS-30	04/21/2022	0 to 4	<0.0250	0.0268	<20.0	<25.0	<50.0	<25.0	ND	<20.0
CS-31	04/21/2022	4 to 20	<0.0250	0.529	<20.0	<25.0	<50.0	<25.0	ND	<20.0
CS-32	04/21/2022	0 to 4	<0.0250	ND	<20.0	<25.0	<50.0	<25.0	ND	31.0
CS-33	04/21/2022	4 to 20	<0.0250	ND	<20.0	<25.0	<50.0	<25.0	ND	<20.0
CS-34	04/21/2022	0 to 4	<0.0250	ND	<20.0	<25.0	<50.0	<25.0	ND	<20.0
CS-35	04/21/2022	4 to 22	<0.0250	ND	<20.0	<25.0	<50.0	<25.0	ND	<20.0
CS-36	04/21/2022	0 to 4	<0.0250	ND	<20.0	<25.0	<50.0	<25.0	ND	29.3
CS-37	04/21/2022	4 to 22	0.300	16.7	48.3	<25.0	<50.0	48.3	48.3	20.2
CS-38	04/21/2022	0 to 4	<0.0250	0.0341	<20.0	<25.0	<50.0	<25.0	ND	<20.0
CS-39	04/21/2022	4 to 22	<0.0250	0.273	<20.0	<25.0	<50.0	<25.0	ND	<20.0
CS-40	04/21/2022	0 to 4	<0.0250	ND	<20.0	<25.0	<50.0	<25.0	ND	<20.0
CS-41	04/28/2022	4 to 22	0.187	0.91	<20.0	<25.0	53.9	53.9	53.9	<20.0
CS-42	04/28/2022	26	0.259	4.31	<20.0	<25.0	<50.0	<25.0	ND	<20.0
CS-43	04/28/2022	26	0.0283	1.14	<20.0	<25.0	<50.0	<25.0	ND	<20.0
CS-44	04/28/2022	22 to 25	0.0305	1.21	<20.0	<25.0	<50.0	<25.0	ND	<20.0
CS-45	04/28/2022	22 to 25	17.7	423	912	35.1	<50.0	947	947	<20.0
CS-46	04/28/2022	22 to 25	691	5,650	13,000	124	<50.0	13,124	13,100	<20.0



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
 Chaco Plant Produced Water Spill
 Enterprise Field Services, LLC
 San Juan County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Soil Borings/Monitoring Wells Advanced by Envirotech, Inc (2022)										
SB-1/MW-1	06/27/2022	24	<0.0250	ND	<20.0	<25.0	<50.0	<25.0	ND	<20.0
		26	<0.0250	ND	<20.0	<25.0	<50.0	<25.0	ND	<20.0
		35	<0.0250	ND	<20.0	<25.0	<50.0	<25.0	ND	<40.0
SB-2/MW-2	06/27/2022	25	<0.0250	ND	<20.0	<25.0	<50.0	<25.0	ND	<20.0
		30	<0.0250	ND	<20.0	<25.0	<50.0	<25.0	ND	33.9
		35	0.0270	0.0971	<20.0	<25.0	<50.0	<25.0	ND	<20.0
SB-3/MW-3	06/28/2022	25	<0.0250	ND	<20.0	<25.0	<50.0	<25.0	ND	<20.0
		35	<0.0250	ND	<20.0	<25.0	<50.0	<25.0	ND	<20.0
SB-4/MW-4	06/28/2022	30	<0.0250	ND	<20.0	<25.0	<50.0	<25.0	ND	36.0
		40	<0.0250	0.197	<20.0	<25.0	<50.0	<25.0	ND	<20.0
		54	0.140	0.550	<20.0	<25.0	<50.0	<25.0	ND	<20.0
SB-5/MW-5	06/29/2022	15	<0.0250	<0.1	<20.0	<25.0	<50.0	<25.0	ND	<20.0
		35	<0.0250	<0.1	<20.0	<25.0	<50.0	<25.0	ND	<20.0

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

ND: Not Detected above the Practical Quantitation Limits (PQLs) or Reporting Limits (RLs)

NE: Not established

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.



TABLE 2A
SUBSURFACE WATER ANALYTICAL SUMMARY - DETECTED VOLATILE ORGANIC COMPOUNDS
 Chaco Plant Produced Water Spill
 Enterprise Field Services LLC
 San Juan County, New Mexico

Sample I.D.	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	1,2,4- Trimethylbenzene ^{1,2} (µg/L)	1,3,5- Trimethylbenzene ^{1,2} (µg/L)	Acetone ^{1,2} (µg/L)	2-Butanone ^{1,2} (µg/L)	Isopropylbenzene ^{1,2} (µg/L)	n-Propylbenzene ^{1,2} (µg/L)
NMWQCC GQS		5	1,000	700	620	NE	NE	NE	NE	NE	NE
Subsurface Water Sample Collected from the Monitoring Well											
MW-4	07/07/2022	216	838	48.4	400	<50.0	<10.0	526	453	<10.0	<10.0
	09/12/2022	300	610	47	390	19	11	38	34	4.8	5.1
	01/19/2023	42	110	4.6	34	<2.0	<2.0	<20	<20	<2.0	<2.0
	02/07/2023	190	190	<2.0	35	<1.0	<1.0	33	28	<2.0	<2.0
	08/23/2023	80	100	<2.0	22	<2.0	<2.0	<20	<20	<2.0	<2.0
	12/30/2024	5.6	2.7	<1.0	<2.0	NA	NA	NA	NA	NA	NA
	04/17/2025	5.9	5.1	<1.0	<1.5	<1.0	<1.0	<1.0	<10	<1.0	<1.0

Notes:

Concentrations in **bold** and yellow exceed the applicable NMWQCC GQS

¹ = Constituent is not identified as "toxic pollutant" under 20.6.2 New Mexico Administrative Code (NMAC).

² = Constituent is not identified as a priority pollutant under the Federal Clean Water Act (CWA).

µg/L = microgram per liter

NA = Not Analyzed

NE = Not Established

NMWQCC GQS: New Mexico Water Quality Control Commission Groundwater Quality Standard

<1.0 = The numeral (in this case "1.0") identifies the laboratory reporting limit (RL) or practical quantitation limit (PQL).



TABLE 2B
SUBSURFACE WATER ANALYTICAL SUMMARY - INORGANICS, PHYSICAL AND CHEMICAL PROPERTIES
 Chaco Plant Produced Water Spill
 Enterprise Field Services LLC
 San Juan County, New Mexico

Sample I.D.	Sample Date	Fluoride (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Phosphorus (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)	pH	Total Dissolved Solids (mg/L)	Conductivity (µS/cm)	Total Alkalinity (mg/L Ca)
NMWQCC GQS		1.6	250	600	10	1	NE	NE	NE	NE	NE	6-9	1,000	NE	NE
Subsurface Water Sample Collected from the Monitoring Well															
MW-4	07/07/2022	<5.00	63.7	3,980	<5.00	<5.00	<5.00	538	80.9	23	1,080	6.83	5,060	5,730	639
	09/12/2022	NA	17	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/19/2023	NA	23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/08/2023	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,740	NA
	08/23/2023	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,800	NA
	04/17/2025	NA	NA	3,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,900	NA

Notes:

Concentrations in **bold** and yellow exceed the applicable NMWQCC GQS.

mg/L = milligram per liter

µS/cm = microsiemens per centimeter

NA = Not Analyzed

NE = Not Established

NMWQCC GQS: New Mexico Water Quality Control Commission Groundwater Quality Standard

<1.0 = The numeral (in this case "1.0") identifies the laboratory reporting limit (RL) or practical quantitation limit (PQL).

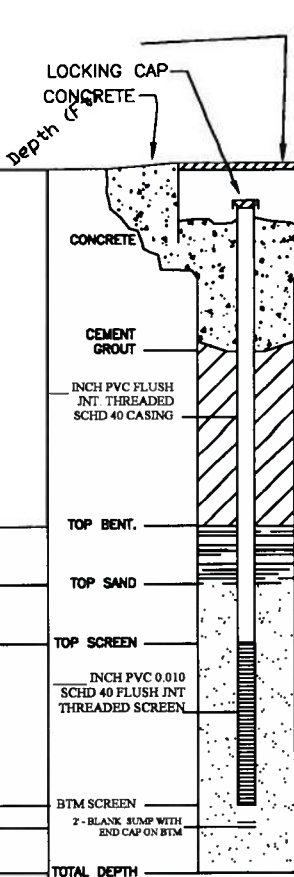


APPENDIX A
Borehole Logs

BELOW GRADE WELL COMPLETION DIAGRAM / LITHOLOGY LOG

MW 1

SB 1



Depth (Feet)	TIME	SAMPLE TYPE	HEADSPACE (PPM)	LITHOLOGY	SAMPLE DESCRIPTION	DEPTH (FEET)
5						
10:30	0.0				Hydro vac'd from 0'-6'	
	0.0				Wet brown sand water from hydro vac (7:55)	
					7-7.5 dark brown sand. light tan sand	
10:51	0.0				Brown sand	10
11:46					Brown sand	
					BROWN SAND	12
11:36					moist, larger grain sand	13
					moist, larger grain sand	14
						15
11:55	0.0				moist fine grain sand, brown	
					no returns	
12:12	0.0				Dark brown sand	20
					brown sand	
12:4	0.0				light tan sand	
12:35					Dark brown sand, moist	
	1.6				Dark brown sand, moist	
						25
12:52	0.0				clay, dark brown	
13:0	0.2				brown clay with red inclusions	
13:45	0.0				brown clay	30
14:32					gray sandy clay w/ white & orange inclusions	35
						40
15:12					NO returns TD = 40'	

Well Materials Used:

- Sks 10-12 Silica Sand
- Sks Bentonite Chips
- Sks Class "A" Cement
- Sks Quikcrete
- Ft Blank Casing
- Ft Screen

Well Development:

- Bailed
- Pumped
- Gallons of Water

Remarks:

DRILLER: Ben BIT SIZE: _____ LOCATION: Chaco Plant
 HELPER: _____ TOTAL BORING DEPTH: 40 ELEVATION: _____
 DRILLING COMPANY: YEL DATE STARTED: 10/27/22 DATE COMPLETED: 10/27/22
 DRILLING METHOD: ISA SAMPLER TYPE: SS GEOLOGIST: BJ/CT
 Note: SS = Split Spoon A = Auger c5 = 5 foot composite from air cuttings

left hole open overnight
no water on 10/28/22

ENVIROTECH INC.

