

REVIEWED

By Mike Buchanan at 11:02 am, Feb 21, 2025

2024 Annual Groundwater Monitoring Report WLSU #8 OCD Case No. 1RP-2457 Lea County, New Mexico

Prepared for
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October 2, 2024

Review of the 2023 Annual Groundwater Monitoring Report for WLSU #8, content satisfactory

1. Continue groundwater monitoring at the site for chloride plume stability in all 9 wells as proposed.
2. Confirm if chloride remains confined to the east of WLSU 8.
3. Continue conduct groundwater monitoring on schedule as prescribed until all eight (8) consecutive quarterly sample results demonstrate below WQCC standards.
4. Submit the 2024 annual report to OCD, on or before October 2, 2025.



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1. Introduction

On behalf of Diamondback Energy, Daniel B. Stephens & Associates, Inc. (DBS&A) has prepared this report for an annual groundwater monitoring event at West Lovington Strawn Unit (WLSU) #8, located approximately 2.5 miles northwest of Lovington in Lea County, New Mexico (Figure 1). Groundwater monitoring was conducted at the site to provided continued characterization of chloride impacts to groundwater. Energen Resources Corporation (Energen), the former unit operator, discovered the impacts in 2009. The New Mexico Energy, Minerals and Natural Resources Department (NMEMNRD) Oil Conservation Division (OCD) case number for the site is 1RP-2457.

Groundwater monitoring consisted of water level measurement and water quality sampling at nine wells (MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, and MW-9) on June 20 and 23, 2024. MW-7 through MW-9 are well nests with wells screened at different depths (Table 1). The project scope was based on the May 30, 2023 site characterization report (DBS&A, 2023). Water quality data demonstrate that the extent of chloride impacts to groundwater is limited to the area immediately east of WLSU #8.

Section 2 provides a physical description of the site, and summarizes its operational and investigative histories. Section 3 describes the groundwater monitoring activities conducted during the 2024 event. Sections 4 and 5 describe the groundwater gradient and flow velocity and water quality results, respectively, for this event. Section 6 presents the results of contaminant transport modeling. Concluding remarks are provided in Section 7.

2. Background

The following subsections describe the physical layout of the site and summarize its operational and groundwater investigative histories.

2.1 Physical Description

The site is located in Section 34, Township 15 South, Range 35 East in OCD unit letter 'L,' approximately 2.5 miles northwest of the city of Lovington, New Mexico. The site is situated on an approximately 2.4-acre footprint. The WLSU #8-R injection well is located near the center of the site (Figure 1). A battery of aboveground storage tanks (ASTs) is situated on the eastern



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edge of the site. A network of aboveground pipe spans the site's perimeter, including permanent pipelines and flexible temporary tubing.

The WLSU #8 water well was located north of the tank battery near the northeast corner of the site (Figure 1). It was plugged and abandoned in 2015.

The site is constructed on Ogallala Formation, which is locally about 190 feet thick and predominantly composed of well-sorted, poorly to well-consolidated fine sand. A surficial layer of caliche is present throughout the site. It is 1.8 feet to more than 7.5 feet thick. The Ogallala Formation comprises the primary regional aquifer system in the area. It can be locally characterized as an unconfined aquifer with approximately 130 feet of saturated thickness based on site data. The water table is approximately 60 feet below ground surface (bgs). The Ogallala Formation locally overlies the Triassic Dockum Group, which behaves as an effective confining layer and base of the Ogallala Aquifer.

2.2 Operational History

The WLSU #8 well (formerly known as the Snyder F Com well) was initially drilled as a production well in 1994 (NMOCD, 1994). It was drilled to a depth of 11,872 feet bgs and into the Strawn Formation. The well is triple cased and cemented to the surface, including 391 feet of 13³/₈-inch surface casing set in Class 3 cement.

In 2001, Energen became the unit operator of the West Lovington Strawn Unit and continued production of the WLSU #8 well. In 2006, the WLSU #8 well was sidetracked and recompleted from approximately 4,800 to 11,887 feet bgs due to downhole problems (NMOCD, 2006a). A pit was constructed at the northeast corner of the site immediately north of the former WLSU #8 water well location to support drilling operations. OCD approved the pit's closure on October 10, 2006 (NMOCD, 2006b). Energen ceased production at the site in 2008 and converted the WLSU #8 production well into an injection well for enhanced oil recovery. Injection operations commenced in January 2010, at which point the well was redesignated WLSU #8-R.

The WLSU #8 water well is believed to have been drilled in 1995 by an unknown driller (Terracon, 2016). Although a drilling application for the water well was submitted and approved by the Office of the State Engineer (OSE), the well was never registered (GST, 2013). The water well was plugged and abandoned in 2015.



2.3 Release Discovery and Response

In March 2009, Energen collected water quality samples from existing water wells in the WLSU #8 vicinity, as required by OCD before they could commence injection at WLSU #8-R. These wells included the Battery "A" water well, the WLSU #11 windmill, the WLSU #20 water well, and the WLSU #8 water well. Concentrations of all analytes sampled for were below the New Mexico Water Quality Control Commission (NMWQCC) standards numerated in Section 3103 of 20.6.2 NMAC (Section 3103 standards), with the exception of chloride concentration at the WLSU #8 water well. The chloride concentration at this well was 298 milligrams per liter (mg/L), just above the standard of 250 mg/L.

Energen submitted a release notification and corrective action form (C-141) to OCD on October 26, 2009 that outlined the discovery of the elevated chloride concentration at the WLSU #8 water well and requested permission to investigate the release (Appendix A). On December 22, 2009, Energen performed a pumping test at the WLSU #8 water well with permission from OCD (per Case No. 14356, Order No. R10448-E) and the Roswell District Office of the OSE. During the initial 10 days of pumping, 15,464 barrels of water was extracted, and the chloride concentration decreased from 3,692 to 1,420 mg/L, as documented in a January 11, 2010 e-mail from Andy Cobb to Larry Johnson (NMEMNRD) (Energen, 2010).

In 2012, Energen had five monitor wells installed at the site (MW-1 through MW-5) (Figure 1). Well logs are provided in Appendix B. Soil samples were collected from the boreholes for the monitor wells, and water quality samples were collected from the monitor wells after their construction (GST, 2013). The samples were submitted to Hall Environmental Analysis Laboratory, Inc. (HEAL) in Albuquerque, New Mexico. The soil and water quality samples were analyzed for chloride and hydrocarbon concentrations (volatile organic compounds [VOCs] and polycyclic aromatic hydrocarbons [PAHs]). The water quality samples were also analyzed for major ion and metal concentrations. The maximum soil chloride concentration was 63 milligrams per kilogram (mg/kg), recorded at MW-4 at 0 to 2 feet bgs. This concentration is well below the closure criteria of 10,000 mg/kg for soils where depth to groundwater is 51 to 100 feet bgs, as specified in 19.15.29.12 NMAC. With the exception of MW-2 and MW-4, water quality samples collected from the monitor wells were at background levels (less than 50 mg/L), and meet the Section 3103 standard for chloride. Chloride concentrations at MW-2 and MW-4 were 130 and 390 mg/L, respectively (Figure 2). Chloride was the only analyte detected at a concentration above a Section 3103 standard. GeoScience Technologies (GST, 2013) submitted a monitor well completion and initial site characterization report to OCD on May 29, 2013 documenting the monitor well installations.



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On September 24, 2015, the WLSU #8 water well was plugged and abandoned, and MW-6 was installed approximately 10 feet east of the water well's former location. These activities were conducted in accordance with a proposal submitted to and approved by OCD (Terracon, 2015). The well log for MW-6 is provided in Appendix B. Soil samples were collected during the drilling of the borehole for MW-6 and were submitted to XENCO Laboratories, Inc. in Midland, Texas for analysis. The maximum soil chloride concentration was 14.5 mg/kg, measured at a depth of 5 feet bgs. Terracon (2017) documented the activities and laboratory analytical results in a report submitted to OCD on March 29, 2017. The report also provided results of 2016 quarterly groundwater monitoring. A similar monitoring report documenting quarterly 2017 quarterly groundwater monitoring was submitted to OCD on March 27, 2018 (Terracon, 2018). Water quality at MW-2 and MW-6 continually exceeded the Section 3103 standard for chloride between 2015 and 2018, while the water quality results at MW-4 exceeded it only once (Figure 2).

In September 2021, Energen had nested monitor wells MW-7, MW-8, and MW-9 installed upgradient and downgradient (Figure 1) of the site to further define the lateral and vertical extents of chloride impacts to groundwater. CMB Environmental and Geological Services, Inc. (CMB) provided oversight of the drilling and well construction activities. Water quality results from the nested monitor wells showed that chloride impacts to groundwater were limited to the area immediately east of WLSU #8 and that chloride concentrations at the site monitor wells were stable (DBS&A, 2023).

3. June 2024 Groundwater Monitoring

Groundwater monitoring activities included measurement of depth to water (Table 2), sampling, measurement of field parameters, quality assurance/quality control (QA/QC), and delivery of samples to the laboratory for analysis. Water quality samples were collected from all nine monitor wells. A survey report for the monitor wells is provided as Appendix C.

3.1 Well Purging and Field Parameters

The three nested monitor wells (MW-7, MW-8, and MW-9) were purged using a submersible pump and then sampled with disposable bailers. The other six wells (MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6) were bailed and sampled using disposable bailers. Each of the monitor wells was purged of three casing volumes of water before sampling, except for well MW-9S, which was purged of 2.5 casing volumes of water (Table 3).



During the purging process, field measurements of pH, specific conductance, and temperature were recorded. Final field water quality parameter values are reported in Table 3. These values were measured at the end of the purging process when sample were collected. No odors or unusual conditions were noted during purging.

The water produced during purging was placed in a trailer-mounted tank for off-site disposal.

3.2 Sample Collection

After purging each well, samples were collected for laboratory analysis. Samples for analysis were not field-filtered. Collected samples were placed immediately in an ice-filled cooler with chain-of-custody documentation and were delivered to the laboratory.

3.3 Laboratory Analytical Water Quality Parameters

Groundwater samples were analyzed for chloride, gasoline-range organics (GRO), diesel-range organics (DRO), motor oil range organics (MRO), and the volatile organic compounds benzene, ethylbenzene, toluene, and total xylenes (BTEX).

The water quality parameters measured during this event are listed in Tables 4a through 4i. These tables also provide the groundwater protection standards (GWPSs) and practical quantitation limits (PQLs) for each water quality parameter. The groundwater samples were analyzed by Eurofins Environment Testing (Eurofins) in Albuquerque, New Mexico. The completed field sheets and field notes are provided in Appendix D. The laboratory report is provided as Appendix E.

3.4 Quality Assurance/Quality Control

QA/QC samples were collected and tested during the groundwater monitoring. Each type of QA/QC samples is described briefly below:

- *Field blank.* A field blank sample was prepared by filling a complete sample set with deionized water in the field. The sample was analyzed for GRO and BTEX.

Field blank results. GRO and BTEX were not detected in the field blank.

- *Field duplicate.* Field duplicates samples are used to evaluate the precision of the field sampling and laboratory techniques. They are submitted "blind" to the laboratory, given different sample designations, and analyzed separately from the primary samples. EPA



guidance (U.S. EPA, 1990) recommends collection of field duplicates at a minimum frequency of 10 percent during each sampling event. A field duplicate sample was collected from monitor well MW-7S in parallel with the primary water quality sample using the same container type and sampling technique as the primary sample. The field duplicate sample was submitted to the laboratory as a separate sample labeled "MW-7 Shallow Duplicate."

Field duplicate results. The field duplicate sample results closely match the results for MW-7S (Table 5). These results indicate good laboratory precision.

- *Matrix spike and matrix spike duplicates.* Matrix spike/matrix spike duplicate (MS/MSD) analyses are performed on additional sample volumes to which the laboratory adds (spikes) appropriate analyte(s) at concentrations between 10 and 50 times the method detection limits. The results of the MS/MSD analyses are used to determine laboratory accuracy and precision and to determine if any matrix interferences exist. MS/MSD analyses are standard laboratory procedures that are independent of the environmental samples collected in the field. The results of the MS/MSD analyses are reported in the Eurofins laboratory report in Appendix E.

Matrix spike and matrix spike duplicate results. The laboratory report (Appendix E) includes a QA/QC summary report. The results indicate that the laboratory's QA/QC criteria have been met.

3.5 Equipment Decontamination and Maintenance

Thorough decontamination of all non-disposable sampling equipment was conducted before each day's sampling and before sampling of each well to prevent cross-contamination of samples collected in the field. This equipment included the water level sounder, water quality field parameter probe, and submersible pump used for well purging. All other sampling equipment was dedicated. Decontamination procedures were as follows:

- Equipment was washed in a solution of non-phosphate detergent (Liquinox) and distilled/deionized water. All surfaces that could come in direct contact with the samples were washed in a clean plastic tub, using a scrub brush to mechanically remove any loose particles.
- Equipment was rinsed twice with distilled/deionized water.
- Equipment was dried before use to the extent practicable.
- Clean latex gloves were worn during all washing and rinsing operations.



3.6 Instrument Calibration and Frequency

Field instruments were calibrated to ensure that reliable data were generated. The only field instrument used during sampling at site was a Hanna Instruments multiparameter meter probe that can test pH, electrical conductivity, and temperature. Complete procedures for operating, maintaining, and calibrating the instrument are contained in the manufacturer's instruction manual.

3.7 Sample Handling and Chain of Custody

Samples collected for laboratory analysis were transported in ice chests to Eurofins. Sample bottles were sealed in clear plastic bags and placed in coolers on bags of ice to cool the samples to 4°C for storage and transportation. Plastic bubble pack was used to prevent breakage of fragile sample bottles. All samples arrived intact, and holding time requirements were met.

Sample bottles were checked in advance of sampling and tagged with an adhesive label containing the following information (applied using waterproof ink): designated sample identification and type of analysis requested. In the field, the sampling date and time and the initials of the sampler were added.

For analytical data to be valid, samples must be traceable from the time of collection through chemical analysis and final disposition. A chain of custody form obtained from the laboratory was used for this purpose. The chain of custody form is included with the laboratory report in Appendix E.

4. Groundwater Flow Direction and Velocity

Figure 3 provides a time-series graph of water level elevations over time. Figure 4 is a potentiometric surface map constructed from June 2024 water level measurements. The water level data presented in the potentiometric surface map show that the groundwater gradient is toward the east-southeast at 0.0034 foot per foot (ft/ft). This groundwater flow direction and gradient are consistent with those of the previous monitoring event that was conducted in 2022 (DBS&A, 2023).

The average linear groundwater flow velocity was calculated using Darcy's Law, as follows:

$$v = \frac{K}{n_e} \frac{(h_1 - h_2)}{l} \quad (1)$$



where v = average linear velocity (feet per day [ft/d])
 K = hydraulic conductivity (ft/d)
 n_e = effective porosity (dimensionless)
 h_2 = hydraulic head (elevation) downgradient (feet)
 h_1 = hydraulic head (elevation) upgradient (feet)
 l = distance between h_1 and h_2 (feet)

The hydraulic gradient is 0.0034 ft/ft based on the June 2024 potentiometric surface map (Figure 4). The hydraulic conductivity (K) of 22 feet per day (ft/d) and effective porosity (n_e) of 0.25 are taken from the OSE's groundwater model for Lea County (Musharrafieh and Chudnoff, 1999). Based on these parameter values, the calculated groundwater flow velocity is 0.3 ft/d (110 feet per year [ft/yr]). The hydraulic conductivity of the Ogallala Aquifer is variable, and the average linear groundwater flow velocity could be lower, or as high as several feet per day.

5. Water Quality Results

Chloride concentrations in regional groundwater have historically been elevated in the area of the former location of the WLSU #8 water well (i.e., at MW-2 and MW-6). The chloride concentration at MW-4 has also occasionally exceeded the Section 3103 standard for chloride, with concentrations ranging from 123 to 390 mg/L (Figure 2). Figure 5 shows the current vertical and horizontal distributions of chloride at the site. Wells MW-2 and MW-6 are the only wells with chloride concentrations above the Section 3103 standard of 250 mg/L. These two wells are located immediately downgradient of the former location of the WLSU #8 water well. MW-2 and MW-6 are approximately 120 feet southeast and 10 feet east, respectively, of the former location of the WLSU #8 water well. The chloride concentration at MW-4 is typically around the Section 3103 standard, and was 140 mg/L in June 2024. Well MW-4 is approximately 225 feet south-southeast of the former location of the WLSU #8 water well.