ENVIRONMENTAL SCIENTISTS & ENGINEERS
 5796 U.S. HIGHWAY 64
 FARMINGTON, NEW MEXICO 87401
 (505) 632-0615
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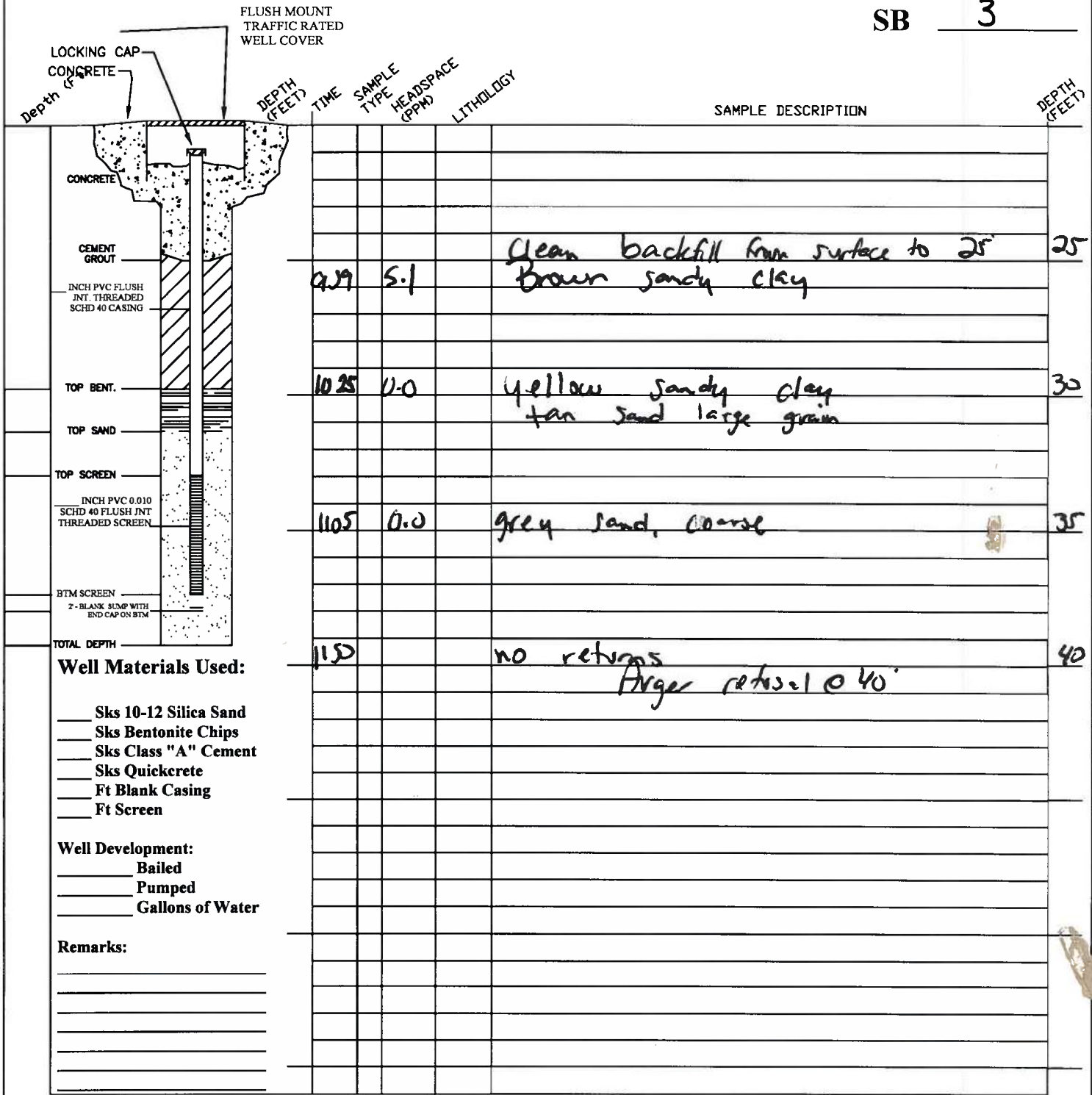
REVISIONS	JOB # _____
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BY _____ DATE _____	

DATE _____	DRAWN _____	PAGE _____
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BELOW GRADE WELL COMPLETION DIAGRAM / LITHOLOGY LOG

MW 3

SB 3



- Well Materials Used:**
- ____ Sks 10-12 Silica Sand
 - ____ Sks Bentonite Chips
 - ____ Sks Class "A" Cement
 - ____ Sks Quikcrete
 - ____ Ft Blank Casing
 - ____ Ft Screen

- Well Development:**
- ____ Bailed
 - ____ Pumped
 - ____ Gallons of Water

Remarks:

DRILLER: Ben BIT SIZE: _____ LOCATION: Charo Plant
 HELPER: Shawn TOTAL BORING DEPTH: _____ ELEVATION: _____
 DRILLING COMPANY: HCC DATE STARTED: 10/28/22 DATE COMPLETED: _____
 DRILLING METHOD: HSA SAMPLER TYPE: SS GEOLOGIST: BA/OT
 Note: SS = Split Spoon A = Auger c5 = 5 foot composite from air cuttings

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 ENVIRONMENTAL SCIENTISTS & ENGINEERS
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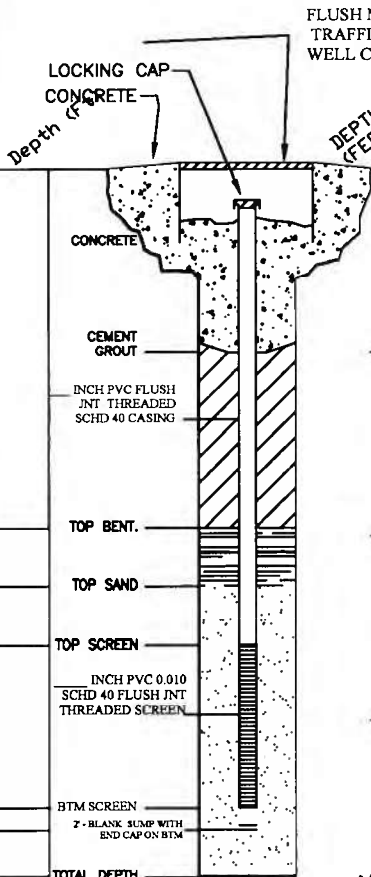
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BELOW GRADE WELL COMPLETION DIAGRAM / LITHOLOGY LOG

MW 4

SB 4



Depth (Feet)	TIME	SAMPLE TYPE	HEADSPACE (FPM)	LITHOLOGY	SAMPLE DESCRIPTION	DEPTH (FEET)
25	1357		113.7		Clean backfill to 25' bgs Brown sand, moist Brown Sandy clay, moist slight hydrocarbon odor	25
30	1418		311.6		Brown sandy clay w/ yellow inclusions	30
35	1448		175.3		Brown sandy clay w/ yellow inclusions	35
40	1520		172.8		8" of return brown sand, grey sand moist	40
45	1558		141.9		light grey coarse sand, hydrocarbon odor	45
50					Water = 47.5'	50
55	1605				light grey sand saturated T.D. = 54' 05"	55

Well Materials Used:

- Sks 10-12 Silica Sand
- Sks Bentonite Chips
- Sks Class "A" Cement
- Sks Quikcrete
- Ft Blank Casing
- Ft Screen

Well Development:

- Bailed
- Pumped
- Gallons of Water

Remarks:

DRILLER: Ben BIT SIZE: _____ LOCATION: Chaco Plant
 HELPER: Shawn TOTAL BORING DEPTH: _____ ELEVATION: _____
 DRILLING COMPANY: NEL DATE STARTED: 6/29/22 DATE COMPLETED: _____
 DRILLING METHOD: USA SAMPLER TYPE: SS GEOLOGIST: BL/CR
 Note: SS = Split Spoon A = Auger c5 = 5 foot composite from air cuttings

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 BY _____ DATE _____

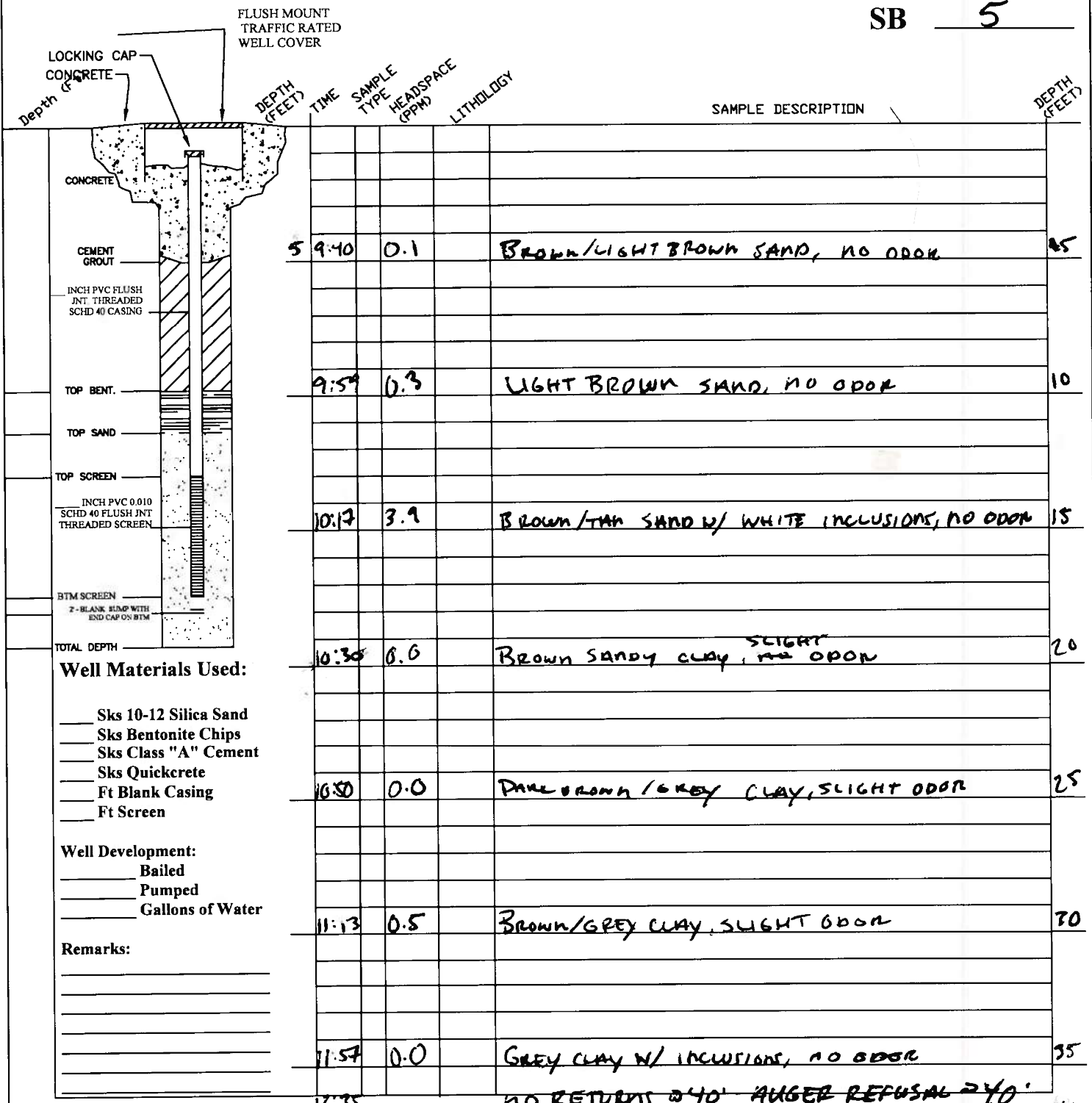
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BELOW GRADE WELL COMPLETION DIAGRAM / LITHOLOGY LOG