The chloride concentrations at the WLSU #8 site monitor wells appear stable with the exception of the chloride concentration at MW-7 (Figure 2). Chloride concentration at MW-7 exhibits an increasing trend over the well's short history. It increased from 56 to 69 mg/L at MW-7S and from 52 to 73 mg/L at MW-7D. The MW-7 monitor well nest is located downgradient MW-2, where chloride concentration is greatest (Figure 5). The increase is likely due to the movement of chloride-impacted groundwater to the southeast. Although chloride concentration at MW-7



remains below the Section 3103 standard, if it continues to increase, additional characterization or implementation of corrective action (e.g., groundwater pumping) may be needed.

The chloride concentrations of the June 2024 water quality samples collected at the three nested monitor wells are similar for each location (Figure 5). For instance, the chloride concentrations at MW-8 were 23 mg/L (shallow), 24 mg/L (middle), and 29 mg/L (deep). Similar trends were seen at MW-7 and MW-9 (Figure 5). These water quality data demonstrate that density stratification of chloride is not present.

The calculated average linear groundwater flow velocity is 0.3 ft/d (110 ft/yr) (Section 4). Based on this velocity, groundwater impacts from the former location of the WLSU #8 water well should have reached MW-7 by now. Chloride is a conservative ion, meaning that it typically does not interact with other dissolved ions or aquifer materials, and therefore travels at about the same rate as groundwater. MW-7 is 690 feet southeast (downgradient) of the former WLSU #8 water well location, where elevated chloride concentrations were first observed in 2009. Given the distance to MW-7 (690 feet) and flow velocity (110 ft/yr), chloride-impacted groundwater should have reached MW-7 in approximately 6 years (by 2016). Chloride concentration at MW-7 is increasing. The increase is likely due to the movement of chloride-impacted groundwater to the southeast and appears to be slightly above background levels (i.e., less than 50 mg/L) this event. Chloride-impacted groundwater is diluted through mixing (i.e., diffusion and dispersion) before reaching MW-7 and remains below Section 3103 standard for chloride.

6. Advection-Dispersion Modeling

DBS&A simulated the transport of chloride-impacted groundwater in the WLSU #8 vicinity using ATRANS-EXCEL (ATRANS). ATRANS is a three-dimensional advection dispersion model that uses analytical transport solutions to determine the concentration of dissolved constituents across time and distance away from a source (S.S. Papadopoulos, 2016). It can be used to consider advection, dispersion, sorption, and first-order transformation reaction processes, and assumes that groundwater flow is steady and uniform. DBS&A used ATRANS to evaluate the degree to which elevated chloride concentrations could become naturally diluted as groundwater travels away from the former location of the WLSU #8 water well.

DBS&A parameterized the ATRANS model using the same hydraulic properties as the calculation of the average linear groundwater flow velocity (Section 4): (1) hydraulic conductivity of 22 ft/d,



(2) effective porosity of 0.25, and (3) hydraulic gradient to the southeast at 0.0034 ft/ft. The model domain was set at 2,000 square-feet with 800 cells. Longitudinal, transverse, and vertical dispersivity values were assigned values of 100, 10, and 0.1 feet. The effective diffusion coefficient was set to zero. The chloride source was simulated as a two-dimensional rectangular patch placed near the former location of the WLSU #8 water well location (20 feet wide and 5 feet deep) with a constant chloride concentration of 2,500 mg/L. The model was run at 1-year timesteps until a steady-state condition was achieved.

ATRANS simulated results are presented in Figure 6. Steady-state conditions are achieved at the site within 10 years. The simulated results show that dispersion effectively dilutes chloride concentrations to less than 250 mg/L 260 feet downgradient of the source, and to background levels 1,300 feet downgradient of the source (Figure 6). The ATRANS simulated results generally agree with observed chloride concentrations.

Despite some uncertainty about the timing and extent of the chloride release at the WLSU #8 site, the ATRANS simulated results demonstrate that elevated chloride concentrations are attenuated by dispersion to background levels within about a thousand feet of the site.

7. Conclusions and Recommendation

In March 2009, Energen (the former WLSU #8 operator) sampled several water wells in the vicinity of the WLSU #8 site. Chloride was detected at the WLSU #8 water well at a concentration of 298 mg/L, above the Section 3103 standard of 250 mg/L. Energen submitted a C-141 form to OCD in October 2009 notifying them of the elevated chloride concentration at the WLSU #8 water well. Since the discovery of the elevated chloride concentration, Energen has installed a total of nine monitor wells at the site. Five monitor wells were installed in 2012 (MW-1 through MW-5), one monitor well was installed in 2016 (MW-6), and three monitor well nests were installed in 2021 (MW-7 through MW-9). The WLSU #8 water well was plugged and abandoned in 2015.

The site's monitor wells were sampled in June 2024. Water quality at the wells show that chloride impacts to groundwater are limited to the area immediately east of the WLSU #8 site (Figure 5). Wells MW-2 and MW-6 were the only wells in June 2024 with water quality results that exceed the Section 3103 standard for chloride. Chloride concentrations at downgradient monitor wells MW-7 and MW-8 met the Section 3103 standard for chloride. This includes each of the screened intervals of monitor well nests MW-7 and MW-8.



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Chloride concentrations at the site's monitor wells appear stable with the exception of the increasing trend observed at MW-7 (Figure 2). The increase is likely due to the movement of chloride-impacted groundwater to the southeast. The chloride concentration at MW-7 remains below the Section 3103 standard for chloride. If the concentration continues to increase addition characterization or implementation of corrective action (e.g., groundwater pumping) may be needed.

DBS&A recommends continued annual groundwater monitoring at the nine site wells to help confirm that the chloride plume remains limited to the area immediately east of the WLSU #8 site and is not migrating further from the site.

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Figures

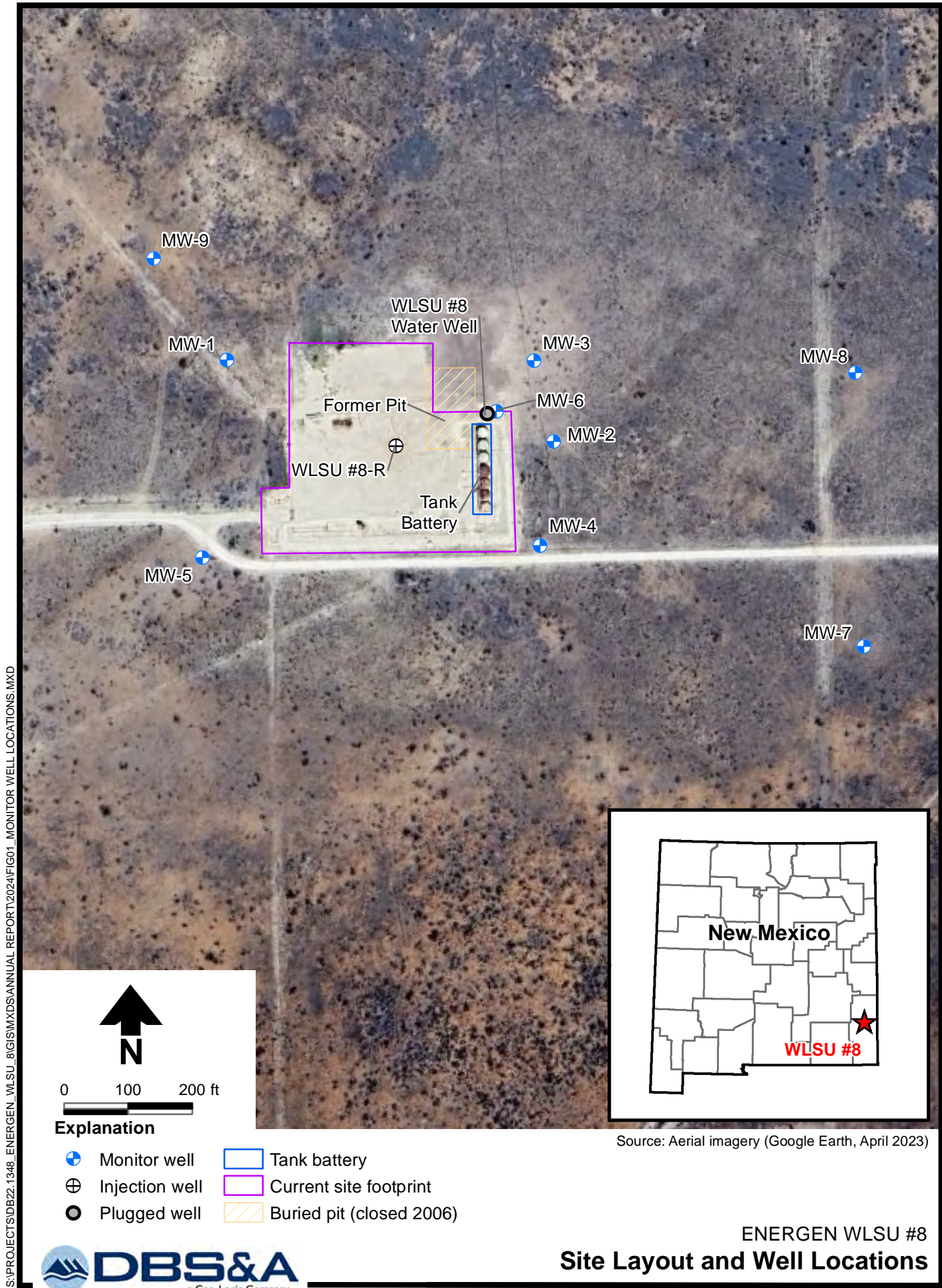


Figure 1

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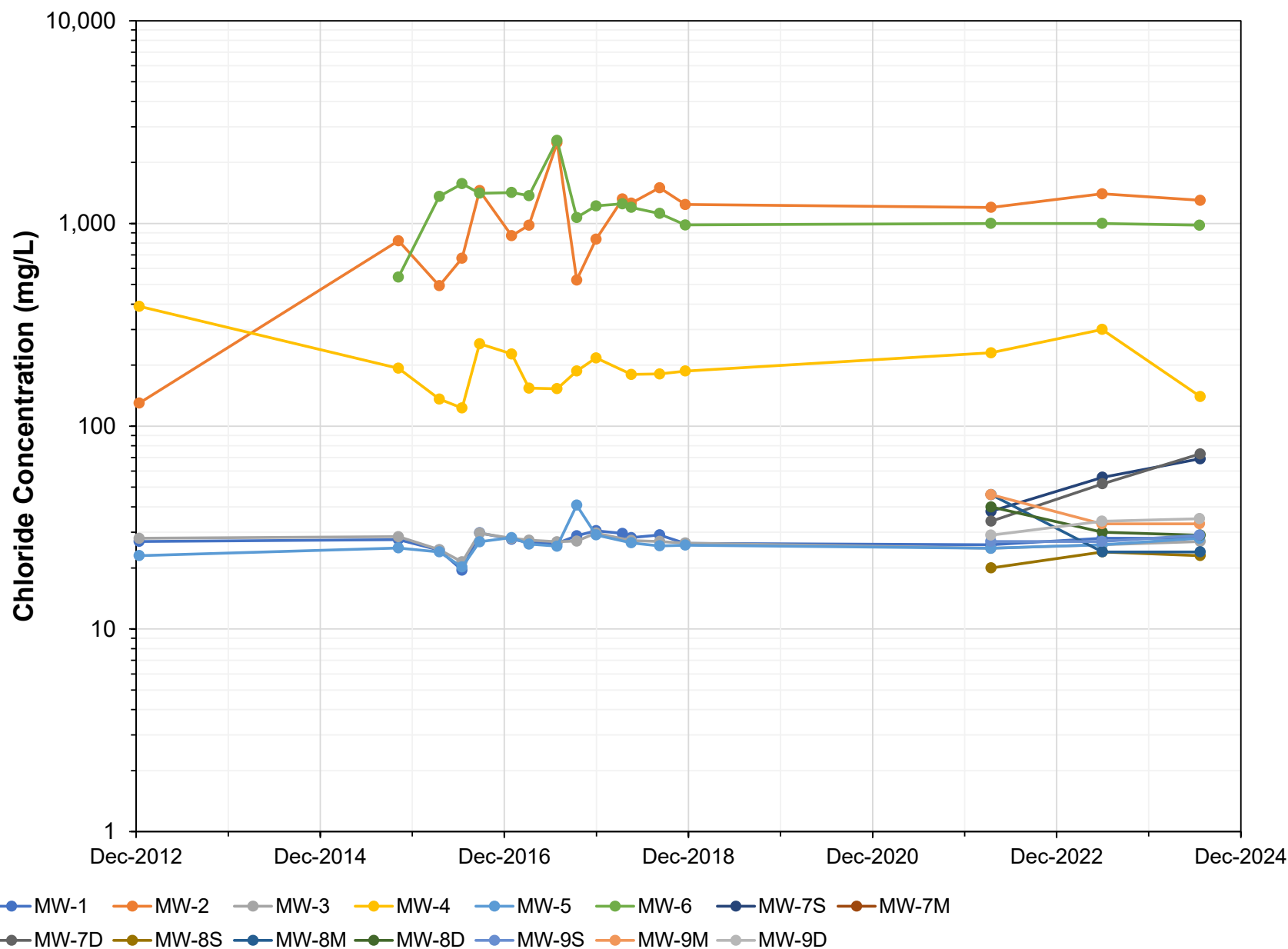


Figure 2

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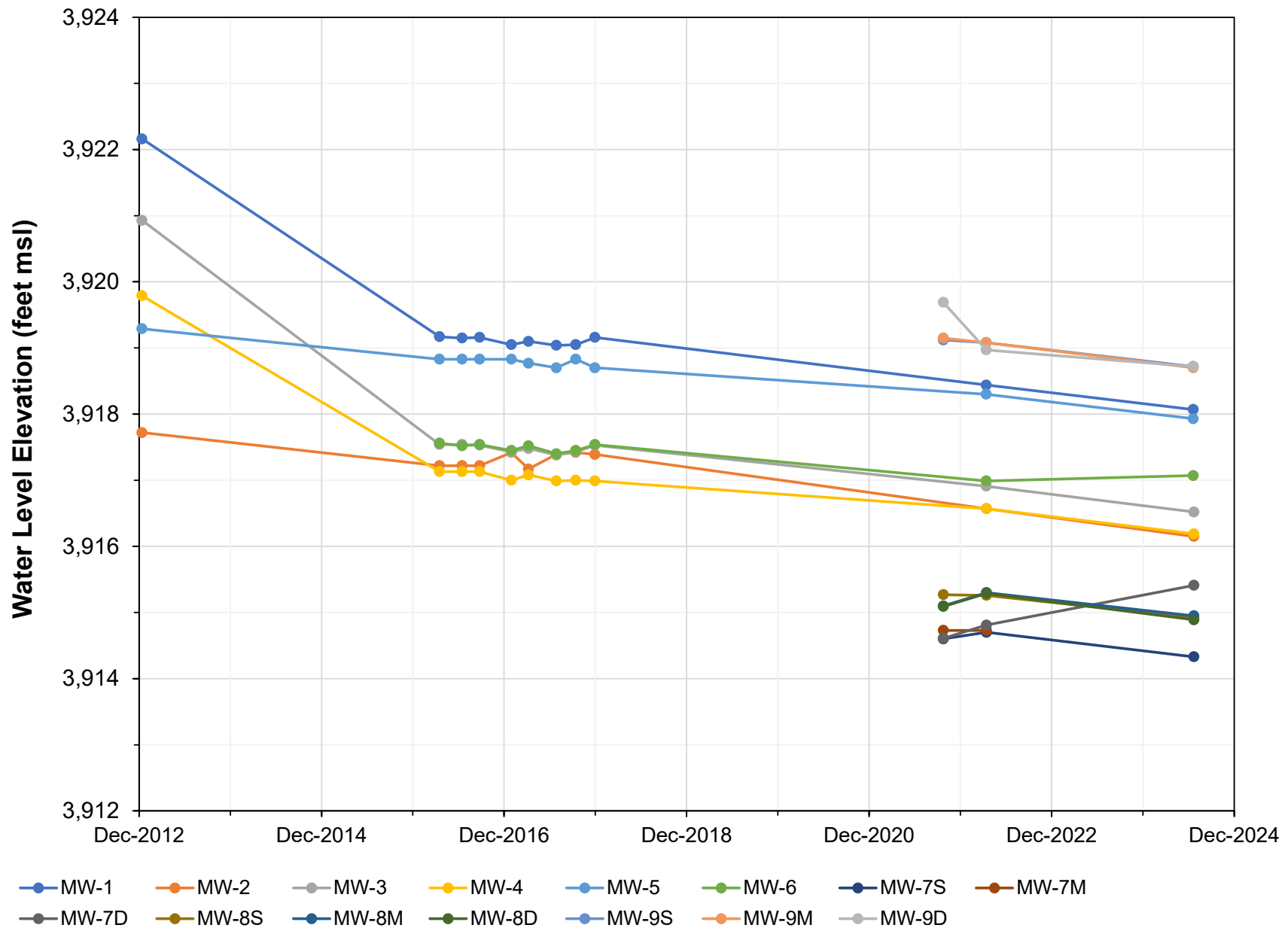