MW 5

SB 5



Well Materials Used:

- Sks 10-12 Silica Sand
- Sks Bentonite Chips
- Sks Class "A" Cement
- Sks Quikcrete
- Ft Blank Casing
- Ft Screen

Well Development:

- Bailed
- Pumped
- Gallons of Water

Remarks:

DRILLER: Ben BIT SIZE: _____ LOCATION: Chaco Plant
 HELPER: Shawn TOTAL BORING DEPTH: _____ ELEVATION: _____
 DRILLING COMPANY: HLL DATE STARTED: 10/29/22 DATE COMPLETED: _____
 DRILLING METHOD: HSA SAMPLER TYPE: SS GEOLOGIST: Bulkes
 Note: SS = Split Spoon A = Auger c5 = 5 foot composite from air cuttings

ENVIROTECH INC.

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 BY _____ DATE _____

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APPENDIX B

Laboratory Analytical Reports



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

September 11, 2023

Kyle Summers

ENSOLUM

606 S. Rio Grande Suite A

Aztec, NM 87410

TEL: (903) 821-5603

FAX:

RE: Chaco Plant Produced Water Release 2022

OrderNo.: 2308C91

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/24/2023 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order **2308C91**

Date Reported: **9/11/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: MW-4

Project: Chaco Plant Produced Water Release 20

Collection Date: 8/23/2023 1:15:00 PM

Lab ID: 2308C91-001

Matrix: AQUEOUS

Received Date: 8/24/2023 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: MCA
Total Dissolved Solids	4800	100	*D	mg/L	1	8/29/2023 3:09:00 PM	77134
EPA METHOD 8260B: VOLATILES							Analyst: JR
Benzene	80	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
Toluene	100	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
Ethylbenzene	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
Methyl tert-butyl ether (MTBE)	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
1,2,4-Trimethylbenzene	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
1,3,5-Trimethylbenzene	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
Naphthalene	ND	4.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
1-Methylnaphthalene	ND	8.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
2-Methylnaphthalene	ND	8.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
Acetone	ND	20		µg/L	2	9/1/2023 12:55:01 AM	B99398
Bromobenzene	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
Bromodichloromethane	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
Bromoform	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
Bromomethane	ND	6.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
2-Butanone	ND	20		µg/L	2	9/1/2023 12:55:01 AM	B99398
Carbon disulfide	ND	20		µg/L	2	9/1/2023 12:55:01 AM	B99398
Carbon Tetrachloride	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
Chlorobenzene	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
Chloroethane	ND	4.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
Chloroform	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
Chloromethane	ND	6.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
2-Chlorotoluene	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
4-Chlorotoluene	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
cis-1,2-DCE	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
Dibromochloromethane	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
Dibromomethane	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
1,2-Dichlorobenzene	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
1,3-Dichlorobenzene	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
1,4-Dichlorobenzene	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
Dichlorodifluoromethane	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
1,1-Dichloroethane	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
1,1-Dichloroethene	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
1,2-Dichloropropane	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398

Refer to the QC Summary report and sample login checklist for flagged QC data 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2308C91

Date Reported: 9/11/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: MW-4

Project: Chaco Plant Produced Water Release 20

Collection Date: 8/23/2023 1:15:00 PM

Lab ID: 2308C91-001

Matrix: AQUEOUS

Received Date: 8/24/2023 6:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
1,3-Dichloropropane	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
2,2-Dichloropropane	ND	4.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
1,1-Dichloropropene	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
Hexachlorobutadiene	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
2-Hexanone	ND	20		µg/L	2	9/1/2023 12:55:01 AM	B99398
Isopropylbenzene	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
4-Isopropyltoluene	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
4-Methyl-2-pentanone	ND	20		µg/L	2	9/1/2023 12:55:01 AM	B99398
Methylene Chloride	ND	6.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
n-Butylbenzene	ND	6.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
n-Propylbenzene	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
sec-Butylbenzene	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
Styrene	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
tert-Butylbenzene	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
1,1,2,2-Tetrachloroethane	ND	4.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
Tetrachloroethene (PCE)	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
trans-1,2-DCE	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
1,2,3-Trichlorobenzene	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
1,2,4-Trichlorobenzene	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
1,1,1-Trichloroethane	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
1,1,2-Trichloroethane	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
Trichloroethene (TCE)	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
Trichlorofluoromethane	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
1,2,3-Trichloropropane	ND	4.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
Vinyl chloride	ND	2.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
Xylenes, Total	22	3.0		µg/L	2	9/1/2023 12:55:01 AM	B99398
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	2	9/1/2023 12:55:01 AM	B99398
Surr: 4-Bromofluorobenzene	99.9	70-130		%Rec	2	9/1/2023 12:55:01 AM	B99398
Surr: Dibromofluoromethane	95.8	70-130		%Rec	2	9/1/2023 12:55:01 AM	B99398
Surr: Toluene-d8	100	70-130		%Rec	2	9/1/2023 12:55:01 AM	B99398

Refer to the QC Summary report and sample login checklist for flagged QC data 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 Quantitative 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#: 2308C91

11-Sep-23

Client: ENSOLUM
Project: Chaco Plant Produced Water Release 2022

Sample ID: 100ng lcs2	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES								
Client ID: LCSW	Batch ID: B99398	RunNo: 99398								
Prep Date:	Analysis Date: 8/31/2023	SeqNo: 3627134	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	22	1.0	20.00	0	110	70	130			
Chlorobenzene	22	1.0	20.00	0	111	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	104	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	105	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	9.2		10.00		92.3	70	130			
Surr: Toluene-d8	9.6		10.00		95.6	70	130			

Sample ID: mb2	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: B99398	RunNo: 99398								
Prep Date:	Analysis Date: 8/31/2023	SeqNo: 3627172	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of 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#: 2308C91

11-Sep-23

Client: ENSOLUM**Project:** Chaco Plant Produced Water Release 2022

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID: mb2	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: B99398		RunNo: 99398							
Prep Date:	Analysis Date: 8/31/2023		SeqNo: 3627172		Units: µg/L					
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 Quantitative 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#: 2308C91

11-Sep-23

Client: ENSOLUM
Project: Chaco Plant Produced Water Release 2022

Sample ID: mb2	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: B99398		RunNo: 99398							
Prep Date:	Analysis Date: 8/31/2023		SeqNo: 3627172		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		104	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	9.2		10.00		92.2	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of 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#: 2308C91

11-Sep-23

Client: ENSOLUM
Project: Chaco Plant Produced Water Release 2022

Sample ID: MB-77134	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 77134	RunNo: 99315								
Prep Date: 8/28/2023	Analysis Date: 8/29/2023	SeqNo: 3623161	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	50.0								

Sample ID: LCS-77134	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 77134	RunNo: 99315								
Prep Date: 8/28/2023	Analysis Date: 8/29/2023	SeqNo: 3623162	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	986	50.0	1000	0	98.6	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of 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
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: ENSOLUM Work Order Number: 2308C91 RcptNo: 1

Received By: Tracy Casarrubias 8/24/2023 6:30:00 AM

Completed By: Tracy Casarrubias 8/24/2023 7:09:46 AM

Reviewed By: *TC 8/24/23*

Chain of Custody

- 1. Is Chain of Custody complete? Yes No Not Present
- 2. How was the sample delivered? Courier

Log In

- 3. Was an attempt made to cool the samples? Yes No NA
- 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 5. Sample(s) in proper container(s)? Yes No
- 6. Sufficient sample volume for indicated test(s)? Yes No
- 7. Are samples (except VOA and ONG) properly preserved? Yes No
- 8. Was preservative added to bottles? Yes No NA
- 9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes No NA
- 10. Were any sample containers received broken? Yes No
- 11. Does paperwork match bottle labels? Yes No
- (Note discrepancies on chain of custody)
- 12. Are matrices correctly identified on Chain of Custody? Yes No
- 13. Is it clear what analyses were requested? Yes No
- 14. Were all holding times able to be met? Yes No
- (If no, notify customer for authorization.)

of preserved bottles checked for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by: *SCM 8/24/23*

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: Phone number is missing on COC- TMC 8/24/23

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.9	Good	Yes	Yogi		



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

September 19, 2022

Kyle Summers
ENSOLUM
606 S. Rio Grande Suite A
Aztec, NM 87410
TEL: (903) 821-5603
FAX:

RE: Chaco Plant Produced Water Release 2022

OrderNo.: 2209572

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 9/13/2022 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,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order **2209572**