Figure 3

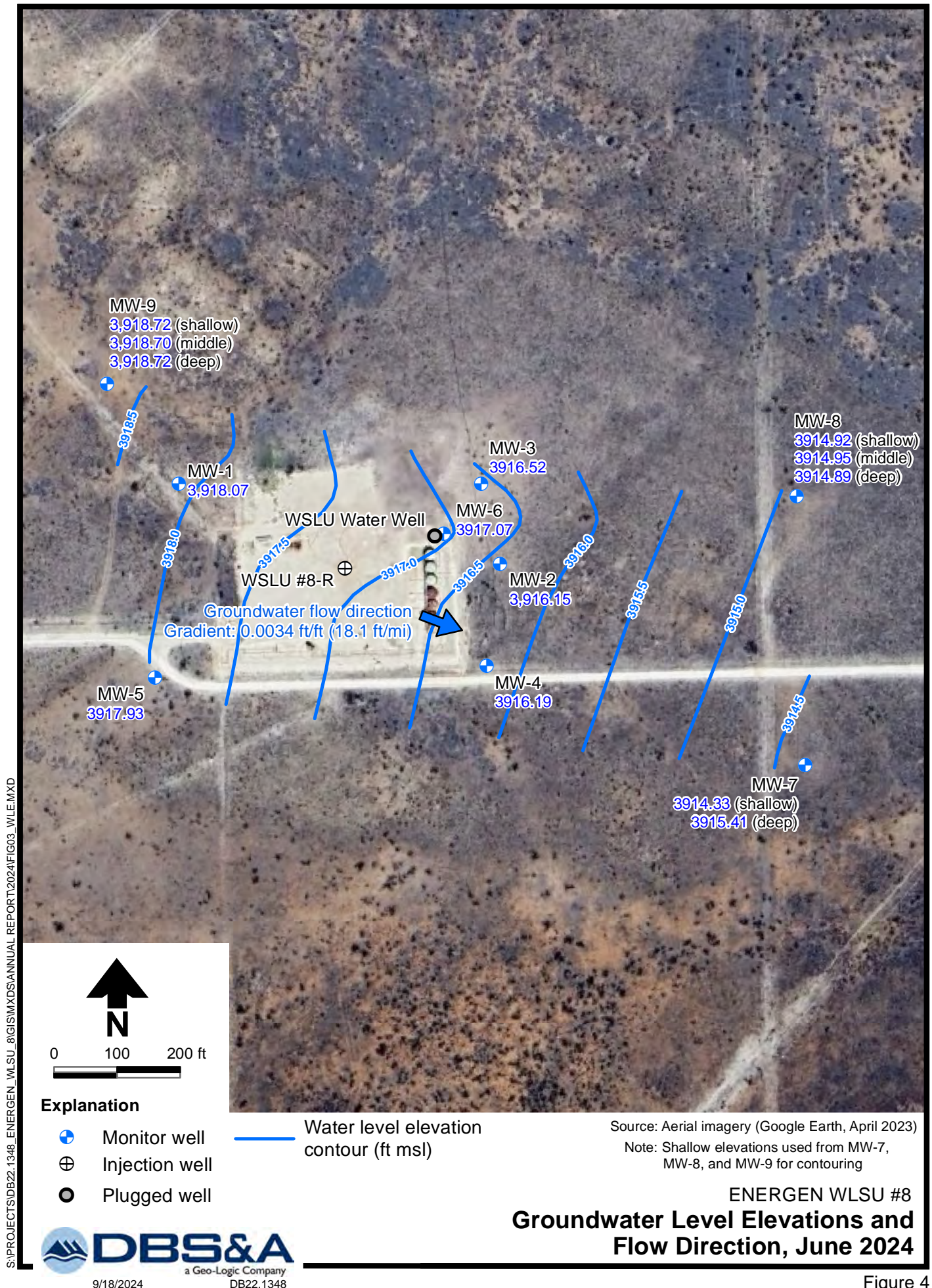


Figure 4

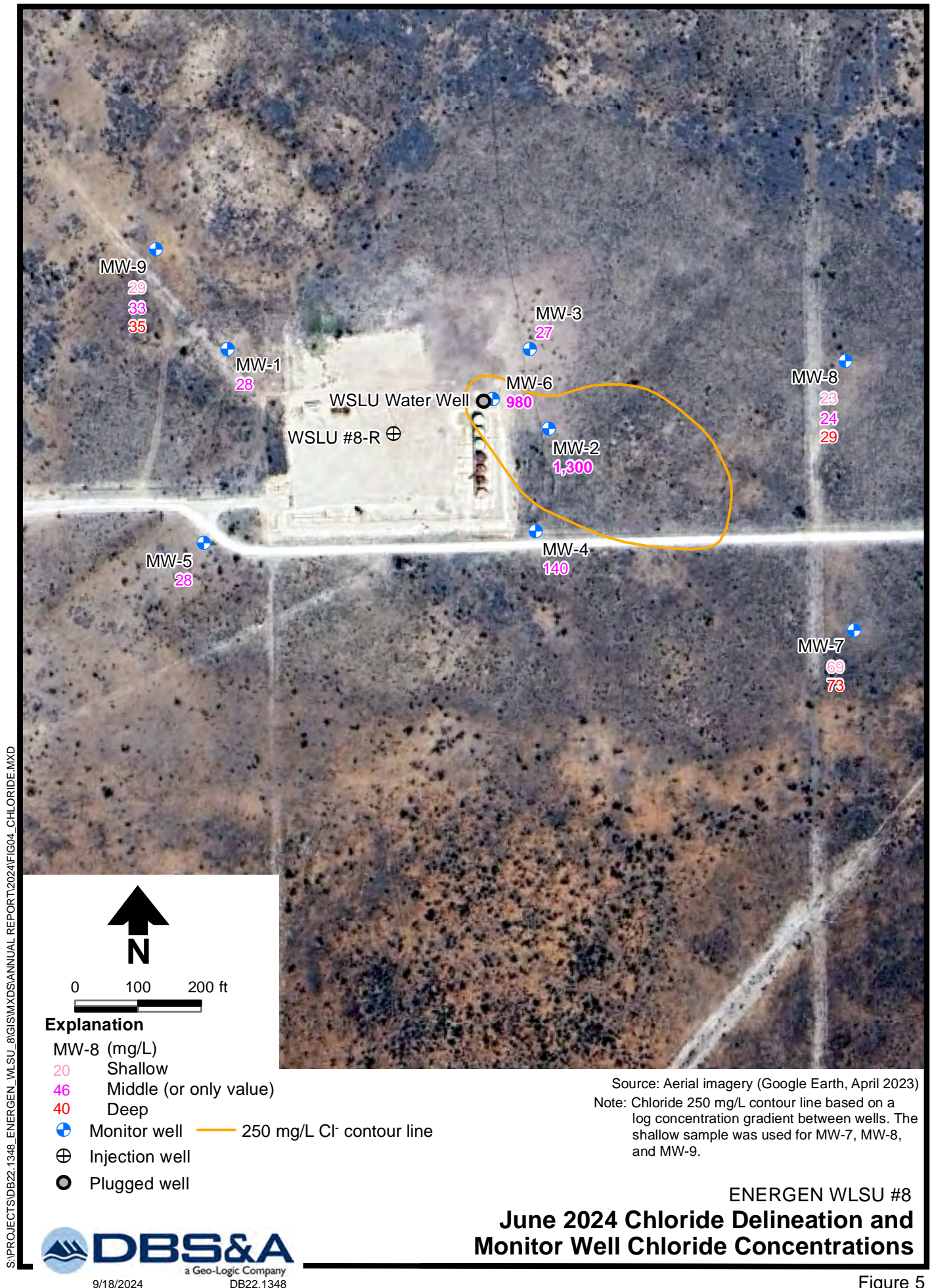


Figure 5



Figure 6

Tables



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Table 1. Monitor Well Construction Information

Well ID	OSE Permit No.	Completion Date	Northing ^a (feet)	Easting ^a (feet)	Ground Surface Elevation ^b (feet msl)	Top of Casing Elevation ^a (feet msl)	Total Borehole Depth (feet bgs)	Total Well Depth (feet bgs)	Screened Interval (feet bgs)
MW-1	L-13218-POD1	12/12/2012	718754.5	826775.5	3,973.05	3,975.52	71	69.6	49–69
MW-2	L-13218-POD2	12/12/2012	718624.4	827284.4	3,972.55	3,974.76	70	69.6	49.6–69.6
MW-3	L-13218-POD3	12/12/2012	718751.1	827254.9	3,973.86	3,976.67	73	71.5	51–71
MW-4	L-13218-POD5	12/13/2012	718462.6	827262.2	3,971.80	3,974.52	73	70.2	49.7–69.7
MW-5	L-13218-POD4	12/13/2012	718446.9	826735.6	3,971.78	3,974.43	71	68	47.5–67.5
MW-6	L-13218-POD6	9/14/2015	718672.3	827195.6	3,972.74	3,976.17	70	70	50–70
MW-7S	L-15194-POD1	9/22/2021	718301.7	827766.4	3,969.65	3,969.45	197.5	72	50–70
MW-7M						3,969.43		143	126–141
MW-7D						3,969.41		190.5	173.5–188.5
MW-8S	L-15194-POD2	9/18/2021	718728.7	827755.9	3,969.75	3,969.47	197.5	72	50–70
MW-8M						3,969.30		146.5	129.5–144.5
MW-8D						3,969.29		193.5	176.5–191.5
MW-9S	L-15194-POD3	9/14/2021	718914.0	826662.6	3,972.15	3,971.80	197.5	72	50–70
MW-9M						3,971.85		145	128–143
MW-9D						3,971.82		192	175–190

^a NAD 1998 Vertical Datum.

^b NAD 1983 - New Mexico East Zone.

OSE = Office of the State Engineer

msl = Above mean sea level

bgs = Below ground surface

October 2, 2024

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2024 Annual Groundwater Monitoring Report Energen WLSU #8

Table 2. 2024 Water Level Measurements

Well ID	Date	Top of Casing Elevation ^a (feet msl)	Depth to Water (feet btoc)	Water Level Elevation (feet msl)
MW-1	6/20/2024	3,975.52	57.45	3,918.07
MW-2	6/23/2024	3,974.76	58.61	3,916.15
MW-3	6/23/2024	3,976.67	60.15	3,916.52
MW-4	6/23/2024	3,974.52	58.33	3,916.19
MW-5	6/20/2024	3,974.43	56.50	3,917.93
MW-6	6/20/2024	3,976.17	59.10	3,917.07
MW-7S	6/23/2024	3,969.45	55.12	3,914.33
MW-7M ^b	6/23/2024	3,969.43	—	—
MW-7D	6/23/2024	3,969.41	54.00	3,915.41
MW-8S	6/23/2024	3,969.47	54.55	3,914.92
MW-8M	6/23/2024	3,969.30	54.35	3,914.95
MW-8D	6/23/2024	3,969.29	54.40	3,914.89
MW-9S	6/20/2024	3,971.80	53.08	3,918.72
MW-9M	6/20/2024	3,971.85	53.15	3,918.70
MW-9D	6/20/2024	3,971.82	53.10	3,918.72

^a NAD 1998 Vertical Datum.

^b This well was damaged by the driller. Casing blocked/collapsed at 46.30 feet from top of casing.

msl = Above mean sea level

btoc = Below top of casing



2024 Annual Groundwater Monitoring Report Energen WLSU #8

Table 3. 2024 Field Water Quality Parameters

Well ID	Sample Date	Purge Volume (gallons)	Temperature (°C)	Conductance (µS/cm)	pH (s.u.)
MW-1	6/20/2024	6.75	19.61	632	7.32
MW-2	6/23/2024	6.50	19.59	4,719	7.36
MW-3	6/23/2024	6.75	19.60	648	7.33
MW-4	6/23/2024	7.00	19.72	1,046	7.30
MW-5	6/20/2024	6.75	18.97	614	7.37
MW-6	6/20/2024	7.00	19.60	3,997	7.56
MW-7S	6/23/2024	8.00	20.05	807	7.41
MW-7D	6/23/2024	60.0	20.95	770	7.73
MW-8S	6/23/2024	10.0	21.55	582	7.43
MW-8M	6/23/2024	45.0	21.13	585	7.47
MW-8D	6/23/2024	67.0	22.13	647	7.52
MW-9S	6/20/2024	10.0	19.70	642	7.46
MW-9M	6/20/2024	45.0	19.50	569	7.61
MW-9D	6/20/2024	67.0	20.21	577	7.56

°C = Degrees Celsius

µS/cm = Microsiemens per centimeter

s.u. = Standard units



2024 Annual Groundwater Monitoring Report Energen WLSU #8

Table 4a. 2024 Analytical Results, Monitor Well MW-1

Parameter	Concentration (mg/L ^a)		
	20.9.9.20 NMAC Standard	PQL	MW-1 (6/20/2024)
<i>General Chemistry</i>			
Chloride	250	10	28
<i>Gasoline and Diesel Range Organics</i>			
Gasoline-range organics [C6-C10]	NS	0.050	<0.050
Diesel-range organics [C10-C28]	NS	1.0	<1.0
Motor oil range organics [C28-C40]	NS	5.0	<5.0
<i>Volatile Organic Compounds (µg/L)</i>			
Benzene	5	1.0	<1.0
Ethylbenzene	700	1.0	<1.0
Toluene	1,000	1.0	<1.0
Total xylenes	620	1.5	<1.5

^a Unless otherwise noted.

mg/L = Milligrams per liter

µg/L = Micrograms per liter

PQL = Practical quantitation limit

NS = No standard



2024 Annual Groundwater Monitoring Report Energen WLSU #8

Table 4b. 2024 Analytical Results, Monitor Well MW-2

Parameter	Concentration (mg/L ^a)		
	20.9.9.20 NMAC Standard	PQL	MW-2 (6/23/2024)
<i>General Chemistry</i>			
Chloride	250	10	1,300
<i>Gasoline and Diesel Range Organics</i>			
Gasoline-range organics [C6-C10]	NS	0.050	<0.050
Diesel-range organics [C10-C28]	NS	1.0	<1.0
Motor oil range organics [C28-C40]	NS	5.0	<5.0
<i>Volatile Organic Compounds (µg/L)</i>			
Benzene	5	1.0	<1.0
Ethylbenzene	700	1.0	<1.0
Toluene	1,000	1.0	<1.0
Total xylenes	620	1.5	<1.5

Bold indicates that value exceeds the standard.

^a Unless otherwise noted.

mg/L = Milligrams per liter

µg/L = Micrograms per liter

PQL = Practical quantitation limit

NS = No standard



2024 Annual Groundwater Monitoring Report Energen WLSU #8

Table 4c. 2024 Analytical Results, Monitor Well MW-3

Parameter	Concentration (mg/L ^a)		
	20.9.9.20 NMAC Standard	PQL	MW-3 (6/23/2024)
<i>General Chemistry</i>			
Chloride	250	10	27
<i>Gasoline and Diesel Range Organics</i>			
Gasoline-range organics [C6-C10]	NS	0.050	<0.050
Diesel-range organics [C10-C28]	NS	1.0	<1.0
Motor oil range organics [C28-C40]	NS	5.0	<5.0
<i>Volatile Organic Compounds (µg/L)</i>			
Benzene	5	1.0	<1.0
Ethylbenzene	700	1.0	<1.0
Toluene	1,000	1.0	<1.0
Total xylenes	620	1.5	<1.5

^a Unless otherwise noted.

mg/L = Milligrams per liter

µg/L = Micrograms per liter

PQL = Practical quantitation limit

NS = No standard



2024 Annual Groundwater Monitoring Report Energen WLSU #8

Table 4d. 2024 Analytical Results, Monitor Well MW-4

Parameter	Concentration (mg/L ^a)		
	20.9.9.20 NMAC Standard	PQL	MW-4 (6/23/2024)
<i>General Chemistry</i>			
Chloride	250	10	140
<i>Gasoline and Diesel Range Organics</i>			
Gasoline-range organics [C6-C10]	NS	0.050	<0.050
Diesel-range organics [C10-C28]	NS	1.0	<1.0
Motor oil range organics [C28-C40]	NS	5.0	<5.0
<i>Volatile Organic Compounds (µg/L)</i>			
Benzene	5	1.0	<1.0
Ethylbenzene	700	1.0	<1.0
Toluene	1,000	1.0	<1.0
Total xylenes	620	1.5	<1.5

^a Unless otherwise noted.

mg/L = Milligrams per liter

µg/L = Micrograms per liter

PQL = Practical quantitation limit

NS = No standard



2024 Annual Groundwater Monitoring Report Energen WLSU #8

Table 4e. 2024 Analytical Results, Monitor Well MW-5

Parameter	Concentration (mg/L ^a)		
	20.9.9.20 NMAC Standard	PQL	MW-5 (6/20/2024)
<i>General Chemistry</i>			
Chloride	250	10	28
<i>Gasoline and Diesel Range Organics</i>			
Gasoline-range organics [C6-C10]	NS	0.050	<0.050
Diesel-range organics [C10-C28]	NS	1.0	<1.0
Motor oil range organics [C28-C40]	NS	5.0	<5.0
<i>Volatile Organic Compounds (µg/L)</i>			
Benzene	5	1.0	<1.0
Ethylbenzene	700	1.0	<1.0
Toluene	1,000	1.0	<1.0
Total xylenes	620	1.5	<1.5

^a Unless otherwise noted.

mg/L = Milligrams per liter

µg/L = Micrograms per liter

PQL = Practical quantitation limit

NS = No standard



2024 Annual Groundwater Monitoring Report Energen WLSU #8

Table 4f. 2024 Analytical Results, Monitor Well MW-6

Parameter	Concentration (mg/L ^a)		
	20.9.9.20 NMAC Standard	PQL	MW-6 (6/20/2024)
<i>General Chemistry</i>			
Chloride	250	10	980
<i>Gasoline and Diesel Range Organics</i>			
Gasoline-range organics [C6-C10]	NS	0.050	<0.050
Diesel-range organics [C10-C28]	NS	1.0	<1.0
Motor oil range organics [C28-C40]	NS	5.0	<5.0
<i>Volatile Organic Compounds (µg/L)</i>			
Benzene	5	1.0	<1.0
Ethylbenzene	700	1.0	<1.0
Toluene	1,000	1.0	<1.0
Total xylenes	620	1.5	<1.5

Bold indicates that value exceeds the standard.

^a Unless otherwise noted.

mg/L = Milligrams per liter

µg/L = Micrograms per liter

PQL = Practical quantitation limit

NS = No standard



2024 Annual Groundwater Monitoring Report
Energen WLSU #8

Table 4g. 2024 Analytical Results, Monitor Well MW-7

Parameter	Concentration (mg/L ^a)			
	20.9.9.20 NMAC Standard	PQL	MW-7S (6/23/2024)	MW-7D (6/23/2024)
<i>General Chemistry</i>				
Chloride	250	10	69	73
<i>Gasoline and Diesel Range Organics</i>				
Gasoline-range organics [C6-C10]	NS	0.050	<0.050	<0.050
Diesel-range organics [C10-C28]	NS	1.0	<1.0	<1.0
Motor oil range organics [C28-C40]	NS	5.0	<5.0	<5.0
<i>Volatile Organic Compounds (µg/L)</i>				
Benzene	5	1.0	<1.0	<1.0
Ethylbenzene	700	1.0	<1.0	<1.0
Toluene	1,000	1.0	<1.0	<1.0
Total xylenes	620	1.5	<1.5	<1.5

^a Unless otherwise noted.

mg/L = Milligrams per liter

µg/L = Micrograms per liter

PQL = Practical quantitation limit

NS = No standard



2024 Annual Groundwater Monitoring Report
Energen WLSU #8

Table 4h. 2024 Analytical Results, Monitor Well MW-8

Parameter	Concentration (mg/L ^a)				
	20.9.9.20 NMAC Standard	PQL	MW-8S (6/23/2024)	MW-8M (6/23/2024)	MW-8D (6/23/2024)
<i>General Chemistry</i>					
Chloride	250	10	23	24	29
<i>Gasoline and Diesel Range Organics</i>					
Gasoline-range organics [C6-C10]	NS	0.050	<0.050	<0.050	<0.050
Diesel-range organics [C10-C28]	NS	1.0	<1.0	<1.0	<1.0
Motor oil range organics [C28-C40]	NS	5.0	<5.0	<5.0	<5.0
<i>Volatile Organic Compounds (µg/L)</i>					
Benzene	5	1.0	<1.0	<1.0	<1.0
Ethylbenzene	700	1.0	<1.0	<1.0	<1.0
Toluene	1,000	1.0	<1.0	<1.0	<1.0
Total xylenes	620	1.5	<1.5	<1.5	<1.5

^a Unless otherwise noted.

mg/L = Milligrams per liter

µg/L = Micrograms per liter

PQL = Practical quantitation limit

NS = No standard



2024 Annual Groundwater Monitoring Report
Energen WLSU #8

Table 4i. 2024 Analytical Results, Monitor Well MW-9

Parameter	Concentration (mg/L ^a)				
	20.9.9.20 NMAC Standard	PQL	MW-9S (6/20/2024)	MW-9M (6/20/2024)	MW-9D (6/20/2024)
<i>General Chemistry</i>					
Chloride	250	10	29	33	35
<i>Gasoline and Diesel Range Organics</i>					
Gasoline-range organics [C6-C10]	NS	0.050	<0.050	<0.050	<0.050
Diesel-range organics [C10-C28]	NS	1.0	<1.0	<1.0	<1.0
Motor oil range organics [C28-C40]	NS	5.0	<5.0	<5.0	<5.0
<i>Volatile Organic Compounds (µg/L)</i>					
Benzene	5	1.0	<1.0	<1.0	<1.0
Ethylbenzene	700	1.0	<1.0	<1.0	<1.0
Toluene	1,000	1.0	<1.0	<1.0	<1.0
Total xylenes	620	1.5	<1.5	<1.5	<1.5

^a Unless otherwise noted.

mg/L = Milligrams per liter

µg/L = Micrograms per liter

PQL = Practical quantitation limit

NS = No standard



2024 Annual Groundwater Monitoring Report
Energen WLSU #8

Table 5. Comparison of 2024 Quality Assurance Duplicate Analytical Results

Analyte	Concentration (mg/L ^a)			
	20.9.9.20 NMAC Standard	MW-7S	Duplicate	RPD ^b (%)
<i>General Chemistry</i>				
Chloride	250	69	75	8.3
<i>Gasoline and Diesel Range Organics</i>				
Gasoline-range organics [C6-C10]	NS	<0.050	<0.050	0
Diesel-range organics [C10-C28]	NS	<1.0	<1.0	0
Motor oil range organics [C28-C40]	NS	<5.0	<5.0	0
<i>Volatile Organic Compounds (µg/L)</i>				
Benzene	5	<1.0	<1.0	0
Ethylbenzene	700	<1.0	<1.0	0
Toluene	1,000	<1.0	<1.0	0
Total xylenes	620	<1.5	<1.5	0

^a Unless otherwise noted.

^b Relative percent difference (RPD) is calculated as follows:

$$RPD = \frac{|A - B|}{(A + B)/2} \times 100\% \quad \text{where A = first duplicate concentration (the reporting limit if non-detect), B = second duplicate concentration (the reporting limit if non-detect)}$$

mg/L = Milligrams per liter

µg/L = Micrograms per liter

NS = No standard

October 2, 2024

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Appendix A

C-141 Forms

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Energen Resources Corporation	Contact: Andrew Cobb
Address: 3300 North A St. Bldg. 4, Ste. 100 Midland, Tx. 79705	Telephone No. 432-687-1155
Facility Name: West Lovington Strawn Unit	Facility Type: Fresh Water Well @ WLSU #8 well 30-025-32291

Surface Owner: Dan Field	Mineral Owner: N/A	Lease No. N/A
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LOCATION OF RELEASE

Unit Letter L	Section 34	Township 15S	Range 35E	Feet from the 1980	North/South Line FNL	Feet from the 660	East/West Line FWL	County Lea
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Latitude 32° 58' 19.1"

Longitude 103° 24' 06.5"

NATURE OF RELEASE

Type of Release: Unknown	Volume of Release	Volume Recovered
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Sampling of fresh water well near the WLSU #8 well shows elevated chloride levels.

Describe Area Affected and Cleanup Action Taken.*
Will begin investigation into cause of the elevated levels and remediate to approved standard.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Andrew Cobb	OIL CONSERVATION DIVISION	
Printed Name: Andrew Cobb	Approved by District Supervisor <i>[Signature]</i> ENVIRONMENTAL ENGINEER	
Title: Sr. Safety & Environmental Specialist	Approval Date: 3.19.10	Expiration Date: 5.19.10
E-mail Address: andy.cobb@energen.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 10-26-09 Phone: 432-686-3599		IRP# 10-3-2457

* Attach Additional Sheets If Necessary

Date: Jan 29, 2021

Ramona Marquez
New Mexico Oil Conservation Division

RE: *Energen Resources Corporation West Lovington Strawn Unit No. 8*
UL "L" Section 34-Township 15 South, Range 35 East, Lea County New Mexico
OCD No. 1RP-2457
Delineation of Ground Water

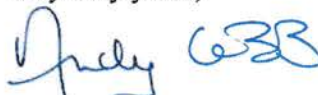
Dear Ms. Marquez:

I write this letter at the request of Brad Billings of the New Mexico Oil Conservation Division to provide evidence of authorization of Wayne Price of Price, LLC to, consistent with the understanding set forth in this letter, represent and submit documents on behalf of Energen Resources Corporation ("Energen"). Energen is a wholly owned subsidiary of Diamondback Energy, Inc.

Mr. Price has been retained by Energen to consult and advise concerning claims of groundwater contamination associated with the West Lovington Strawn Unit No. 8. In that regard he has been authorized to submit documents on behalf of Energen to the New Mexico Oil Conservation Division, and in particular to submit those documents necessary to obtain approval for the installation of four additional ground water monitoring wells, as set forth in his letter of January 4, 2021 to Mr. Brad Billings and subsequent communication between he and Mr. Billings.

I trust that this gives you the information necessary to properly document the authorization of Mr. Price to act on behalf of Energen.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Andy Cobb", followed by a stylized set of initials "CB".

Andy Cobb

From: **Wayne Price** wayneprice@q.com
Subject: 1RP-2457 Amended
Date: January 19, 2021 at 8:25 AM
To: EMNRD Billings Bradford Bradford.Billings@state.nm.us
Cc: Wayne Price wayneprice@q.com, Richard Olson rolson@hinklelawfirm.com, Clayton Barnhill cmbenviro@gmail.com

Dear Brad,

Please find attached the amended plan pursuant to our recent telephone conference call. I will also insert this E-mail and aerial view showing the additional MW-10 down-gradient well and the moved location of the up-gradient MW-9 well in your new electronic submittal system. Per your phone instructions we may begin the project.

Thank you for your assistance.

Wayne Price-Price LLC
7 SYCAMORE LANE
GLENWOOD NM 88039
wayneprice@q.com
505-715-2809



January 05, 2021

Mr. Brad Billings-NMOCD-Albuquerque Office,
5200 Oakland Avenue, N.E. Suite 100, 87113
Via E-mail: EMNRD Billings Bradford <Bradford.Billings@state.nm.us

Reference: Energen Resources Corporation
West Lovington Strawn Unit#8
UL "L" Sec 34-TS15S Rg 35E
Lea County, NM
OCD Case # 1RP-2457

Subject: Delineation of Groundwater

Dear Brad,

On behalf of the Energen Resources Corporation Project, Price LLC (Wayne Price) request OCD approval to install three (3) additional groundwater monitoring wells at the above reference location. The objective is to further define the vertical and horizontal extent of contamination at the site.

Our plan is to install an up-gradient well and two additional down-gradient wells. Please refer to the attached aerial plat for approximate locations. The attachment includes a simple dilution box model that assisted in determining the down-gradient distance for these wells. The estimated depth was taken from area wells logs and "Triassic" Red Bed maps for the area. (REF: USGS Hydrologic Investigation Atlas HA-62) complete report enclosed for reference.

The down-gradient well locations were place in order to assure future protection of known fresh water resources in the area.

Each well will be an EPA approved type nested well containing three isolated 2" well bores with isolation seals and proper sand/gravel pack, all completed in a 6" PVC casing. The top well will be equipped with 20 foot slotted screen, 5 feet above he current water level and 15 ft. below. The second well will be similar in construction and will have 15 feet of screen in the mid-range of the aquifer, and the third well will have 15 feet of screen for monitoring the bottom of the aquifer.

This will allow samples to be collected at the top, middle and bottom of the aquifer to pick up floating hydrocarbons or density gradient constituents such as chlorides.

Before installation of additional monitor wells, we plan on collecting water samples from each existing monitor well for WQCC volatiles, semi -volatiles, metals, and

inorganic constituents to establish a new baseline and constituents of concern (COC's).

The first round of sampling of the three new wells will also include these COC's. Attached is the most recent water analysis that was collected in 2018 with up-dated site plat. The 2019 event is missing, and we will report the next results in the first quarter of 2021.

Once the new wells have been installed, levels measured, we will utilize EPA protocols, properly purge with Ph., Conductivity, and Temperature measurements to ensure we are obtaining a stabilized sample before collecting, preserve, and then analyzed at an approved Laboratory.

A report will be sent to you with findings, conclusions and recommendations.

If you have any questions, concerns or comments please contact me at wayneprice@q.com or 505-715-2809.

Sincerely,



Wayne Price-Price LLC
7 Sycamore Ln
Glenwood, NM 88039

CC: Richard Olson-Hinkle Shanor LLP
Bill B. Caraway-Deputy General Counsel Diamondback Energy
Andy Cobb-Diamondback Energy Inc.
Clay Barnhill-CMB Environmental & Geological Services
Wayne Price-Jr BSME Environmental Engineer

Attachments:

- 1- Aerial view of proposed wells.
- 2- GW Model.
- 3- USGS- Geography, Geology and Groundwater and Histoy.
- 4- Annotated Site Map with most recent Chlorides.
- 5- Nov 2018 analytical result report



Dilution Box Model
Energen Resources-W. Lov. Strawn Unit #8
UL I-Sec 34-Ts15S-R34E
OCD 1RP-2457

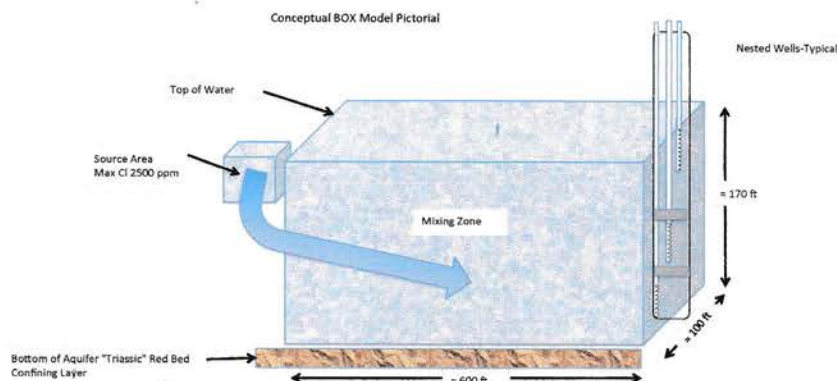
Model Objective: To determine a reasonable distance for installing down-gradient monitor wells to define the outer limit of the contamination.

Model Description: A simple volumetric dilution model that compares the estimated source volume at certain worst case concentration of Chlorides, to an estimated volume of down-gradient fresh water, and calculates the DAF (Dilution Attenuation Factor) for the site. By varying the down-gradient length (a manual reiterative process), then the assumptions provides a calculated distance for the installation of down-gradient wells. Model assumptions for the initial source area was taken from the site diagram and initial depth estimated. The mixing zone lateral width of 100 feet was used as several EPA DAF models use this default dimension. The depth was determine from the estimated depth of the first confinin layer in the Ogalla aquifer in this area.