Date Reported: **9/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: MW-4

Project: Chaco Plant Produced Water Release 202

Collection Date: 9/12/2022 3:45:00 PM

Lab ID: 2209572-001

Matrix: AQUEOUS

Received Date: 9/13/2022 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JTT
Chloride	17	5.0		mg/L	10	9/13/2022 2:58:55 PM	R91014
EPA METHOD 8260B: VOLATILES							Analyst: CCM
Benzene	300	10		µg/L	10	9/15/2022 3:53:00 PM	R91060
Toluene	610	10		µg/L	10	9/15/2022 3:53:00 PM	R91060
Ethylbenzene	47	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
1,2,4-Trimethylbenzene	19	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
1,3,5-Trimethylbenzene	11	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
Naphthalene	ND	2.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
1-Methylnaphthalene	ND	4.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
2-Methylnaphthalene	ND	4.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
Acetone	38	10		µg/L	1	9/14/2022 5:38:00 PM	R91021
Bromobenzene	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
Bromodichloromethane	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
Bromoform	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
Bromomethane	ND	3.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
2-Butanone	34	10		µg/L	1	9/14/2022 5:38:00 PM	R91021
Carbon disulfide	ND	10		µg/L	1	9/14/2022 5:38:00 PM	R91021
Carbon Tetrachloride	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
Chlorobenzene	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
Chloroethane	ND	2.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
Chloroform	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
Chloromethane	ND	3.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
2-Chlorotoluene	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
4-Chlorotoluene	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
cis-1,2-DCE	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
Dibromochloromethane	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
Dibromomethane	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
1,1-Dichloroethane	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
1,1-Dichloroethene	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
1,2-Dichloropropane	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021

Refer to the QC Summary report and sample login checklist for flagged QC data 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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of range due to dilution or matrix interference	

Analytical Report

Lab Order **2209572**

Date Reported: **9/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: MW-4

Project: Chaco Plant Produced Water Release 202

Collection Date: 9/12/2022 3:45:00 PM

Lab ID: 2209572-001

Matrix: AQUEOUS

Received Date: 9/13/2022 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: CCM
1,3-Dichloropropane	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
2,2-Dichloropropane	ND	2.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
1,1-Dichloropropene	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
Hexachlorobutadiene	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
2-Hexanone	ND	10		µg/L	1	9/14/2022 5:38:00 PM	R91021
Isopropylbenzene	4.8	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
4-Isopropyltoluene	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
4-Methyl-2-pentanone	ND	10		µg/L	1	9/14/2022 5:38:00 PM	R91021
Methylene Chloride	ND	3.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
n-Butylbenzene	ND	3.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
n-Propylbenzene	5.1	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
sec-Butylbenzene	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
Styrene	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
tert-Butylbenzene	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
trans-1,2-DCE	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
Trichlorofluoromethane	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
Vinyl chloride	ND	1.0		µg/L	1	9/14/2022 5:38:00 PM	R91021
Xylenes, Total	390	15		µg/L	10	9/15/2022 3:53:00 PM	R91060
Surr: 1,2-Dichloroethane-d4	93.3	70-130		%Rec	1	9/14/2022 5:38:00 PM	R91021
Surr: 4-Bromofluorobenzene	93.9	70-130		%Rec	1	9/14/2022 5:38:00 PM	R91021
Surr: Dibromofluoromethane	91.3	70-130		%Rec	1	9/14/2022 5:38:00 PM	R91021
Surr: Toluene-d8	103	70-130		%Rec	1	9/14/2022 5:38:00 PM	R91021

Refer to the QC Summary report and sample login checklist for flagged QC data 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209572

19-Sep-22

Client: ENSOLUM
Project: Chaco Plant Produced Water Release 2022

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R91014	RunNo: 91014								
Prep Date:	Analysis Date: 9/13/2022	SeqNo: 3254768	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R91014	RunNo: 91014								
Prep Date:	Analysis Date: 9/13/2022	SeqNo: 3254769	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.5	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix 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#: 2209572

19-Sep-22

Client: ENSOLUM
Project: Chaco Plant Produced Water Release 2022

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES								
Client ID: LCSW	Batch ID: R91021	RunNo: 91021								
Prep Date:	Analysis Date: 9/14/2022	SeqNo: 3255741	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlorobenzene	19	1.0	20.00	0	97.0	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	92.6	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	93.3	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		90.9	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.4	70	130			
Surr: Toluene-d8	9.0		10.00		90.1	70	130			

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R91021	RunNo: 91021								
Prep Date:	Analysis Date: 9/14/2022	SeqNo: 3255742	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix 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#: 2209572

19-Sep-22

Client: ENSOLUM
Project: Chaco Plant Produced Water Release 2022

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R91021	RunNo: 91021
Prep Date:	Analysis Date: 9/14/2022	SeqNo: 3255742 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.2	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix 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#: 2209572

19-Sep-22

Client: ENSOLUM
Project: Chaco Plant Produced Water Release 2022

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R91021	RunNo: 91021								
Prep Date:	Analysis Date: 9/14/2022	SeqNo: 3255742	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Toluene-d8	8.8		10.00		88.2	70	130			

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES								
Client ID: LCSW	Batch ID: R91060	RunNo: 91060								
Prep Date:	Analysis Date: 9/15/2022	SeqNo: 3257050	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	19	1.0	20.00	0	96.6	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.4	70	130			
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	9.0		10.00		89.8	70	130			

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R91060	RunNo: 91060								
Prep Date:	Analysis Date: 9/15/2022	SeqNo: 3258173	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								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	8.8		10.00		87.8	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.0		10.00		90.3	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix 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
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: ENSOLUM Work Order Number: 2209572 RcptNo: 1

Received By: Juan Rojas 9/13/2022 7:50:00 AM
Completed By: Cheyenne Cason 9/13/2022 9:46:27 AM
Reviewed By: KPG 9.13.22

Chain of Custody

- 1. Is Chain of Custody complete? Yes [checked] No [] Not Present []
2. How was the sample delivered? Courier

Log In

- 3. Was an attempt made to cool the samples? Yes [checked] No [] NA []
4. Were all samples received at a temperature of >0° C to 6.0°C Yes [checked] No [] NA []
5. Sample(s) in proper container(s)? Yes [checked] No []
6. Sufficient sample volume for indicated test(s)? Yes [checked] No []
7. Are samples (except VOA and ONG) properly preserved? Yes [checked] No []
8. Was preservative added to bottles? Yes [] No [checked] NA []
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes [checked] No [] NA []
10. Were any sample containers received broken? Yes [] No [checked]
11. Does paperwork match bottle labels? Yes [checked] No []
12. Are matrices correctly identified on Chain of Custody? Yes [checked] No []
13. Is it clear what analyses were requested? Yes [checked] No []
14. Were all holding times able to be met? Yes [checked] No []

of preserved bottles checked for pH:
(<2 or >12 unless noted)
Adjusted?
Checked by: ma/13/22

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [] No [] NA [checked]

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

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 0.2, Good, Not Present, , ,



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

January 31, 2023

Kyle Summers
ENSOLUM
606 S. Rio Grande Suite A
Aztec, NM 87410
TEL: (903) 821-5603
FAX:

RE: Chaco Plant Produced Water

OrderNo.: 2301862

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 1/24/2023 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order **2301862**

Date Reported: **1/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: MW-4

Project: Chaco Plant Produced Water

Collection Date: 1/19/2023 4:20:00 PM

Lab ID: 2301862-001

Matrix: AQUEOUS

Received Date: 1/24/2023 7:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	23	2.5		mg/L	5	1/24/2023 10:27:43 PM	A94171
EPA METHOD 8260B: VOLATILES							Analyst: JR
Benzene	42	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
Toluene	110	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
Ethylbenzene	4.6	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
Methyl tert-butyl ether (MTBE)	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
1,2,4-Trimethylbenzene	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
1,3,5-Trimethylbenzene	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
Naphthalene	ND	4.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
1-Methylnaphthalene	ND	8.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
2-Methylnaphthalene	ND	8.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
Acetone	ND	20		µg/L	2	1/28/2023 6:08:12 AM	B94255
Bromobenzene	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
Bromodichloromethane	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
Bromoform	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
Bromomethane	ND	6.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
2-Butanone	ND	20		µg/L	2	1/28/2023 6:08:12 AM	B94255
Carbon disulfide	ND	20		µg/L	2	1/28/2023 6:08:12 AM	B94255
Carbon Tetrachloride	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
Chlorobenzene	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
Chloroethane	ND	4.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
Chloroform	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
Chloromethane	ND	6.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
2-Chlorotoluene	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
4-Chlorotoluene	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
cis-1,2-DCE	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
Dibromochloromethane	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
Dibromomethane	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
1,2-Dichlorobenzene	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
1,3-Dichlorobenzene	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
1,4-Dichlorobenzene	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
Dichlorodifluoromethane	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
1,1-Dichloroethane	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
1,1-Dichloroethene	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
1,2-Dichloropropane	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255

Refer to the QC Summary report and sample login checklist for flagged QC data 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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2301862**

Date Reported: **1/31/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: MW-4

Project: Chaco Plant Produced Water

Collection Date: 1/19/2023 4:20:00 PM

Lab ID: 2301862-001

Matrix: AQUEOUS

Received Date: 1/24/2023 7:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
1,3-Dichloropropane	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
2,2-Dichloropropane	ND	4.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
1,1-Dichloropropene	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
Hexachlorobutadiene	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
2-Hexanone	ND	20		µg/L	2	1/28/2023 6:08:12 AM	B94255
Isopropylbenzene	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
4-Isopropyltoluene	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
4-Methyl-2-pentanone	ND	20		µg/L	2	1/28/2023 6:08:12 AM	B94255
Methylene Chloride	ND	6.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
n-Butylbenzene	ND	6.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
n-Propylbenzene	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
sec-Butylbenzene	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
Styrene	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
tert-Butylbenzene	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
1,1,2,2-Tetrachloroethane	ND	4.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
Tetrachloroethene (PCE)	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
trans-1,2-DCE	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
1,2,3-Trichlorobenzene	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
1,2,4-Trichlorobenzene	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
1,1,1-Trichloroethane	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
1,1,2-Trichloroethane	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
Trichloroethene (TCE)	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
Trichlorofluoromethane	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
1,2,3-Trichloropropane	ND	4.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
Vinyl chloride	ND	2.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
Xylenes, Total	34	3.0		µg/L	2	1/28/2023 6:08:12 AM	B94255
Surr: 1,2-Dichloroethane-d4	99.9	70-130		%Rec	2	1/28/2023 6:08:12 AM	B94255
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	2	1/28/2023 6:08:12 AM	B94255
Surr: Dibromofluoromethane	97.7	70-130		%Rec	2	1/28/2023 6:08:12 AM	B94255
Surr: Toluene-d8	102	70-130		%Rec	2	1/28/2023 6:08:12 AM	B94255

Refer to the QC Summary report and sample login checklist for flagged QC data 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 Quantitative 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#: 2301862

31-Jan-23

Client: ENSOLUM
Project: Chaco Plant Produced Water

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: A94171	RunNo: 94171								
Prep Date:	Analysis Date: 1/24/2023	SeqNo: 3400673	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: A94171	RunNo: 94171								
Prep Date:	Analysis Date: 1/24/2023	SeqNo: 3400674	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.6	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of 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#: 2301862