Model Limitations: This model is for estimation of MW placement, and only provides an Initial starting point. Depending upon future sampling results will actual determine future delineation work.

Model Results: The model results indicate that the wells can be approximately 600 ft down-gradient and still maintain a Chloride level of the natural background.

	Wide ft	Sat thickness Depth ft	Length ft	VOL Ft3	Gal/ft3		
Source Area Volume	50	50	50	125000	7.46	932,500	Gallons
Diluted Volume Down-Gradient	100	170	600	10200000	7.46	76,092,000	Gallons
						81.6 DAF	
Source		2,500 ppm		2500 PPM			
Diluted down Gradient			2500/DAF=	31 PPM		Estimated Chlorides within statistical range for background	



DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

GROUND-WATER CONDITIONS
IN THE NEW MEXICO STATE

HYDROLOGIC INVESTIGATIONS
KLEAS HA-45 (1957) 1 OF 2



EXPLANATION

Topographic map of Lea County, New Mexico, showing ground-water conditions. The map includes contour lines, a grid, and a legend. A red box highlights a specific area labeled '10P 2457 Study Area'. The map is titled 'GROUND-WATER CONDITIONS IN THE NEW MEXICO STATE' and 'LEA COUNTY, NEW MEXICO'.

INTRODUCTION

The purpose of this report is to present a summary of the ground-water conditions in Lea County, New Mexico, as determined by the United States Geological Survey. The report is based on data collected from 1945 to 1955, and it includes a description of the geology, hydrology, and climate of the county. The report also includes a list of wells and a table of water levels.

The geology of Lea County is primarily composed of sandstone and shale. The sandstone is of the Permian and Triassic periods, and the shale is of the Permian period. The climate of Lea County is arid, with annual precipitation of about 10 inches. The hydrology of Lea County is characterized by the presence of the Rio Grande, which flows through the county. The Rio Grande is a major source of water for the county, and it is used for irrigation and domestic purposes.

DESCRIPTION OF THE STUDY AREA

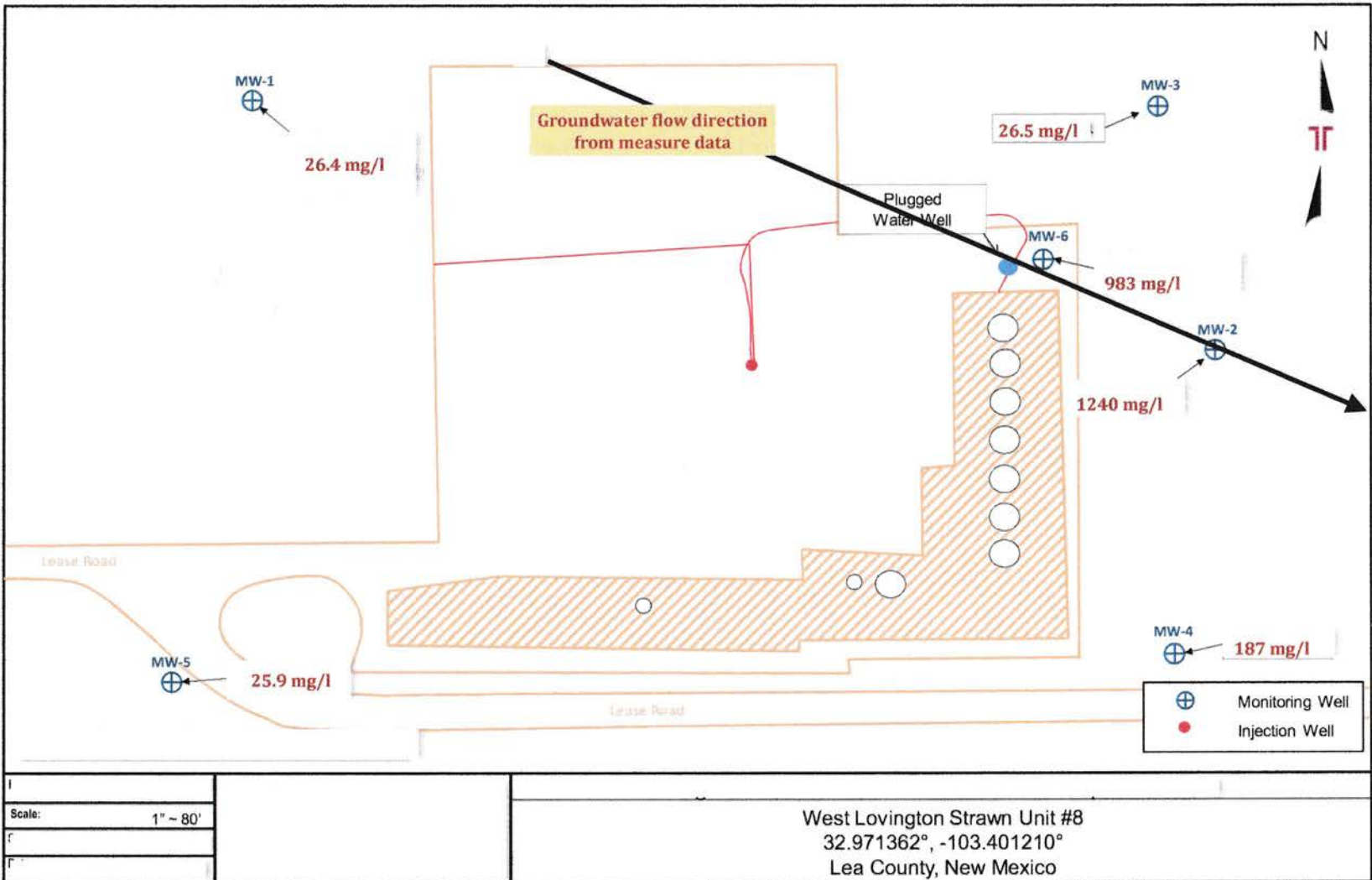
The study area is located in the southwestern corner of Lea County, New Mexico. It is bounded by the Rio Grande to the west and south, and by the New Mexico-Arizona border to the east. The study area is approximately 10 miles long and 5 miles wide. The topography of the study area is generally flat, with some low hills in the north. The geology of the study area is primarily composed of sandstone and shale. The sandstone is of the Permian and Triassic periods, and the shale is of the Permian period. The climate of the study area is arid, with annual precipitation of about 10 inches. The hydrology of the study area is characterized by the presence of the Rio Grande, which flows through the county. The Rio Grande is a major source of water for the county, and it is used for irrigation and domestic purposes.

GROUND-WATER CONDITIONS IN NORTHERN LEA COUNTY, NEW MEXICO

By
Sidney R. Ash
1957

HYDROLOGIC INVESTIGATIONS
KLEAS HA-45 (1957) 1 OF 2

HYDROLOGIC INVESTIGATIONS
KLEAS HA-45 (1957) 1 OF 2



**Plat copied from OCD Well File Annotated by Price LLC to show the Nov 2018 chloride sample results:
Analysis attached herein. Jan 05, 2021**



Certificate of Analysis Summary 606107

Terracon Lubbock, Lubbock, TX

Project Name: West Lovington Strawn Unit #8

Project Id: AR157026

Contact: Brett Dennis

Project Location:

Date Received in Lab: Tue Nov-20-18 08:45 am

Report Date: 29-NOV-18

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	606107-001	606107-002	606107-003	606107-004	606107-005	606107-006
	Field Id:	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6
	Depth:						
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	Sampled:	Nov-19-18 13:25	Nov-19-18 14:45	Nov-19-18 14:15	Nov-19-18 13:50	Nov-19-18 12:55	Nov-19-18 15:20
Chloride by EPA 300	Extracted:	Nov-28-18 15:00	Nov-28-18 15:00	Nov-28-18 15:00	Nov-28-18 15:00	Nov-28-18 15:00	Nov-28-18 15:00
	Analyzed:	Nov-28-18 16:21	Nov-28-18 16:59	Nov-28-18 17:11	Nov-28-18 17:23	Nov-28-18 17:36	Nov-28-18 17:48
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Chloride		26.4 12.5	1240 250	26.5 12.5	187 25.0	25.9 12.5	983 250

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.



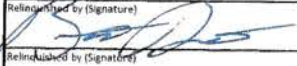
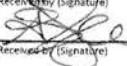
Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager

606107

CHAIN OF CUSTODY RECORD

606107

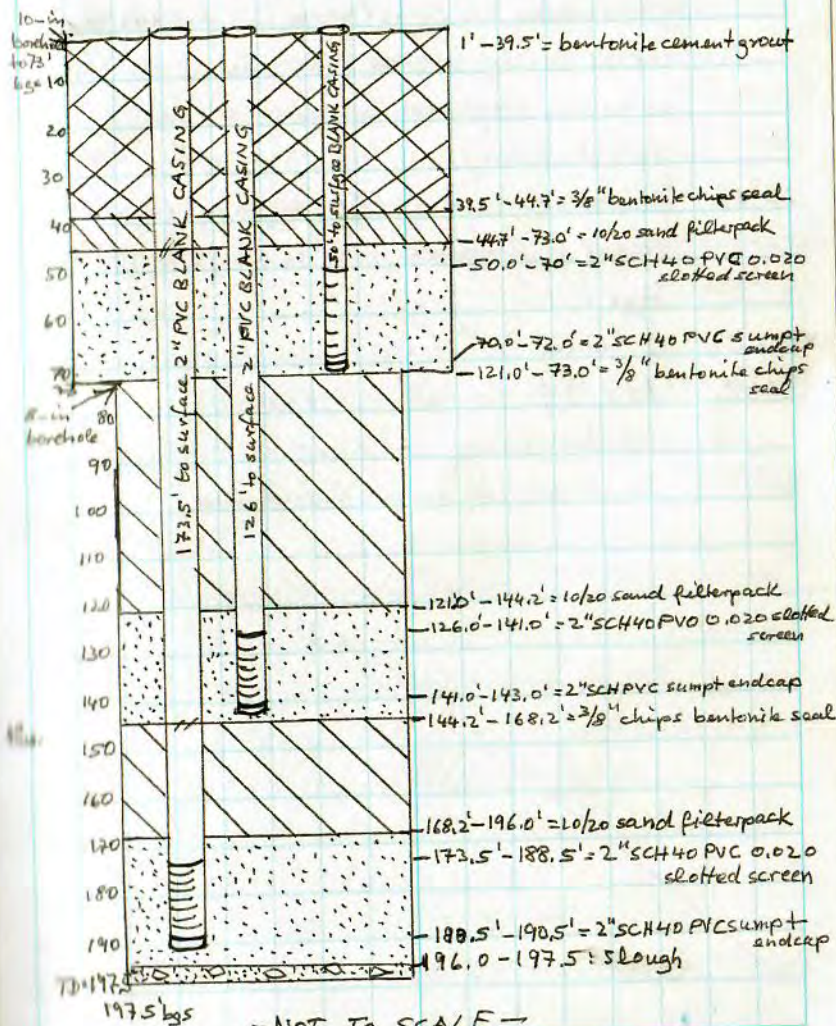
		Laboratory: Xenco Address: 6701 Aberdeen Lubbock, Texas 79424		Phone: _____ Contact: _____ SRS #: _____ Sampler's Signature: 		ANALYSIS REQUESTED		LAB USE ONLY DUE DATE: _____ TEMP OF COOLER WHEN RECEIVED (°C) <u>18.3</u> Page <u>1</u> of <u>1</u>	
		Office Location: <u>Lubbock</u> Project Manager: <u>Brett Dennis</u> Sampler's Name: <u>Brett Dennis</u>							
Project Number: <u>AR157026</u>		Project Name: <u>West Lovington Strawn Unit #8</u>		No. Type of Containers					
Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	250 ml Poly	Chloride (EPA Method 300)
GW	11/19/2018	13:25		X	MW-1			1	X
GW	11/19/2018	14:45		X	MW-2			1	X
GW	11/19/2018	14:15		X	MW-3			1	X
GW	11/19/2018	13:50		X	MW-4			1	X
GW	11/19/2018	12:55		X	MW-5			1	X
GW	11/19/2018	15:20		X	MW-6			1	X
TURNAROUND TIME: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> 48-Hour Rush <input type="checkbox"/> 24-Hour Rush									
TRRP Laboratory Review Checklist: <input type="checkbox"/> Yes <input type="checkbox"/> No									
Relinquished by (Signature): 		Date: <u>11-20-18</u> Time: <u>8:45</u>		Received by (Signature): 		Date: <u>11/20/18</u> Time: <u>8:45</u>		NOTES:	
Relinquished by (Signature): _____		Date: _____ Time: _____		Received by (Signature): _____		Date: _____ Time: _____		e-mail results to:	
Relinquished by (Signature): _____		Date: _____ Time: _____		Received by (Signature): _____		Date: _____ Time: _____		brett.dennis@terracon.com kcwilliams@terracon.com kristina.kohl@terracon.com	
Matrix: WW - Wastewater W - Water S - Soil L - Liquid A - Air Bag C - Charcoal tube SL - Sludge Container: VOA - 80 ml vial A/G - Amber Glass 1L 250 ml - Glass wide mouth P/O - Plastic or other									
Lubbock Office = 5827 50th Street, Suite 1 • Lubbock, Texas 79424 • 806-300-0140 Responsive • Resourceful • Reliable									

Appendix B

Monitor Well Logs

Location Diamondback Energy Date 9/22/21
 Project / Client West Lovington Strawn Unit #5
 Charge Resources OCD Case #1 RP -2457

WELL COMPLETION MW-7
SCHEMATIC OF TRIPLE NESTED MW-7
MW-7 (DEEP) + MW-7 (MIDDLE) + MW-7 (SHALLOW)
- NOT TO SCALE -



- NOT TO SCALE -

- LA -

Put in the Rain

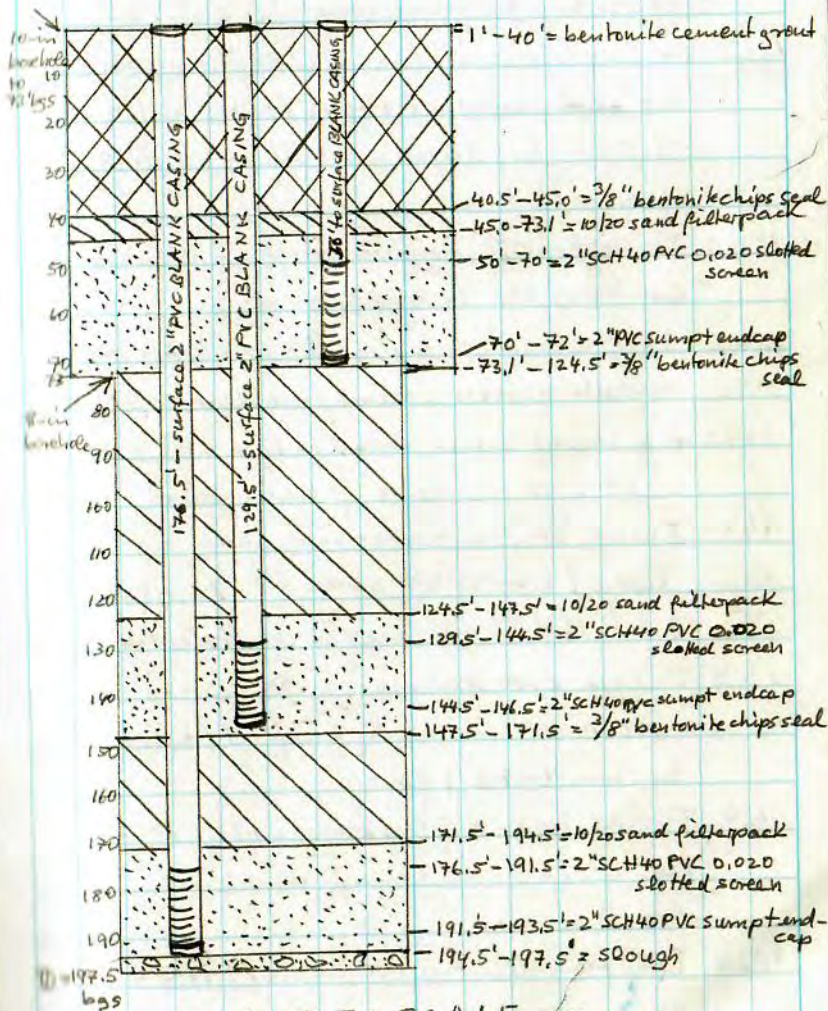
Location Diamondback Energy Date 9/18/21