31-Jan-23

Client: ENSOLUM
Project: Chaco Plant Produced Water

Sample ID: 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: B94255		RunNo: 94255							
Prep Date:	Analysis Date: 1/28/2023		SeqNo: 3404347		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	97.0	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	96.1	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	96.8	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.5	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	10		10.00		104	70	130			
Surr: Toluene-d8	9.9		10.00		99.3	70	130			

Sample ID: mb2	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: B94255		RunNo: 94255							
Prep Date:	Analysis Date: 1/28/2023		SeqNo: 3404395		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of 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#: 2301862

31-Jan-23

Client: ENSOLUM
Project: Chaco Plant Produced Water

Sample ID: mb2	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: B94255	RunNo: 94255
Prep Date:	Analysis Date: 1/28/2023	SeqNo: 3404395 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of 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#: 2301862

31-Jan-23

Client: ENSOLUM
Project: Chaco Plant Produced Water

Sample ID: mb2	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: B94255		RunNo: 94255							
Prep Date:	Analysis Date: 1/28/2023		SeqNo: 3404395		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		99.1	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		99.5	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.
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- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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: ENSOLUM Work Order Number: 2301862 RcptNo: 1

Received By: Juan Rojas 1/24/2023 7:05:00 AM
Completed By: Tracy Casarrubias 1/24/2023 8:13:36 AM
Reviewed By: JRC 1/24/23

Chain of Custody

- 1. Is Chain of Custody complete? Yes [] No [x] Not Present []
2. How was the sample delivered? Courier

Log In

- 3. Was an attempt made to cool the samples? Yes [x] No [] NA []
4. Were all samples received at a temperature of >0° C to 6.0°C Yes [x] No [] NA []
5. Sample(s) in proper container(s)? Yes [x] No []
6. Sufficient sample volume for indicated test(s)? Yes [x] No []
7. Are samples (except VOA and ONG) properly preserved? Yes [x] No []
8. Was preservative added to bottles? Yes [] No [x] NA []
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes [x] No [] NA []
10. Were any sample containers received broken? Yes [] No [x]
11. Does paperwork match bottle labels? Yes [x] No []
12. Are matrices correctly identified on Chain of Custody? Yes [x] No []
13. Is it clear what analyses were requested? Yes [x] No []
14. Were all holding times able to be met? Yes [x] No []

of preserved bottles checked for pH:
(<2 or >12 unless noted)
Adjusted?
Checked by: JRC 1/24/23

Special Handling (if applicable)

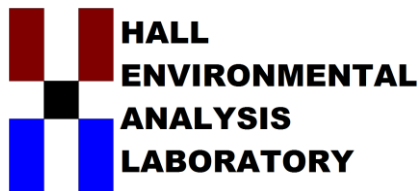
- 15. Was client notified of all discrepancies with this order? Yes [] No [] NA [x]

Person Notified: Date:
By Whom: Via: [] eMail [] Phone [] Fax [] In Person
Regarding:
Client Instructions: Missing phone number on COC -TMC 1/24/23

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 0.9, Good, Yes, , ,



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

February 14, 2023

Kyle Summers

ENSOLUM

606 S. Rio Grande Suite A

Aztec, NM 87410

TEL: (903) 821-5603

FAX:

RE: Chaco Plant Produced Water Release 2022

OrderNo.: 2302349

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/8/2023 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2302349

Date Reported: 2/14/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: MW-4

Project: Chaco Plant Produced Water Release 20

Collection Date: 2/7/2023 2:15:00 PM

Lab ID: 2302349-001

Matrix: AQUEOUS

Received Date: 2/8/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: DML
Total Dissolved Solids	4740	40.0	*D	mg/L	1	2/13/2023 3:55:00 PM	73125
EPA METHOD 8260B: VOLATILES							Analyst: CCM
Benzene	190	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
Toluene	190	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
Ethylbenzene	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
Methyl tert-butyl ether (MTBE)	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
1,2,4-Trimethylbenzene	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
1,3,5-Trimethylbenzene	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
Naphthalene	ND	4.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
1-Methylnaphthalene	ND	8.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
2-Methylnaphthalene	ND	8.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
Acetone	33	20		µg/L	2	2/8/2023 11:27:00 PM	R94478
Bromobenzene	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
Bromodichloromethane	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
Bromoform	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
Bromomethane	ND	6.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
2-Butanone	28	20		µg/L	2	2/8/2023 11:27:00 PM	R94478
Carbon disulfide	ND	20		µg/L	2	2/8/2023 11:27:00 PM	R94478
Carbon Tetrachloride	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
Chlorobenzene	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
Chloroethane	ND	4.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
Chloroform	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
Chloromethane	ND	6.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
2-Chlorotoluene	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
4-Chlorotoluene	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
cis-1,2-DCE	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
Dibromochloromethane	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
Dibromomethane	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
1,2-Dichlorobenzene	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
1,3-Dichlorobenzene	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
1,4-Dichlorobenzene	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
Dichlorodifluoromethane	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
1,1-Dichloroethane	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
1,1-Dichloroethene	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
1,2-Dichloropropane	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478

Refer to the QC Summary report and sample login checklist for flagged QC data 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 Quantitative Limit	RL Reporting Limit
	S % Recovery outside of standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order 2302349

Date Reported: 2/14/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM

Client Sample ID: MW-4

Project: Chaco Plant Produced Water Release 20

Collection Date: 2/7/2023 2:15:00 PM

Lab ID: 2302349-001

Matrix: AQUEOUS

Received Date: 2/8/2023 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: CCM
1,3-Dichloropropane	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
2,2-Dichloropropane	ND	4.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
1,1-Dichloropropene	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
Hexachlorobutadiene	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
2-Hexanone	ND	20		µg/L	2	2/8/2023 11:27:00 PM	R94478
Isopropylbenzene	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
4-Isopropyltoluene	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
4-Methyl-2-pentanone	ND	20		µg/L	2	2/8/2023 11:27:00 PM	R94478
Methylene Chloride	ND	6.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
n-Butylbenzene	ND	6.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
n-Propylbenzene	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
sec-Butylbenzene	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
Styrene	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
tert-Butylbenzene	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
1,1,2,2-Tetrachloroethane	ND	4.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
Tetrachloroethene (PCE)	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
trans-1,2-DCE	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
1,2,3-Trichlorobenzene	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
1,2,4-Trichlorobenzene	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
1,1,1-Trichloroethane	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
1,1,2-Trichloroethane	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
Trichloroethene (TCE)	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
Trichlorofluoromethane	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
1,2,3-Trichloropropane	ND	4.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
Vinyl chloride	ND	2.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
Xylenes, Total	35	3.0		µg/L	2	2/8/2023 11:27:00 PM	R94478
Surr: 1,2-Dichloroethane-d4	118	70-130		%Rec	2	2/8/2023 11:27:00 PM	R94478
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	2	2/8/2023 11:27:00 PM	R94478
Surr: Dibromofluoromethane	116	70-130		%Rec	2	2/8/2023 11:27:00 PM	R94478
Surr: Toluene-d8	97.1	70-130		%Rec	2	2/8/2023 11:27:00 PM	R94478

Refer to the QC Summary report and sample login checklist for flagged QC data 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 Quantitative 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#: 2302349

14-Feb-23

Client: ENSOLUM
Project: Chaco Plant Produced Water Release 2022

Sample ID: 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R94478		RunNo: 94478							
Prep Date:	Analysis Date: 2/8/2023		SeqNo: 3413974		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	25	1.0	20.00	0	127	70	130			
Toluene	22	1.0	20.00	0	111	70	130			
Chlorobenzene	22	1.0	20.00	0	111	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	117	70	130			
Trichloroethene (TCE)	24	1.0	20.00	0	119	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		112	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	9.8		10.00		97.9	70	130			

Sample ID: mb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R94478		RunNo: 94478							
Prep Date:	Analysis Date: 2/8/2023		SeqNo: 3414238		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of 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#: 2302349

14-Feb-23

Client: ENSOLUM
Project: Chaco Plant Produced Water Release 2022

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R94478	RunNo: 94478
Prep Date:	Analysis Date: 2/8/2023	SeqNo: 3414238 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of 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#: 2302349

14-Feb-23

Client: ENSOLUM
Project: Chaco Plant Produced Water Release 2022

Sample ID: mb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R94478		RunNo: 94478							
Prep Date:	Analysis Date: 2/8/2023		SeqNo: 3414238		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	12		10.00		117	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	12		10.00		117	70	130			
Surr: Toluene-d8	9.7		10.00		96.8	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of 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#: 2302349

14-Feb-23

Client: ENSOLUM
Project: Chaco Plant Produced Water Release 2022

Sample ID: MB-73125	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 73125	RunNo: 94572								
Prep Date: 2/10/2023	Analysis Date: 2/13/2023	SeqNo: 3418672	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: LCS-73125	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 73125	RunNo: 94572								
Prep Date: 2/10/2023	Analysis Date: 2/13/2023	SeqNo: 3418673	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1060	20.0	1000	0	106	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of 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
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: ENSOLUM

Work Order Number: 2302349

RcptNo: 1

Received By: Sean Livingston 2/8/2023 7:50:00 AM

Signature of Sean Livingston

Completed By: Sean Livingston 2/8/2023 9:31:29 AM

Signature of Sean Livingston

Reviewed By: m 2/8/23

Chain of Custody

1. Is Chain of Custody complete? Yes [checked] No [] Not Present []

2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes [checked] No [] NA []

4. Were all samples received at a temperature of >0° C to 6.0°C Yes [checked] No [] NA []

5. Sample(s) in proper container(s)? Yes [checked] No []

6. Sufficient sample volume for indicated test(s)? Yes [checked] No []

7. Are samples (except VOA and ONG) properly preserved? Yes [checked] No []

8. Was preservative added to bottles? Yes [] No [checked] NA []

9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes [checked] No [] NA []

10. Were any sample containers received broken? Yes [] No [checked]

11. Does paperwork match bottle labels? Yes [checked] No []

12. Are matrices correctly identified on Chain of Custody? Yes [checked] No []

13. Is it clear what analyses were requested? Yes [checked] No []

14. Were all holding times able to be met? Yes [checked] No []

of preserved bottles checked for pH: (<2 or >12 unless noted) Adjusted? Checked by: [Signature] 2-8-23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes [] No [] NA [checked]

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

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 0.7, Good, Not Present, YOGI, Row 2: 2, 0.2, Good, Not Present, YOGI