Project / Client West Covington Strawn Unit # 8

21 ^{VED} Emergency Resources Case # 1 RP-2457

WELL COMPLETION MW-8

WELL COMPLETION MW-8
SCHEMATIC OF TRIPLE NESTED MW-8
mw-8C (deep) + mw-8C (middle) + mw-8C (shallow)
- NOT TO SCALE -



- NOT TO SCALE -

— LR —

Rite in the Rain

Location Great Diamondback Energy Date 9/14/21

LA 9/14/21

Project / Client West Lorington Strawn Unit # 8

Energy Resources Corp OGD Case #1RP-2457

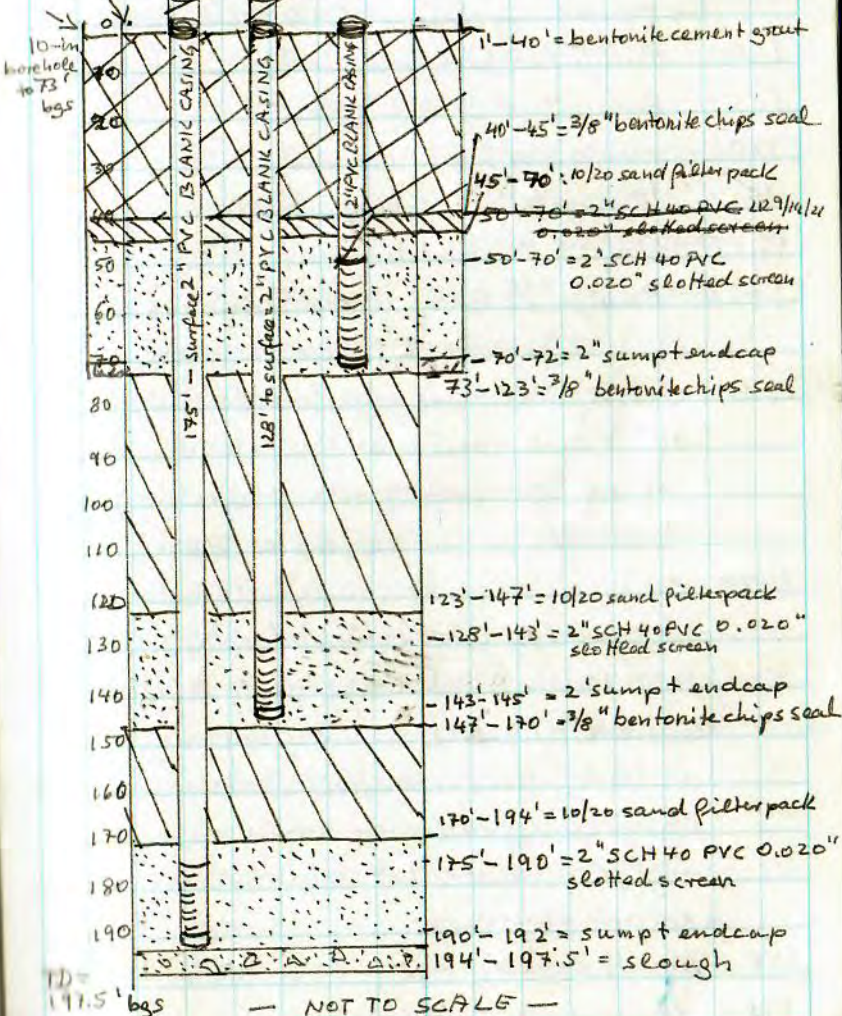
WELL COMPLETION mw-9

SCHEMATIC OF TRIPLE NESTED mw-9:

mw-9 (Deep) + mw-9 (middle) + mw-9 (shallow)

NOT TO SCALE -

8-in borehole



- LA -

Return to owner

CMB Environmental & Geological Services, Inc. Boring ID: PW-7

Project: Energy Resources OCD
 Case # 1 RP-2457 Sheet: 7 of 4
 Location: West Lovington Strawn Unit #8
 Client: Diamondback Energy Job number:
 Driller: Trey Cain Total depth: 197.5' bgs
 Drilling method: Sonic Core CLS-600 Roto Sonic Boring diameter: 10-in to 73 ft bgs; 8-in to 197.5' bgs
 Boring date: 9/19/21 - 9/23/21 Logged by: P. Anderson
 Water level: Date measured:

depth (ft)	SAMPLE			standard penetration test results	SOIL DESCRIPTION Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS Monitoring well installation, geotechnical properties, analytical tests, instrumentation
	interval	number	recovery (inches)				
0	top soil			0-0.7'	Topsoil: fine sand/silt/clay + organic matter (7.5YR 5/4) and white caliche at 0.5' bgs; dry		
			SS	++	0-7.5': caliche / sandstone; very pale brown (10YR 8/2); flint to medium sand; well indurated; dry		0-7.5': PID = 5.4 ppm
			SS	+++	7.5'-12.5': sandstone / caliche - same as above		7.5'-12.5': PID = 3.1 ppm
10			SS	++	12.5'-17.5': sandstone / caliche - same as above		12.5'-17.5': PID = 0.3 ppm
			SS	+++	17.5'-20.0' sandstone / caliche - same as above		17.5'-20.0' = PID = 3.0 ppm
20			SS	++	20.0'-25.0' sandstone / caliche - same as above		20.0'-25.0': PID = 2.2 ppm
			SS	+++	25.0'-30.0' ss / caliche - same as above		25.0'-30.0': PID = 2.8 ppm
30			SP	++	30.0'-32.0' = sugarlike sand; light brown (7.5YR 6/4); fine grained, well sorted, moist.		30.0'-37.5': PID = 3.6 ppm
32			SS/SP	++	32.0'-37.5': sand with thin ss-layers; pink (7.5YR 8/3); very fine to fine sand; ss slightly calcareous; damp.		
40			SS/SP	++	32.0'-37.5' same as above (7.5YR 7/4) pink; subangular to subrounded		
			SS/SP	++	37.5'-45.0' = same as above		
			SS/SP	++	(44'-45' calcareous sandstone layers.		
			SS/SP	++	45'-48' same as above		
48			SS/SP	++	48'-52.5' sugarlike sand, light reddish brown (5YR 6/4); well sorted;		
50			SP	++	fine grained sand; subrounded; moist		49'-51' = capillary fringe (=very moist)
			SP	++	At 49'-51' = very moist		
			SP	++	At 51'-53.5' gray (mottled) (no odor detected), wet.		52.5'-53.5': PID = 14.6 ppm
60			SP	++	55.0'-60.0': sugarlike fine sand; reddish yellow (5YR 6/6); well sorted, subrounded, irregular thin ss layers which are slightly calcareous; saturated.		

CMB Environmental & Geological Services, Inc.

Boring ID: mco-7

Project: Enogen Resources O.C.D
 Case # IRP 2457
 Location: West Lovington Strawn Unit #8
 Client: Diamond Back Energy
 Driller: Trey Cain
 Drilling method: Sonic Core (LS-600 Roto Sonic)
 Boring date: 9/19/21 - 9/23/21
 Water level: _____

Sheet: 2 of 4
 Job number: _____
 Total depth: 197.5' bgs
 Boring diameter: 10-in to 73 ft bgs / 8-in to 197.5' bgs
 Logged by: C. Anderson
 Date measured: _____

depth (ft)	SAMPLE			standard penetration test results	SOIL DESCRIPTION Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS Monitoring well installation, geotechnical properties, analytical tests, instrumentation
	interval	number	recovery (inches)				
60			SP		60'-70': sugary like sand; reddish yellow CSYR 6/6; subrounded; well sorted; irregular thin layers of slightly calcareous sandstone; saturated		
70			SP		70'-80': sugary like sand; - same as above -		
80			SP		80'-85': sugary like sand; - same as above -		
83.0			SS		(83'-84' = calcareous sandstone)		
84.0			SP		85.0'-87.5': sugary like sand - same as above -		
86.5			SS		At 86.5'-87.5' = calcareous SS		
87.5			SP		87.5'-97.5' sugary like sand; reddish yellow CSYR 6/6; subrounded; well sorted; thin saturated; CSS very rare to non-existent		
90			SP		97.5'-107.5' = sugary like sand - same as above -		
100			SP		107.5'-117.5' = sugary like sand - same as above -		
110			SP		At 112.5'-114.0': grey mottled material At 115.0'-115.5' = calcareous sandstone		
115-115.5			SP		117.5'-127.5' sugary like sand; same as above		
120							

CMB Environmental & Geological Services, Inc. Boring ID: MW-7

Project: Emergen Resources OCD Case # 7RP - ²⁴⁵⁷ Sheet: 3 of 4
 Location: West Lovington Strawn Unit # 8
 Client: Diamondback Energy Job number: _____
 Driller: Trey Cain Total depth: 197.5' bgs
 Drilling method: Sonic Core CLS 600 Roto * Boring diameter: 10" to 73' bgs and 8" to 197.5' bgs
 Boring date: 9/19/21 - 9/23/21 Logged by: A. Anderson
 Water level: _____ Date measured: _____

depth (ft)	SAMPLE			standard penetration test results	SOIL DESCRIPTION Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS Monitoring well installation, geotechnical properties, analytical tests, instrumentation
	interval	number	recovery (inches)				
120			SP				
127.5			SP		127.5' - 137.5': sugarelite sand reddish yellow (5YR 6/6); fine sand; subrounded; well sorted, saturated.		
130			SP		NO ss at all		
140			SP		137.5' - 147.5': sugarelite sand same as above		
147.5			SP		At 147.5' - 148.5': ss; very hard with gray staining above		Note: 147.5' - 148.5' above the ss gray sugarsand PID: 2.4 ppm "vinyl-color" very hard drilling
148.5			SS		148.5' - 157.5': sugarelite sand;		
150			SP		fine sand subrounded, well sorted; wet;		
			SP		At 155' some very fine sand without distinct contact; looks more yellowish red than reddish yellow (5YR 6/6) → (5YR 5/6)		
160			SP		157.5' - 167.5': sugarelite sand; fine sand, subrounded, well sorted, wet; has trace of very fine sand and silt/clay; getting denser.		
			SP		167.5' - 177.5': sugarelite sand; more yellowish red looking than reddish yellow; some very fine sand/silt/clay in matrix; wet to very moist;		
170			SP		very dense.		
			SP		177.5' - 186.0': sugarelite sand - as above -		
180			SP		At 183': driller reports very dense formation; slightly more very fine sand/silt/clay with increasing depth →		

continued on p. 4 of 4

IRP-2452

Sheet: 4 of 4

Job number:

Total depth: 197.5 ft bgs

Total depth:

Boring diameter: 10" to 73 fms and 8" to 1975 fms

Logged by: S. Anderson

Date measured: _____

depth (ft)	SAMPLE			standard penetration test results	SOIL DESCRIPTION Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS Monitoring well installation, geotechnical properties, analytical tests, instrumentation
	interval	number	recovery (inches)				
180					See previous p. 3, continued: occasional mm-size rounded rock fragment / pebbles, very moist		
186					186.0 - 188.0' : very fine sand (trace fine medium sand; color more brownish red, subangular to subrounded, slightly calcareous; 5-7% silt/clay; wet to moist dense,		
188		SP/SM			188.0 - 195.0 = very fine sand with silty-clayey matrix; color more to reddish hues; slightly calcareous with mottled appearance, very dense; moist (excluding the rocks fragments) pebbles from previous wells).		
190		SH/SC			195.0 - 196.0 = siltstone: very fine sand / silt / clay, light greenish gray (GLY 1 / 7.1); moist to damp.		
195		SH/SC			196.0' - 197.5' : silt; silty-clayey very fine (subangular) sand; rarely mm-size rounded pe pebbles; red (2.5YR 5/6); dry; hard drilling; slightly calcareous with bedding planes (?) similar to previous wells with horizontal fracturing along irregular thin clay layers.		
196		SH/SC					
TD = 197.5		ML ML					

NOTE: 188' logs
"TAIKASSIC" Red Bed
bottom screen = 188.5' logs

CMB Environmental & Geological Services, Inc. Boring ID: MW-8

Project: Emergen Resources OCD
 Location: Case # 1 RP-2457
 Client: West Lovington Strawn Unit #8
 Driller: Diamondback Energy
 Drilling method: Foster Maples
 Boring date: 9/15/21 - 9/17/21
 Water level: _____

Sheet: 1 of 4
 Job number: _____
 Total depth: _____
 Boring diameter: _____
 Logged by: L. Anderson
 Date measured: _____

depth (ft)	SAMPLE				SOIL DESCRIPTION Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS Monitoring well installation, geotechnical properties, analytical tests, instrumentation
	interval	number	recovery (inches)	standard penetration test results			
0				(2)	0-0.9': Top soil; brown 7.5YR 4/2 fine sand with silt/clay + organic matter; dry; white caliche fragments		0-2.5': PID =
7.3				45	0.9'-7.3': caliche, white, dry, very hard		2.5-7.5': PID =
10				SP	0.9'-7.3': sandstone/caliche; very pale brown (10YR 8/2); fine to medium grain; well indurated		7.5'-15.0': PID =
12.5				SP	7.3'-12.5': sugary sand; pink (5YR 7/4); very fine to fine sand; subrounded to subangular, dry; 5% caliche nodules, well sorted		15.0'-17.5': PID =
17.5				SS/SP	12.5'-17.5': sandstone; pinkish white (7.5YR 8/2); layers of SS with very fine to fine sand layers; caliche cemented (calcareous); very hard, dry. (17'-27' SS less frequent)		
20				SS/SP	At 12.5': sand + thin SS		
27				SP	27.0' - 49.0' = sand (pink 5YR 8/3)		
30				SP	49.0' - 57.5' = sugary sand, mostly very fine to fine, subangular to subrounded grains, well sorted; sporadic (irregular) thin calcareous SS-layers; dry. The transition to sugary sand is gradual		
40				SP	47.5' - 50 ft damp reddish yellow (5Y 6/4)		
47				SP	49' = sugary sand; pink (5YR 7/4); fine grained, sub-rounded, well sorted		47.5' - 50.0' = damp
50				SP	50'-52.5' very moist = capillary fringe. 52'-55' = wet		50.0' - 52.5' = very moist = capillary fringe
57.5				SP	At 55' = saturated		52.0' - 55.0' = wet
60				SP	At 51' - 52': moderate/light gray discoloration		57.5' - 67.5' = sugary sand, continued on p. 2
					reddish yellow (5YR 6/6)		

CMB Environmental & Geological Services, Inc. Boring ID: MW-8

1 RP-2457

Project: Energex Resources OCD Case # Sheet: 2 of 4
 Location: West Lorington Strawn Unit #8
 Client: Diamondback Energy Job number: _____
 Driller: Justin Maples / Trey Cain Total depth: _____
 Drilling method: Sonic Core (LS-600 Roto Sonic) Boring diameter: _____
 Boring date: 9/15/21 - 9/17/21 Logged by: L. Anderson
 Water level: _____ Date measured: _____

depth (ft)	SAMPLE			standard penetration test results	SOIL DESCRIPTION Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS Monitoring well installation, geotechnical properties, analytical tests, instrumentation
	interval	number	recovery (inches)				
60			SP		continued from p. 4 subrounded fine sand; saturated, denser than above, some thin layers of sandstone of same fine sand interspersed.		
67.5					67.5' - 77.5' : sugarsand		
70			SP		same as above some irregular layers with calcareous cementation		
80					77.5' - 87.5' : Sugarsand		
			SP		same as above at 78' - 80' : medium gray discoloration		78' - 80' = P ID = 6.9 ppm
90					87.5' - 97.5' : sugarsand		
			SP		same as above At 93' no more SS inclusions		
100					97.5' - 107.5' : sugarsand		
			SP		same as above		
107 -					107.5' - 117.5' : Sugarsand		
110			SP		same as above sandstone layers minor SS inclusions: → at 112.0' - 112.3' bgs → at 116.6' - 117.0' bgs		
120					117.5' - 127.5' : sugarsand same as above		