Chain-of-Custody Record

Client: Ensolium LLC
 Mailing Address: 606 S. Bi Grande, Suite A
Artec NM 87410
 Phone #: _____

email or Fax#: ksummers@ensolium.com
 QA/QC Package: Standard Level 4 (Full Validation)
 Accreditation: Az Compliance NELAC Other
 EDD (Type) _____

Turn-Around Time: Standard Rush
 Project Name: Chaco Plant Produced Water Release 2022
 Project #: See notes

Project Manager: Ksummers
 Sampler: R Dechilla
 On Ice: Yes No YOGS
 # of Coolers: 2 0.8-0.1=0.7°C
 Cooler Temp (including CF): 0.3-0.1=0.2°C

Container Type and # VARIOUS Preservative Type VARIOUS HEAL No. 2302349
 Date 2/13/15 Matrix W Sample Name MW-4
 Date 2/13/15 Time 1:47
 Date 2/13/15 Time 7:50

Relinquished by: [Signature] Date: _____
 Relinquished by: [Signature] Date: _____



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) Full	X
8270 (Semi-VOA)	
Total Coliform (Present/Absent)	TDS

Remarks: PM - Tom Long (EPRAD)
Pay key - SF11548



Environment Testing

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11

ANALYTICAL REPORT

PREPARED FOR

Attn: Wes Weichert
 Ensolum LLC
 776 E 2nd Avenue
 Durango, Colorado 81301
 Generated 4/25/2025 12:24:10 PM

JOB DESCRIPTION

Chaco Plant Produced Water Spill

JOB NUMBER

885-23438-1

Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization



Generated
4/25/2025 12:24:10 PM

Authorized for release by
John Caldwell, Project Manager
john.caldwell@et.eurofinsus.com
(505)345-3975

Client: Ensolum LLC
Project/Site: Chaco Plant Produced Water Spill

Laboratory Job ID: 885-23438-1



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Definitions/Glossary

Client: Ensolum LLC

Job ID: 885-23438-1

Project/Site: Chaco Plant Produced Water Spill

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum LLC
Project: Chaco Plant Produced Water Spill

Job ID: 885-23438-1

Job ID: 885-23438-1

Eurofins Albuquerque

Job Narrative 885-23438-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 4/18/2025 7:45 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.3°C.

GC/MS VOA

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

HPLC/IC

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

General Chemistry

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

Eurofins Albuquerque



Client Sample Results

Client: Ensolum LLC
 Project/Site: Chaco Plant Produced Water Spill

Job ID: 885-23438-1

Client Sample ID: MW-4

Lab Sample ID: 885-23438-1

Date Collected: 04/17/25 14:47

Matrix: Water

Date Received: 04/18/25 07:45

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L			04/24/25 00:18	1
1,1,1-Trichloroethane	ND		1.0	ug/L			04/24/25 00:18	1
1,1,2,2-Tetrachloroethane	ND		2.0	ug/L			04/24/25 00:18	1
1,1,2-Trichloroethane	ND		1.0	ug/L			04/24/25 00:18	1
1,1-Dichloroethane	ND		1.0	ug/L			04/24/25 00:18	1
1,1-Dichloroethene	ND		1.0	ug/L			04/24/25 00:18	1
1,1-Dichloropropene	ND		1.0	ug/L			04/24/25 00:18	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			04/24/25 00:18	1
1,2,3-Trichloropropane	ND		2.0	ug/L			04/24/25 00:18	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			04/24/25 00:18	1
1,2,4-Trimethylbenzene	ND		1.0	ug/L			04/24/25 00:18	1
1,2-Dibromo-3-Chloropropane	ND		2.0	ug/L			04/24/25 00:18	1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L			04/24/25 00:18	1
1,2-Dichlorobenzene	ND		1.0	ug/L			04/24/25 00:18	1
1,2-Dichloroethane (EDC)	ND		1.0	ug/L			04/24/25 00:18	1
1,2-Dichloropropane	ND		1.0	ug/L			04/24/25 00:18	1
1,3,5-Trimethylbenzene	ND		1.0	ug/L			04/24/25 00:18	1
1,3-Dichlorobenzene	ND		1.0	ug/L			04/24/25 00:18	1
1,3-Dichloropropane	ND		1.0	ug/L			04/24/25 00:18	1
1,4-Dichlorobenzene	ND		1.0	ug/L			04/24/25 00:18	1
1-Methylnaphthalene	ND		4.0	ug/L			04/24/25 00:18	1
2,2-Dichloropropane	ND		2.0	ug/L			04/24/25 00:18	1
2-Butanone	ND		10	ug/L			04/24/25 00:18	1
2-Chlorotoluene	ND		1.0	ug/L			04/24/25 00:18	1
2-Hexanone	ND		10	ug/L			04/24/25 00:18	1
2-Methylnaphthalene	ND		4.0	ug/L			04/24/25 00:18	1
4-Chlorotoluene	ND		1.0	ug/L			04/24/25 00:18	1
4-Isopropyltoluene	ND		1.0	ug/L			04/24/25 00:18	1
4-Methyl-2-pentanone	ND		10	ug/L			04/24/25 00:18	1
Acetone	ND		10	ug/L			04/24/25 00:18	1
Benzene	5.9		1.0	ug/L			04/24/25 00:18	1
Bromobenzene	ND		1.0	ug/L			04/24/25 00:18	1
Bromodichloromethane	ND		1.0	ug/L			04/24/25 00:18	1
Dibromochloromethane	ND		1.0	ug/L			04/24/25 00:18	1
Bromoform	ND		1.0	ug/L			04/24/25 00:18	1
Bromomethane	ND		3.0	ug/L			04/24/25 00:18	1
Carbon disulfide	ND		10	ug/L			04/24/25 00:18	1
Carbon tetrachloride	ND		1.0	ug/L			04/24/25 00:18	1
Chlorobenzene	ND		1.0	ug/L			04/24/25 00:18	1
Chloroethane	ND		2.0	ug/L			04/24/25 00:18	1
Chloroform	ND		1.0	ug/L			04/24/25 00:18	1
Chloromethane	ND		3.0	ug/L			04/24/25 00:18	1
cis-1,2-Dichloroethene	ND		1.0	ug/L			04/24/25 00:18	1
cis-1,3-Dichloropropene	ND		1.0	ug/L			04/24/25 00:18	1
Dibromomethane	ND		1.0	ug/L			04/24/25 00:18	1
Dichlorodifluoromethane	ND		1.0	ug/L			04/24/25 00:18	1
Ethylbenzene	ND		1.0	ug/L			04/24/25 00:18	1
Hexachlorobutadiene	ND		1.0	ug/L			04/24/25 00:18	1
Isopropylbenzene	ND		1.0	ug/L			04/24/25 00:18	1

Eurofins Albuquerque

Client Sample Results

Client: Ensolum LLC
 Project/Site: Chaco Plant Produced Water Spill

Job ID: 885-23438-1

Client Sample ID: MW-4

Lab Sample ID: 885-23438-1

Date Collected: 04/17/25 14:47

Matrix: Water

Date Received: 04/18/25 07:45

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		1.0	ug/L			04/24/25 00:18	1
Methylene Chloride	ND		2.5	ug/L			04/24/25 00:18	1
n-Butylbenzene	ND		3.0	ug/L			04/24/25 00:18	1
N-Propylbenzene	ND		1.0	ug/L			04/24/25 00:18	1
Naphthalene	ND		2.0	ug/L			04/24/25 00:18	1
sec-Butylbenzene	ND		1.0	ug/L			04/24/25 00:18	1
Styrene	ND		1.0	ug/L			04/24/25 00:18	1
tert-Butylbenzene	ND		1.0	ug/L			04/24/25 00:18	1
Tetrachloroethene (PCE)	ND		1.0	ug/L			04/24/25 00:18	1
Toluene	5.1		1.0	ug/L			04/24/25 00:18	1
trans-1,2-Dichloroethene	ND		1.0	ug/L			04/24/25 00:18	1
trans-1,3-Dichloropropene	ND		1.0	ug/L			04/24/25 00:18	1
Trichloroethene (TCE)	ND		1.0	ug/L			04/24/25 00:18	1
Trichlorofluoromethane	ND		1.0	ug/L			04/24/25 00:18	1
Vinyl chloride	ND		1.0	ug/L			04/24/25 00:18	1
Xylenes, Total	ND		1.5	ug/L			04/24/25 00:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		70 - 130		04/24/25 00:18	1
Toluene-d8 (Surr)	94		70 - 130		04/24/25 00:18	1
4-Bromofluorobenzene (Surr)	88		70 - 130		04/24/25 00:18	1
Dibromofluoromethane (Surr)	98		70 - 130		04/24/25 00:18	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	3000		10	mg/L			04/19/25 16:21	20

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	4900		250	mg/L			04/23/25 09:51	1