CMB Environmental & Geological Services, Inc. Boring ID: mw-8

Project: Energex Resources OCD
 Location: Case # 1 R P - 2457 Sheet: 3 of 4
 Client: West Lovington Strawn Unit #48
 Driller: Diamond back Energy Job number: _____
 Drilling method: Trey Cain Total depth: _____
 Boring date: Sonic Core CLS-600 Roto Sonic Boring diameter: _____
 Water level: 9/15/21 - 9/18/21 9/17/21 Logged by: L. Anderson
 Date measured: _____

depth (ft)	SAMPLE			standard penetration test results	SOIL DESCRIPTION Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS Monitoring well installation, geotechnical properties, analytical tests, instrumentation
	interval	number	recovery (inches)				
120			SP		117.5' - 127.5' on last previous page		
127.5			SP		127.5' - 137.5' = sugarsand reddish yellow (5YR 6/6); fine sand, subrounded, well sorted; wet		
130			SP				
137.5			SP		137.5' - 145.0' : sugarsand, same as above		
140			SP		At 138' - 140' medium gray striae. overall hard drilling		NOTE: 138' - 140' = gray striae
145			SP		145' - 155' = sugarsand same as above		
148-150			SP				
150			SP				
155			SP		155' - 157.5' = sugarsand same as above		
157.5			SP		157.5' - 167.5' : sugarsand		
160			SP		color slightly more towards yellowish red probably due to trace of clay (1%), but still fine sand, subrounded, hard drilling; wet; well sorted.		
167.5			SP		167.5' - 177.5' : sugarsand		
170			SP		with 1% clay, reddish yellow (5YR 6/6); well sorted, wet, getting denser still		
177.5			SP		177.5' - 187.5' on page 4 of 4 (see below!)		
180							

CMB Environmental & Geological Services, Inc. Boring ID: mw-8

Project: Engecon Resources OCD Case# 2RP- Sheet: 4 of 4
 Location: West Lorington Shallow Unit #8
 Client: Diamondback Energy Job number: _____
 Driller: Trey Cain Total depth: 197.5' bgs
 Drilling method: SonicCore CLS-600 Roto Sonic Boring diameter: 10" to 73' bgs and 8" to 197.5' bgs
 Boring date: 9/15/21 - 9/17/21 Logged by: L. Anderson
 Water level: _____ Date measured: _____

depth (ft)	SAMPLE			standard penetration test results	SOIL DESCRIPTION Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS Monitoring well installation, geotechnical properties, analytical tests, instrumentation
	interval	number	recovery (inches)				
180			SP		177.5' - 187.0', sugary like fine sand, reddish yellow (5.5R 6/6); dense, wet; A+181' = 1% mm-size rounded rock fragments, some very fine sand; 2% silt/clay = slowly increase with depth.		
187			SP				
190			SP/sm		187.0' - 191.0' = very fine sand (trace medium sand), 5-7% silt/clay, slightly calcareous; 10% calciche nodules; dense hard drilling, wet to moist.		
191			SP/sm				AE 191 ft bgs
194.5'			SM/SC		191.0' - 194.5' = very fine sand with silty/clayey matrix; color changes to more reddish hues; small voids filled with fine "sugary like" sand; slightly calcareous with a mottled texture; 1-2% rounded/subrounded rock pebbles and calciche nodules; moist; very hard drilling.		"TRANSIC" Red Bed bottom of screen @ 191.5' bgs
TD = 197.5			ML				
			ML		194.5' - 197.5' = silt; silty-clayey angular very fine sand; red (2.5R 5/6); 10% small pebbles and large quartz grains; dry; very hard drilling; separates horizontally along irregular thin layers of clay (irregular bedding planes?);		

CMB Environmental & Geological Services, Inc. Boring ID: MW-9

1 RP-2457

Project: Emergen Resources OCD case#
 Location: West Lovington Strata Unit #8
 Client: Diamondback Energy
 Driller: Justen Maples
 Drilling method: Sonic Core (LS-600 Rotasonic)
 Boring date: 9/9/21 - 9/13/21
 Water level:

Sheet: 7 of 4
 Job number:
 Total depth: 197.5' bgs
 Boring diameter: 10-in to 70' and 8-in to 197.5'
 Logged by: P. Anderson
 Date measured:

depth (ft)	SAMPLE			SOIL DESCRIPTION	COMMENTS
	interval	number	recovery (inches)		
1				0-0.7': top soil; dark brown (7.5YR 5/3)	
2.5				caliche medium/fine sand silt, clay, roots; dense, moist. At 0.5' start mm-size caliche nodules (white)	2.5'-10.0': PID=2.1 ppm
4				0.7'-2.5': caliche, white, dry	
6				2.5'-7.5': calcareous SS; pinkish white	
7.5				7.5-8' (2) very hard, calcich nodules	
10				6-in diam; pea-size rounded gravel (trace)	
12				7.5'-20' calcareous SS; well indurated, well sorted.	
14				10'-20' PID=0.4 ppm	
16				- same as above -	
18				* calcium carbonate cemented sandstone	
19.5				19.5'-52.5':	
22				sandstone SS; pink (5YR 7/3)	
24				22'-52.5' with irregular layers of well sorted SP.	
26				the SS visible in the SS are trace of mm-size subrounded rock fragments; CaCO ₃ cemented.	
28				caliche fragments less than 10%; Dry	
30				At 39'-50' pinkish gray (5YR 7/2), dry.	
32					
34					
36					
38					
40					
42					
44					
46					
48					
49				At 49' moist formation: well sorted sugar sand with small irregular lenses of SS; fine subrounded sand; white to grayish pink.	52.5'-55.0': PID=99.9 ppm
50				52.5'-57.0': very moist = capillary fringe! (pink 5YR 7/4)	55.0'-57.0': PID=145.8 ppm
52				At 52' saturated	
52.5				54.5'-60.0' gray discoloration	
54				60.0'-61.0' sand "vine"-like color	60.0'-61.0': PID=17.0 ppm
56					
58					
60					

CMB Environmental & Geological Services, Inc. Boring ID: mw-9

Project: Energizer Resources Corp. OCD Case # 1R22457 Sheet: 2 of 4
 Location: West Lovington Shallow Unit #8
 Client: Diamondback Energy Job number:
 Driller: Justin Mayhew Total depth: 197.5'
 Drilling method: Sonic Core (LS-600 Roto sonic) Boring diameter: 10-in to 70' and 8-in to 197.5'
 Boring date: 9/9/21 - 9/13/21 Logged by: C. Anderson
 Water level: Date measured:

depth (ft)	SAMPLE			standard penetration test results	SOIL DESCRIPTION	graphic log	COMMENTS
	interval	number	recovery (inches)				
60					59' - 67' = sugar sand reddish yellow (SYR 6/6) (reddish yellow (SYR 6/6))		
67				SP	67.0' - 77.5': Lost 0.5 ft sample At 67.5 ft: sugar sand, fine well sorted, yellowish red (SYR 6/6) reddish yellow		
70					soft, saturated; less than 1% of mm- to cm-size subrounded gravel / calcareous sandstone concretions.		
				SP	At 72.5' - 73.0' approximately 6" layer of calcareous sandstone in calcareous fine sand (Nodules).		
80				SP	77.5' - 87.5': same as above reddish yellow (SYR 6/6) reddish yellow		
				SP	At 78.5' - 79.0' calcareous sandstone nodules		
				SP	At 84.0' - 84.5' same as above (as above) in fine sand matrix		
90				SP	87.5' - 97.5' same as above reddish yellow (SYR 6/6) reddish yellow		
				SP	94.3' - 94.7' approximately 5" of calcareous sandstone in fine sand matrix (as above)		
100				SP	97.5' - 107.5' same as above reddish yellow (SYR 6/6) reddish yellow		
				SP	At 104' - 104.5' = calc. nodules SS as above		
				SP	At 105.5' - 106.2' = calc. nodules SS (as above)		
				SP	107.5' - 117.5' = same as above reddish yellow (SYR 6/6) reddish yellow		
110				SP	At 112.1' - 112.7' = calc. nodules SS in non-calc. fine sand		
				SP	At 115.2' - 115.5' = calc. nodules SS in non-calc. fine sand		
120				SP	117.5' - 127.5' = sugar sand reddish yellow (SYR 6/6) as above		
					117.5' - 127.5' = on page 3		

CMB Environmental & Geological Services, Inc. Boring ID: MW-9

Project: Eugen Resources Corp.
 Location: OCD Capex LRP-2457
 Client: West Lovington Strawn Unit #8
 Driller: Diamondback Energy
 Drilling method: Justen Maples
 Boring date: Sonic Core (LS-600 Roto Sonic)
 Water level: 9/9/21 - 9/13/21

Sheet: 3 of 4
 Job number:
 Total depth: 197.5 ft
 Boring diameter: 10" to 70 ft & 8" to 197.5'
 Logged by: L. Anderson
 Date measured:

depth (ft)	SAMPLE			standard penetration test results	SOIL DESCRIPTION Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS Monitoring well installation, geotechnical properties, analytical tests, instrumentation
	interval	number	recovery (inches)				
120				SP	117.5' - 127.5' sugar sand; reddish yellow (5YR 6/6); mostly fine sand, subrounded, well sorted, saturated. (No more calcareous nodules present.) 127.5' - 137.5' same as above		
130				SP	137.5' - 147.5' same as above		
140				SP	147.5' - 157.5' same as above		
150				SP	from approximately 152.5' still sugar sand but slight/gradual color change from reddish yellow to yellowish red (5YR 5/6); also trace amount of silt/clay in matrix and subrounded to sub angular grains; saturated. 157.5' - 167.5' as above		
160				SP	167.5' - 177.5' sugar sand yellowish red (5YR 5/6); as above; but a lot denser, wet, harder drilling, gradually getting denser.		
170				SP	177.5' - 182.5' as above but a lot denser, harder drilling, wet.		
180							

1 RP-2457

4 of 4

Job number:


Total depth:

Boring diameter: 10-in to 73' bgs + 8-in to 197.5' bgs

Logged by: L Anderson

Date measured:

Water level:

depth (ft)	SAMPLE			standard penetration test results	SOIL DESCRIPTION Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS Monitoring well installation, geotechnical properties, analytical tests, instrumentation
	interval	number	recovery (inches)				
180			SP		182.5 - 186.0: fine sugarlike sand; yellowish red to reddish yellow, well sorted; subrounded, but silt/clay about 2% and increasing with depth. 1% mm-size rounded rock fragments and large quartz grains; saturated.		
186			SP				
190			SP/SM		186.0 - 190.0: very fine to fine sand; subangular, clay silt 5-7%; slightly calcareous; wet		At 190 ft logs: "Triassic" Red Bed (bottom screen at 190' logs)
193			SM/SC		190.0' - 193.0': mostly very fine sand; subangular; yellowish red (5YR 5/6); 5-7% silt/clay; calcareous with a mottled appearance; moist to damp; very hard		
			ML		193.0' - 197.5' = silt/silty-clayey angular fine sand; red (2.5YR 5/6); trace rounded pebbles and gravel to 35 mm diameters; matrix slightly calcareous; very small crystals (magnetite?); very hard; dry.		
			ML		separates horizontally along irregular "wavy" clay layers (bedding?).		

TD = 197.5' logs



WELL RECORD & LOG

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STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO

1 2013 JAN 10 1 A 10:30

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) MW-1				OSE FILE NUMBER(S) L-13218 POD 1			
	WELL OWNER NAME(S) Energen Resources Corporation				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 904 Moore Avenue				CITY Roswell		STATE NM	ZIP 88201-1144
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 58'	SECONDS 21.48" N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND			
	LONGITUDE 103	24"	09.32" W	* DATUM REQUIRED: WGS 84				
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE Energen #8-R West Lovington Strawn Unit Location 1980' FSL & 660' FWL of Section 34, T15S-R35E, Lea County								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER WD1222		NAME OF LICENSED DRILLER Lee Peterson			NAME OF WELL DRILLING COMPANY Peterson Drilling & Testing, Inc.		
	DRILLING STARTED 12/11/12	DRILLING ENDED 12/12/12	DEPTH OF COMPLETED WELL (FT) 69.6		BORE HOLE DEPTH (FT) 71	DEPTH WATER FIRST ENCOUNTERED (FT)		
	COMPLETED WELL IS: <input type="radio"/> ARTESIAN <input type="radio"/> DRY HOLE <input checked="" type="radio"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT)		
	DRILLING FLUID: <input checked="" type="radio"/> AIR <input type="radio"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="radio"/> ROTARY <input type="radio"/> HAMMER <input type="radio"/> CABLE TOOL <input type="radio"/> OTHER - SPECIFY:							
	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	0	49	6 1/2	PVC Casing	FJ	2	Sch 40	
	49	69	6 1/2	PVC Screening	FJ	2	Sch 40	0.010
3. ANNULAR MATERIAL	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	0	40	6 1/2	Grout		Tremie		
	40	45	6 1/2	Bentonite Chips		Tremie		
	45	69.6	6 1/2	8/16 Sand		Tremie		

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WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER

POD NUMBER |

TRN NUMBER

517451

LOCATION

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WELL RECORD & LOG

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1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) MW-2				OSE FILE NUMBER(S) L-13218 POD2			
	WELL OWNER NAME(S) Energen Resources Corporation				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 904 Moore Avenue				CITY Roswell		STATE NM	ZIP 88201-1144
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 58'	SECONDS 19.10"	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND		
	LONGITUDE 103	24"	03.08"	W	* DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE Energen #8-R West Lovington Strawn Unit Location 1980' FSL & 660' FWL of Section 34, T15S-R35E, Lea County								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER WD1222		NAME OF LICENSED DRILLER Lee Peterson			NAME OF WELL DRILLING COMPANY Peterson Drilling & Testing, Inc.		
	DRILLING STARTED 12/11/12	DRILLING ENDED 12/12/12	DEPTH OF COMPLETED WELL (FT) 69.6		BORE HOLE DEPTH (FT) 70	DEPTH WATER FIRST ENCOUNTERED (FT)		
	COMPLETED WELL IS: <input type="radio"/> ARTESIAN <input type="radio"/> DRY HOLE <input checked="" type="radio"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT)		
	DRILLING FLUID: <input checked="" type="radio"/> AIR <input type="radio"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="radio"/> ROTARY <input type="radio"/> HAMMER <input type="radio"/> CABLE TOOL <input type="radio"/> OTHER - SPECIFY:							
	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	0	49.6	6 1/2	PVC Casing	FJ	2	Sch 40	
	49.6	69.6	6 1/2	PVC Screening	FJ	2	Sch 40	0.010
3. ANNULAR MATERIAL	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	0	43	6 1/2	Grout		Tremie		
	43	46	6 1/2	Bentonite Chips		Tremie		
	46	70	6 1/2	8/16 Sand		Tremie		

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WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER

POD NUMBER **2**

TRN NUMBER **517401**

LOCATION

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WELL RECORD & LOG

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STATE ENGINEER OFFICE
ROSWEI

2017 JAN 10 - A 10:30

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) MW-3				OSE FILE NUMBER(S) L-13218 Pod 3			
	WELL OWNER NAME(S) Energen Resources Corporation				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 904 Moore Ave				CITY Roswell		STATE NM	ZIP 88201-1144
	WELL LOCATION (FROM GPS)		DEGREES LATITUDE 32	MINUTES 58'	SECONDS 20.90	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND	
		LONGITUDE 103	24'	03.66"	W	* DATUM REQUIRED: WGS 84		
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE Energen #8-R West Lovington Strawn Unit Location 1980' FSL & 660' FWL of Section 34, T15S-R35E, Lea County								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER WD1222		NAME OF LICENSED DRILLER Lee Peterson			NAME OF WELL DRILLING COMPANY Peterson Drilling & Testing, Inc.		
	DRILLING STARTED 12/11/12		DRILLING ENDED 12/12/12		DEPTH OF COMPLETED WELL (FT) 71.5	BORE HOLE DEPTH (FT) 73	DEPTH WATER FIRST ENCOUNTERED (FT)	
	COMPLETED WELL IS: <input type="radio"/> ARTESIAN <input type="radio"/> DRY HOLE <input checked="" type="radio"/> SHALLOW (UNCONFINED)						STATIC WATER LEVEL IN COMPLETED WELL (FT)	
	DRILLING FLUID: <input checked="" type="radio"/> AIR <input type="radio"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="radio"/> ROTARY <input type="radio"/> HAMMER <input type="radio"/> CABLE TOOL <input type="radio"/> OTHER - SPECIFY:							
	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	0 51		6 1/2	PVC Casing	FJ	2	Sch 40	
	51 71		6 1/2	PVC Screening	FJ	2	Sch 40	0.010
3. ANNULAR MATERIAL	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	0 43		6 1/2	Grout		Tremie		
	43 48		6 1/2	Bentonite Chips		Tremie		
	48 71.5		6 1/2	8/16 Sand		Tremie		