QC Sample Results

Client: Ensolum LLC

Job ID: 885-23438-1

Project/Site: Chaco Plant Produced Water Spill

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

Lab Sample ID: MB 885-24857/5

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 24857

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L			04/23/25 22:40	1
1,1,1-Trichloroethane	ND		1.0	ug/L			04/23/25 22:40	1
1,1,2,2-Tetrachloroethane	ND		2.0	ug/L			04/23/25 22:40	1
1,1,2-Trichloroethane	ND		1.0	ug/L			04/23/25 22:40	1
1,1-Dichloroethane	ND		1.0	ug/L			04/23/25 22:40	1
1,1-Dichloroethene	ND		1.0	ug/L			04/23/25 22:40	1
1,1-Dichloropropene	ND		1.0	ug/L			04/23/25 22:40	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			04/23/25 22:40	1
1,2,3-Trichloropropane	ND		2.0	ug/L			04/23/25 22:40	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			04/23/25 22:40	1
1,2,4-Trimethylbenzene	ND		1.0	ug/L			04/23/25 22:40	1
1,2-Dibromo-3-Chloropropane	ND		2.0	ug/L			04/23/25 22:40	1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L			04/23/25 22:40	1
1,2-Dichlorobenzene	ND		1.0	ug/L			04/23/25 22:40	1
1,2-Dichloroethane (EDC)	ND		1.0	ug/L			04/23/25 22:40	1
1,2-Dichloropropane	ND		1.0	ug/L			04/23/25 22:40	1
1,3,5-Trimethylbenzene	ND		1.0	ug/L			04/23/25 22:40	1
1,3-Dichlorobenzene	ND		1.0	ug/L			04/23/25 22:40	1
1,3-Dichloropropane	ND		1.0	ug/L			04/23/25 22:40	1
1,4-Dichlorobenzene	ND		1.0	ug/L			04/23/25 22:40	1
1-Methylnaphthalene	ND		4.0	ug/L			04/23/25 22:40	1
2,2-Dichloropropane	ND		2.0	ug/L			04/23/25 22:40	1
2-Butanone	ND		10	ug/L			04/23/25 22:40	1
2-Chlorotoluene	ND		1.0	ug/L			04/23/25 22:40	1
2-Hexanone	ND		10	ug/L			04/23/25 22:40	1
2-Methylnaphthalene	ND		4.0	ug/L			04/23/25 22:40	1
4-Chlorotoluene	ND		1.0	ug/L			04/23/25 22:40	1
4-Isopropyltoluene	ND		1.0	ug/L			04/23/25 22:40	1
4-Methyl-2-pentanone	ND		10	ug/L			04/23/25 22:40	1
Acetone	ND		10	ug/L			04/23/25 22:40	1
Benzene	ND		1.0	ug/L			04/23/25 22:40	1
Bromobenzene	ND		1.0	ug/L			04/23/25 22:40	1
Bromodichloromethane	ND		1.0	ug/L			04/23/25 22:40	1
Dibromochloromethane	ND		1.0	ug/L			04/23/25 22:40	1
Bromoform	ND		1.0	ug/L			04/23/25 22:40	1
Bromomethane	ND		3.0	ug/L			04/23/25 22:40	1
Carbon disulfide	ND		10	ug/L			04/23/25 22:40	1
Carbon tetrachloride	ND		1.0	ug/L			04/23/25 22:40	1
Chlorobenzene	ND		1.0	ug/L			04/23/25 22:40	1
Chloroethane	ND		2.0	ug/L			04/23/25 22:40	1
Chloroform	ND		1.0	ug/L			04/23/25 22:40	1
Chloromethane	ND		3.0	ug/L			04/23/25 22:40	1
cis-1,2-Dichloroethene	ND		1.0	ug/L			04/23/25 22:40	1
cis-1,3-Dichloropropene	ND		1.0	ug/L			04/23/25 22:40	1
Dibromomethane	ND		1.0	ug/L			04/23/25 22:40	1
Dichlorodifluoromethane	ND		1.0	ug/L			04/23/25 22:40	1
Ethylbenzene	ND		1.0	ug/L			04/23/25 22:40	1
Hexachlorobutadiene	ND		1.0	ug/L			04/23/25 22:40	1

Eurofins Albuquerque

QC Sample Results

Client: Ensolum LLC
 Project/Site: Chaco Plant Produced Water Spill

Job ID: 885-23438-1

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

Lab Sample ID: MB 885-24857/5
 Matrix: Water
 Analysis Batch: 24857

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

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Isopropylbenzene	ND		1.0	ug/L			04/23/25 22:40	1
Methyl-tert-butyl Ether (MTBE)	ND		1.0	ug/L			04/23/25 22:40	1
Methylene Chloride	ND		2.5	ug/L			04/23/25 22:40	1
n-Butylbenzene	ND		3.0	ug/L			04/23/25 22:40	1
N-Propylbenzene	ND		1.0	ug/L			04/23/25 22:40	1
Naphthalene	ND		2.0	ug/L			04/23/25 22:40	1
sec-Butylbenzene	ND		1.0	ug/L			04/23/25 22:40	1
Styrene	ND		1.0	ug/L			04/23/25 22:40	1
tert-Butylbenzene	ND		1.0	ug/L			04/23/25 22:40	1
Tetrachloroethene (PCE)	ND		1.0	ug/L			04/23/25 22:40	1
Toluene	ND		1.0	ug/L			04/23/25 22:40	1
trans-1,2-Dichloroethene	ND		1.0	ug/L			04/23/25 22:40	1
trans-1,3-Dichloropropene	ND		1.0	ug/L			04/23/25 22:40	1
Trichloroethene (TCE)	ND		1.0	ug/L			04/23/25 22:40	1
Trichlorofluoromethane	ND		1.0	ug/L			04/23/25 22:40	1
Vinyl chloride	ND		1.0	ug/L			04/23/25 22:40	1
Xylenes, Total	ND		1.5	ug/L			04/23/25 22:40	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	101		70 - 130		04/23/25 22:40	1
Toluene-d8 (Surr)	93		70 - 130		04/23/25 22:40	1
4-Bromofluorobenzene (Surr)	81		70 - 130		04/23/25 22:40	1
Dibromofluoromethane (Surr)	111		70 - 130		04/23/25 22:40	1

Lab Sample ID: LCS 885-24857/4
 Matrix: Water
 Analysis Batch: 24857

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
1,1-Dichloroethene	20.0	19.6		ug/L		98	70 - 130
Benzene	20.0	20.1		ug/L		101	70 - 130
Chlorobenzene	20.0	20.9		ug/L		105	70 - 130
Toluene	20.0	19.4		ug/L		97	70 - 130
Trichloroethene (TCE)	20.0	18.2		ug/L		91	70 - 130

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	101		70 - 130
Toluene-d8 (Surr)	93		70 - 130
4-Bromofluorobenzene (Surr)	87		70 - 130
Dibromofluoromethane (Surr)	106		70 - 130

Lab Sample ID: 885-23438-1 MS
 Matrix: Water
 Analysis Batch: 24857

Client Sample ID: MW-4
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
				Result	Qualifier				
1,1-Dichloroethene	ND		20.0	20.4		ug/L		102	70 - 130
Benzene	5.9		20.0	28.1		ug/L		111	70 - 130

Eurofins Albuquerque

QC Sample Results

Client: Ensolum LLC
 Project/Site: Chaco Plant Produced Water Spill

Job ID: 885-23438-1

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

Lab Sample ID: 885-23438-1 MS
 Matrix: Water
 Analysis Batch: 24857

Client Sample ID: MW-4
 Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				
Chlorobenzene	ND		20.0	23.7		ug/L		119	70 - 130
Toluene	5.1		20.0	28.0		ug/L		115	70 - 130
Trichloroethene (TCE)	ND		20.0	19.4		ug/L		97	70 - 130
MS MS									
Surrogate	%Recovery	Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	94		70 - 130						
Toluene-d8 (Surr)	95		70 - 130						
4-Bromofluorobenzene (Surr)	90		70 - 130						
Dibromofluoromethane (Surr)	100		70 - 130						

Lab Sample ID: 885-23438-1 MSD
 Matrix: Water
 Analysis Batch: 24857

Client Sample ID: MW-4
 Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						
1,1-Dichloroethene	ND		20.0	19.0		ug/L		95	70 - 130	7	20
Benzene	5.9		20.0	26.9		ug/L		105	70 - 130	5	20
Chlorobenzene	ND		20.0	22.5		ug/L		113	70 - 130	5	20
Toluene	5.1		20.0	26.4		ug/L		106	70 - 130	6	20
Trichloroethene (TCE)	ND		20.0	18.4		ug/L		92	70 - 130	5	20
MSD MSD											
Surrogate	%Recovery	Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	95		70 - 130								
Toluene-d8 (Surr)	92		70 - 130								
4-Bromofluorobenzene (Surr)	87		70 - 130								
Dibromofluoromethane (Surr)	100		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-24605/4
 Matrix: Water
 Analysis Batch: 24605

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

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Sulfate	ND		0.50	mg/L			04/19/25 10:24	1

Lab Sample ID: LCS 885-24605/5
 Matrix: Water
 Analysis Batch: 24605

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

Analyte	Spike	Added	LCS	LCS	Unit	D	%Rec	%Rec
			Result	Qualifier				
Sulfate	10.0		10.5		mg/L		105	90 - 110

Lab Sample ID: MRL 885-24605/3
 Matrix: Water
 Analysis Batch: 24605

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

Analyte	Spike	Added	MRL	MRL	Unit	D	%Rec	%Rec
			Result	Qualifier				
Sulfate	0.500		0.518		mg/L		104	50 - 150

Eurofins Albuquerque

QC Sample Results

Client: Ensolum LLC
 Project/Site: Chaco Plant Produced Water Spill

Job ID: 885-23438-1

Method: 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 885-24795/1
 Matrix: Water
 Analysis Batch: 24795

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		50	mg/L			04/23/25 09:51	1

Lab Sample ID: LCS 885-24795/2
 Matrix: Water
 Analysis Batch: 24795

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	1030		mg/L		103	80 - 120

QC Association Summary

Client: Ensolum LLC
 Project/Site: Chaco Plant Produced Water Spill

Job ID: 885-23438-1

GC/MS VOA

Analysis Batch: 24857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23438-1	MW-4	Total/NA	Water	8260B	
MB 885-24857/5	Method Blank	Total/NA	Water	8260B	
LCS 885-24857/4	Lab Control Sample	Total/NA	Water	8260B	
885-23438-1 MS	MW-4	Total/NA	Water	8260B	
885-23438-1 MSD	MW-4	Total/NA	Water	8260B	

HPLC/IC

Analysis Batch: 24605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23438-1	MW-4	Total/NA	Water	300.0	
MB 885-24605/4	Method Blank	Total/NA	Water	300.0	
LCS 885-24605/5	Lab Control Sample	Total/NA	Water	300.0	
MRL 885-24605/3	Lab Control Sample	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 24795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-23438-1	MW-4	Total/NA	Water	2540C	
MB 885-24795/1	Method Blank	Total/NA	Water	2540C	
LCS 885-24795/2	Lab Control Sample	Total/NA	Water	2540C	

Eurofins Albuquerque

Lab Chronicle

Client: Ensolum LLC
Project/Site: Chaco Plant Produced Water Spill

Job ID: 885-23438-1

Client Sample ID: MW-4

Lab Sample ID: 885-23438-1

Date Collected: 04/17/25 14:47

Matrix: Water

Date Received: 04/18/25 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		1	24857	CM	EET ALB	04/24/25 00:18
Total/NA	Analysis	300.0		20	24605	ES	EET ALB	04/19/25 16:21
Total/NA	Analysis	2540C		1	24795	HR	EET ALB	04/23/25 09:51

Laboratory References:

EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

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Accreditation/Certification Summary

Client: Ensolum LLC
Project/Site: Chaco Plant Produced Water Spill

Job ID: 885-23438-1

Laboratory: Eurofins Albuquerque

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	NM100001	02-26-26

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Login Sample Receipt Checklist

Client: Ensolum LLC

Job Number: 885-23438-1

Login Number: 23438

List Source: Eurofins Albuquerque

List Number: 1

Creator: Casarrubias, Tracy

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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APPENDIX C
List of Landowners

Table A
Property Owners Within One Mile Radius

Chaco Plant Produced Water Spill
San Juan County, New Mexico
Enterprise Field Services, LLC

Parcel Number ¹	Owner Name	Owner Address	Owner City, State, Zip Code
2900400900400	USA in Trust for Navajo Tribe	Not Available	Not Available
2900500900500	Indian Allotment	Not Available	Not Available

¹ = Information was obtained from the San Juan County, New Mexico Assessor's Public Parcel Map



APPENDIX D

Proposed Verbiage for Public Notice

Enterprise proposes the following verbiage for public notice:

Enterprise Field Services, LLC (Enterprise) hereby announces the publication of a Stage 1 Abatement Plan for groundwater impacts identified at the Chaco Plant Produce Water Spill site located at latitude 36.484021° and longitude 108.117050° within Unit Letter E in Section 16 of Township 26 North, Range 12 West in rural San Juan County, New Mexico (NM) approximately 22 miles southeast of Bloomfield, NM.

On January 26, 2022, a release of produced water was identified due to a frozen valve. Initial site assessments and subsurface investigations performed at the site between January 2022 and June 2022 concluded that groundwater impacts were present above applicable NM Water Quality Control Commission (WQCC) standards for groundwater. The current extent of groundwater impact is estimated to be less than one acre. No surface water was impacted.

The Director of the NM Energy, Minerals and Natural Resources Department (ENMRD) Oil Conservation Division (OCD) has approved a Stage 1 Abatement Plan in which Enterprise proposes implementation of groundwater monitoring at the site to evaluate the concentrations of constituents of concern (COC) and the implementation of additional site-specific aquifer characterization. The data obtained from the Stage 1 Abatement Plan activities will be evaluated to determine a preferred abatement plan remediation option at the site. In order to determine that the Stage 1 Abatement Plan is administratively complete, the NM ENMRD OCD Director has complied with Subsection B of 19.15.30.15 of the New Mexico Administrative Code (NMAC) by reviewing the document and concluding that it satisfies the requirements of Subsection C of 19.15.30.13 NMAC.

Members of the public may view a copy of the Stage 1 Abatement Plan at the NM ENMRD OCD's Santa Fe office located at 1220 South St Francis Drive, #3, Santa Fe, NM or at the NM ENMRD OCD's district office at 1000 Rio Brazos Road, Aztec, New Mexico. Additionally, the Stage 1 Abatement Plan is available for viewing electronically on the NM ENMRD OCD public database at <http://www.emnrd.state.nm.us/OCD/>.

The NM ENMRD OCD accepts written comments and requests for consideration if they are received within 30 days after the publication date of this public notice. Any person seeking to comment on a Stage 1 Abatement Plan should submit written comments to:

Mr. Cory Smith
Environmental Specialist
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

The NM ENMRD OCD shall distribute notice of the submittal of the Stage 1 Abatement Plan with the next division and commission hearing docket following receipt of the plan.

Additional information can be obtained from the Enterprise project contact:

Valerie J. Phipps
1100 Louisiana Street
Houston, Texas 77002-5227
(713) 381-8780

BALLANTINE COMMUNICATIONS

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO

County of San Juan

Odeffe Zerrizo, the undersigned, authorized Representative of the Tri-City Record, on oath states that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Session Law of 1937, that payment therefore has been made of assessed as court cost; and that the notice, copy of which is hereto attached, was published in said paper in the regular daily edition, for 1 time(s) on the following date(s):

1/2/2026

Sworn and subscribed before me, a notary public in and for the county of La Plata and the State of Colorado, 01/15/2026

[Signature]
Notary Public

PRICE: \$78.66

Statement to come at the end of the month.

ACCOUNT NUMBER: 110779

COPY OF ADVERTISEMENT

Stage 1 Abatement Plan

Enterprise Field Services, LLC (Enterprise) hereby announces the publication of a Stage 1 Abatement Plan for groundwater impacts identified at the Chaco Plant Produce Water Spill site located at latitude 36.484021° and longitude 108.117050° within Unit Letter E 7n Section 16 of Township 26 North, Range 12 West in rural San Juan County, New Mexico (NM) approximately 22 miles southeast of Bloomfield, NM. On January 26, 2023, a release of produced water was identified due to a frozen valve. Initial site assessments and subsurface investigations performed at the site between January 2022 and June 2022 concluded that groundwater impacts were present above applicable NM Water Quality Control Commission (WQCC) standards for groundwater. The current extent of groundwater impact is estimated to be less than one acre. No surface water was impacted. The Director of the NM Energy, Minerals and Natural Resources Department (ENMRD) Oil Conservation Division (OCD) has approved a Stage 1 Abatement Plan in which Enterprise proposes implementation of groundwater monitoring at the site to evaluate the concentrations of constituents of concern (COC) and the implementation of additional site-specific aquifer characterization. The data obtained from the Stage 1 Abatement Plan activities will be evaluated to determine a preferred abatement plan remediation option at the site. In order to determine that the Stage 1 Abatement Plan is administratively complete, the NM ENMRD OCD Director has compiled with Subsection B of 19.15.30.15 of the New Mexico Administrative Code (NMAC) by reviewing the document and concluding that it satisfies the requirements of Subsection C of 19.15.30.13 NMAC. Members of the public may view a copy of the Stage 1 Abatement Plan at the NM ENMRD OCD's Santa Fe office located at 1220 South St Francis Drive, 5th, Santa Fe, NM or at the NM ENMRD OCD's district office at 1000 Rio Brazos Road, Aztec, New Mexico. Additionally, the Stage 1 Abatement Plan is available for viewing electronically on the NM ENMRD OCD public database at <http://www.emnrd.state.nm.us/OCD/>. The NM ENMRD OCD accepts written comments and requests for consideration if they are received within 30 days after the publication date of this public notice. Any person seeking to comment on a Stage 1 Abatement Plan should submit written comments to:

Mr. Cory Smith
Environmental Special Projects Supervisor
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

The NM ENMRD OCD shall distribute notice of the submittal of the Stage 1 Abatement Plan with the next division and commission hearing docket following receipt of the plan.

KARI E PATHUIS
Notary Public
State of Colorado
Notary ID # 20254043032
My Commission Expires 11-20-2028

Affidavit of Publication

STATE OF NEW MEXICO } SS
COUNTY OF BERNALILLO }

Ad Cost: \$615.24
Ad Number: 342190
Account Number: 1106314
Classification: NON-GOVERNMENT LEGALS

I, Michele Aster, the undersigned, Legal Representative of the Albuquerque Journal, on oath, state that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, chapter 167, Session Laws of 1937, and payment of fees has been made of assessed and a copy of which is hereto attached, was published in said publication in the daily edition, 1 time on the following date:

January 2, 2026

That said newspaper was regularly issued and circulated on those dates.

SIGNED:

Michele Aster
Legal Representative

Subscribed to and sworn to me this 2nd day of January 2026.

David Lindsey Montoya
Notary Public

County Bernalillo

ID#: 1140229
My commission expires: 04-26-2027

STATE OF NEW MEXICO
NOTARY PUBLIC
DAVID LINDSEY MONTOYA
COMMISSION NUMBER 1140229
EXPIRATION DATE 04-26-2027

ENSOLUM LLC
8330 LBJ FREEWAY, STE. 830
DALLAS, TX 75243

Enterprise Field Services, LLC (Enterprise) hereby announces the publication of a Stage 1 Abatement Plan for groundwater impacts identified at the Chaco Plant Produce Water Spill site located at latitude 36.484021° and longitude 108.117050° within Unit Letter E in Section 16 of Township 26 North, Range 12 West in rural San Juan County, New Mexico (NM) approximately 22 miles southeast of Bloomfield, NM.

On January 26, 2022, a release of produced water was identified due to a frozen valve. Initial site assessments and subsurface investigations performed at the site between January 2022 and June 2022 concluded that groundwater impacts were present above applicable NM Water Quality Control Commission (WQCC) standards for groundwater. The current extent of groundwater impact is estimated to be less than one acre. No surface water was impacted.

The Director of the NM Energy, Minerals and Natural Resources Department (ENMRD) Oil Conservation Division (OCD) has approved a Stage 1 Abatement Plan in which Enterprise proposes implementation of groundwater monitoring at the site to evaluate the concentrations of constituents of concern (COC) and the implementation of additional site-specific aquifer characterization. The data obtained from the Stage 1 Abatement Plan activities will be evaluated to determine a preferred abatement plan remediation option at the site. In order to determine that the Stage 1 Abatement Plan is administratively complete, the NM ENMRD OCD Director has complied with Subsection B of 19.15.30.15 of the New Mexico Administrative Code (NMAC) by reviewing the document and concluding that it satisfies the requirements of Subsection C of 19.15.30.13 NMAC.

Members of the public may view a copy of the Stage 1 Abatement Plan at the NM ENMRD OCD's Santa Fe office located at 1220 South St Francis Drive, #3, Santa Fe, NM or at the NM ENMRD OCD's district office at 1000 Rio Brazos Road, Aztec, New Mexico. Additionally, the Stage 1 Abatement Plan is available for viewing electronically on the NM ENMRD OCD public database at <http://www.emnrd.state.nm.us/OCD/>.

The NM ENMRD OCD accepts written comments and requests for consideration if they are received within 30 days after the publication date of this public notice. Any person seeking to comment on a Stage 1 Abatement Plan should submit written comments to:

Mr. Cory Smith
Environmental Special Projects Supervisor
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

The NM ENMRD OCD shall distribute notice of the submittal of the Stage 1 Abatement Plan with the next division and commission hearing docket following receipt of the plan.

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 519960

CONDITIONS

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 519960
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
shanna.smith	Pursuant to 19.15.30.9 (A) Each soil boring will have two soil samples collected from the depth exhibiting the highest concentration of VOC's based on PID screenings, at the capillary fringe, and will be analyzed for all constituents in 20.6.2.3103 NMAC.	12/31/2025
shanna.smith	All groundwater samples will be analyzed according to all constituents in 20.6.2.3103 NMAC Pursuant to 19.15.30.9.B(2) NMAC. Operators may request to reduce sampling constituents based upon future results.	12/31/2025
shanna.smith	Submit quarterly reports pursuant to 19.15.30.13 Paragraph (5) of Subsection C. Operators may request to reduce sampling events based upon future results.	12/31/2025
shanna.smith	If soil and/or groundwater analytical data indicates impacted soil and/or groundwater is present in any of the lateral extent monitor wells, additional delineation soil borings/monitor wells will be advance within 120 days of laboratory analytical receipt and notifications to the NMOCDD of exceedances.	12/31/2025