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WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER

POD NUMBER **3**

TRN NUMBER **517451**

LOCATION

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4. HYDROGEOLOGIC LOG OF WELL

5. TEST; RIG SUPERVISION

6. SIGNATURE

FOR OSE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 06/08/2012)	
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WELL RECORD & LOG

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STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO

2013 JAN 10 10:31

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER)				OSE FILE NUMBER(S)				
	MW-4				L-13218 POD5				
	WELL OWNER NAME(S)				PHONE (OPTIONAL)				
	Energen Resources Corporation								
WELL OWNER MAILING ADDRESS				CITY		STATE		ZIP	
904 Moore Ave				Roswell		NM		88201-1144	
WELL LOCATION (FROM GPS)	DEGREES		MINUTES		SECONDS				
	LATITUDE	32	58'	17.54"	N		* ACCURACY REQUIRED: ONE TENTH OF A SECOND		
	LONGITUDE	103	24'	04.64"	W		* DATUM REQUIRED: WGS 84		
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE									
Energen #8-R West Lovington Strawn Unit Location 1980' FSL & 660' FWL of Section 34, T15S-R35E, Lea County									
2. DRILLING & CASING INFORMATION	LICENSE NUMBER		NAME OF LICENSED DRILLER			NAME OF WELL DRILLING COMPANY			
	WD1222		Lee Peterson			Peterson Drilling & Testing, Inc.			
	DRILLING STARTED		DRILLING ENDED		DEPTH OF COMPLETED WELL (FT)		BORE HOLE DEPTH (FT)		DEPTH WATER FIRST ENCOUNTERED (FT)
	12/12/12		12/13/12		70.2		73		
	COMPLETED WELL IS: <input type="radio"/> ARTESIAN <input type="radio"/> DRY HOLE <input checked="" type="radio"/> SHALLOW (UNCONFINED)								STATIC WATER LEVEL IN COMPLETED WELL (FT)
	DRILLING FLUID: <input checked="" type="radio"/> AIR <input type="radio"/> MUD ADDITIVES - SPECIFY:								
	DRILLING METHOD: <input checked="" type="radio"/> ROTARY <input type="radio"/> HAMMER <input type="radio"/> CABLE TOOL <input type="radio"/> OTHER - SPECIFY:								
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)	
	FROM	TO							
	0	49.7	6 1/2	PVC Casing	FJ	2	Sch 40		
49.7	69.7	6 1/2	PVC Screening	FJ	2	Sch 40	0.010		
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT			
	FROM	TO							
	0	40.5	6 1/2	Grout		Tremie			
	40.5	46	6 1/2	Bentonite Chips		Tremie			
	46	70.2	6 1/2	8/16 Sand		Tremie			

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WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER 5	TRN NUMBER 517451
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WELL RECORD & LOG

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STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO

2012 JAN 10 1A 10:31

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) MW-5				OSE FILE NUMBER(S) L-13218 POD 4			
	WELL OWNER NAME(S) Energen Resources Corporation				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 904 Moore Ave				CITY Roswell		STATE NM	
					ZIP 88201-1144			
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE	MINUTES 32	SECONDS 58'	16.74"	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND	
		LONGITUDE	103	24'	08.02"	W	* DATUM REQUIRED: WGS 84	
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE Energen #8-R West Lovington Strawn Unit Location 1980' FSL & 660' FWL of Section 34, T15S-R35E, Lea County								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER WD1222		NAME OF LICENSED DRILLER Lee Peterson			NAME OF WELL DRILLING COMPANY Peterson Drilling & Testing, Inc.		
	DRILLING STARTED 12/12/12	DRILLING ENDED 12/13/12	DEPTH OF COMPLETED WELL (FT) 68	BORE HOLE DEPTH (FT) 71	DEPTH WATER FIRST ENCOUNTERED (FT)			
	COMPLETED WELL IS: <input type="radio"/> ARTESIAN <input type="radio"/> DRY HOLE <input checked="" type="radio"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT)			
	DRILLING FLUID: <input checked="" type="radio"/> AIR <input type="radio"/> MUD				ADDITIVES - SPECIFY:			
	DRILLING METHOD: <input checked="" type="radio"/> ROTARY <input type="radio"/> HAMMER <input type="radio"/> CABLE TOOL <input type="radio"/> OTHER - SPECIFY:							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0	47.5	6 1/2	PVC Casing	FJ	2	Sch 40	
	47.5	67.5	6 1/2	PVC Screening	FJ	2	Sch 40	0.010
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
	0	39	6 1/2	Grout		Tremie		
	39	44	6 1/2	Bentonite Chips		Tremie		
	44	68	6 1/2	8/16 Sand		Tremie		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER 4	TRN NUMBER 517451
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WELL RECORD & LOG

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I. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) (POD6) WLSU 8R MW-6				OSE FILE NUMBER(S) L-13218			
	WELL OWNER NAME(S) ENERGEN RESOURCES CORPORATION				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 3300 NORTH A ST BLDG 4 STE 100				CITY MIDLAND		STATE TX	ZIP 79705
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 58	SECONDS 20	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND		
	LONGITUDE 103	24	05	W	* DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE CORNER OF 17TH AND W GUM AVE & TURN INTO GATE FOLLOW CALICHE RD. UNIT L, SEC 34, TWP 15S, R 35E								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER WD-1711		NAME OF LICENSED DRILLER EDWARD BRYAN			NAME OF WELL DRILLING COMPANY STRAUB CORPORATION		
	DRILLING STARTED 9-24-15	DRILLING ENDED 9-24-15	DEPTH OF COMPLETED WELL (FT) 70'		BORE HOLE DEPTH (FT) 70'	DEPTH WATER FIRST ENCOUNTERED (FT) N/A		
	COMPLETED WELL IS: <input type="radio"/> ARTESIAN <input type="radio"/> DRY HOLE <input checked="" type="radio"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) N/A		
	DRILLING FLUID: <input checked="" type="radio"/> AIR <input type="radio"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="radio"/> ROTARY <input type="radio"/> HAMMER <input type="radio"/> CABLE TOOL <input type="radio"/> OTHER - SPECIFY:							
	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	70'	50'	6"	SCH 40 .010 SCREEN	FJ	2"	0.154	.010
	50'	+43"	6"	SCH 40 RISER	FJ	2"	0.154	RISER
3. ANNULAR MATERIAL	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	70'	48'	6"	11 BAGS OF 20/40 SAND		TOPLOAD		
	48'	2'	6"	12 BAG OF 3/8 HOLEPLUG		TOPLOAD		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER L-13218	POD NUMBER 6	TRN NUMBER 570502
LOCATION Mon	15S.35E.34.213	
		PAGE 1 OF 2

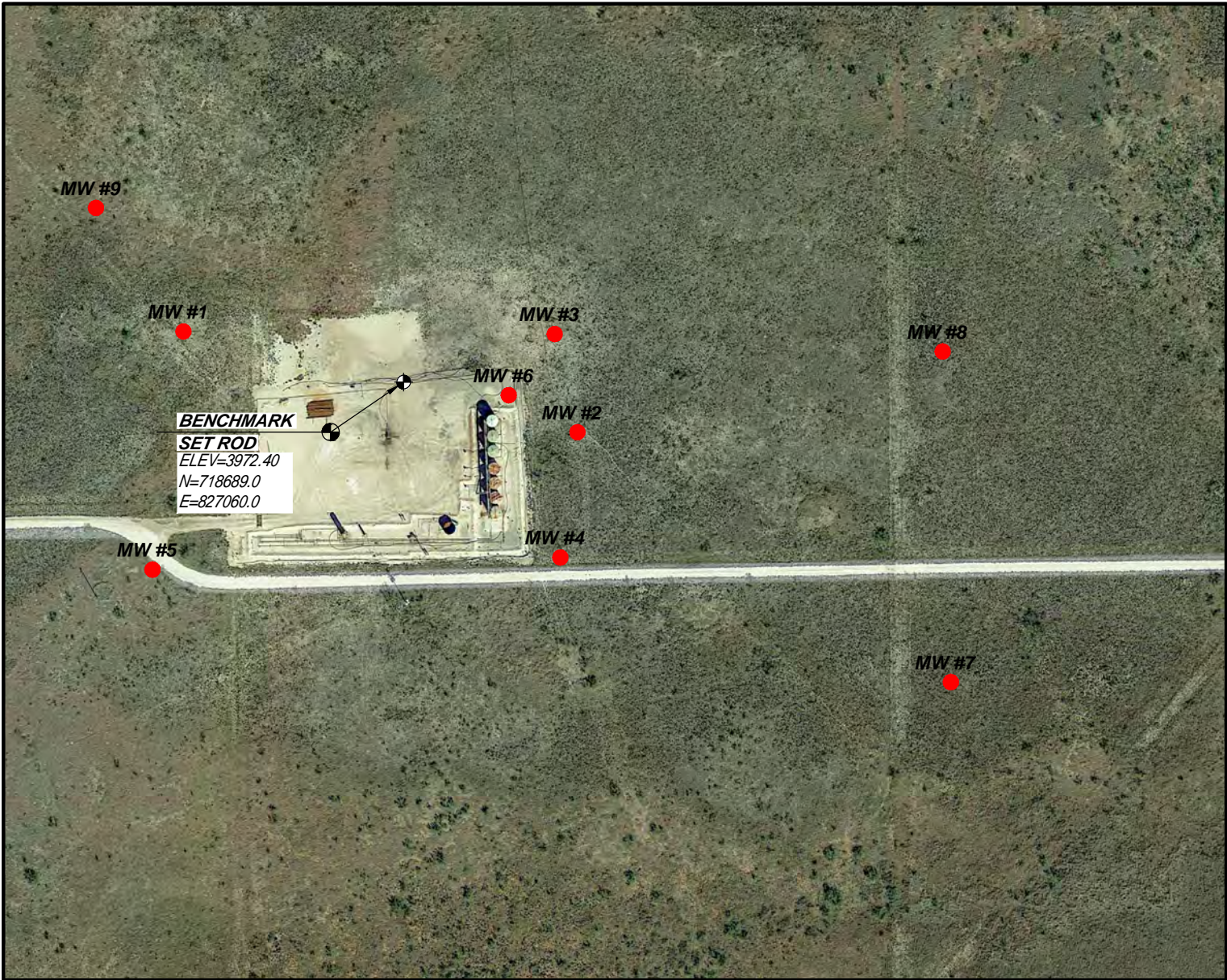
[illegible]

FOR OSE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 06/08/2012)	
FILE NUMBER	L-13218	POD NUMBER	6
		TRN NUMBER	570502
LOCATION	mon 155.35E.34.213		PAGE 2 OF 2

Appendix C

Well Survey Report

November 2022



COORDINATE TABLE
COORDINATES VALUES SHOWN ARE RELATIVE TO THE NORTH AMERICAN DATUM 1983, "NEW MEXICO EAST ZONE".
ELEVATIONS ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM 1988

WELL	COORDINATES	ELEVATIONS
MW #1	718754.5 N 826775.5 E	NATURAL GROUND - 3973.05' TOP OF CONCRETE - 3973.15' TOP OF PVC - 3975.52'
MW #2	718624.4 N 827284.4 E	NATURAL GROUND - 3972.55' TOP OF CONCRETE - 3972.52' TOP OF PVC - 3974.76'
MW #3	718751.1 N 827254.9 E	NATURAL GROUND - 3973.86' TOP OF CONCRETE - 3973.92' TOP OF PVC - 3976.67'
MW #4	718462.6 N 827262.2 E	NATURAL GROUND - 3971.80' TOP OF CONCRETE - 3971.91' TOP OF PVC - 3974.52'
MW #5	718446.9 N 826735.6 E	NATURAL GROUND - 3971.78' TOP OF CONCRETE - 3971.82' TOP OF PVC - 3974.43'
MW #6	718672.3 N 827195.6 E	NATURAL GROUND - 3972.74' TOP OF CONCRETE - 3973.13' TOP OF PVC - 3976.17'
MW #7	718301.7 N 827766.4 E	NATURAL GROUND - 3969.65' TOP OF CONCRETE - 3969.83' TOP OF PVC DEEP - 3969.41' TOP OF PVC MEDIUM - 3969.43' TOP OF PVC SHALLOW - 3969.45'
MW #8	718728.7 N 827755.9 E	NATURAL GROUND - 3969.75' TOP OF CONCRETE - 3970.03' TOP OF PVC DEEP - 3969.29' TOP OF PVC MEDIUM - 3969.30' TOP OF PVC SHALLOW - 3969.47'
MW #9	718914.0 N 826662.6 E	NATURAL GROUND - 3972.15' TOP OF CONCRETE - 3972.44' TOP OF PVC DEEP - 3971.82' TOP OF PVC MEDIUM - 3971.85' TOP OF PVC SHALLOW - 3971.80'

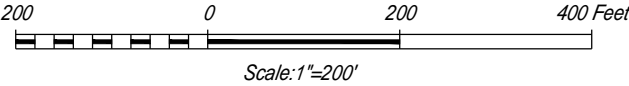
SURVEYOR'S CERTIFICATE:

I, RONALD J. EIDSON, NEW MEXICO PROFESSIONAL SURVEYOR No. 3239, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Ronald J. Eidson
DATE: 11/18/2022

LEGEND:

- - DENOTES MONITOR WELL
- ⊕ - DENOTES BENCHMARK 5/8" STL. ROD W/2" A.C.



DIAMONDBACK ENERGY

**MONITOR WELL LOCATIONS IN NW/4 SW/4 SECTION 34,
TOWNSHIP 15 SOUTH, RANGE 35 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO**

Survey Date:	11/16/2022	CAD Date:	11/17/2022	Drawn By:	ACK
W.O. No.:	22110410	Rev:	0	Rel. W.O.:	Sheet 1 of 1



PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

Appendix D

June 2024 Field Notes

Location Lovington, NM

Date 06/20/2024

Project / Client GW Monitoring 2024 / Energen
WLSU #8 DBSEA DB22.1348By: CMB Environmental &
Geological Services, Inc. Page 1 of 3

Arrive on-site 09:00 hr.

Cloudy 65°F Wind ESE @ 7 mph

Max Wind Gust 10 mph. Humidity

93% Barometric Pressure 30.28" Hg

Sequist I.P. Serial # 350470

Well	Dnpl	DTW	T.D.	Remarks
MW-1	Ø	57.45'	71.41'	2" MW
MW-2	Ø	58.61'	72.11'	2" MW
MW-3	Ø	60.15'	74.10'	2" MW
MW-4	Ø	58.33'	72.76'	2" MW
MW-5	Ø	56.50'	70.36'	2" MW
MW-6	Ø	59.10'	73.20'	2" MW
MW-7S	Ø	55.12'	71.60'	2" MW
MW-7M	Ø	Ø	46.30'	collapsed MW closed by driller
MW-7D	Ø	54.0'	178.01'	2" MW
MW-8S	Ø	54.55'	72.0'	2" MW
MW-8M	Ø	54.35'	146.02'	2" MW
MW-8D	Ø	54.40'	192.10'	2" MW
MW-9S	Ø	53.08'	72.41'	MW-9 shallow
MW-9M	Ø	53.15'	145.37'	MW-9 middle
MW-9D	Ø	53.10'	192.60'	MW-9 Deep

Location Lovington, NM

Date 06/20/2024 105

Project / Client GW Monitoring 2024 / Energen
WLSU #8 DBSEA DB22.1348By: CMB Environmental & Geological
Services, Inc. Page 2 of 3Calibrated Hanna Instruments
Multi Parameter Probe HI 8819X

Serial # 05400038101 For

pH, Conductivity, DO.

Hanna Quick Calibration Solution
HI 19828-0 Expires 09/2025

530 mL.

Calibrated Hanna Instruments
Optical Dissolved Oxygen
meter HI 98198

Serial # 072101101

Started GW Sampling @
10:00 hr.Left Site @ 16:00 hr.
06/22/2024 Arrive on-site @

10:30 hr. Began GW monitoring

@ 10:40 hr. @ 11:30 pH, EC, ORP -
meter would not work. Returned
to Roswell To Repair -06/23/24 Arrive on-site @ 0900 hr -
Started GW monitoring -

Rite in the Rain

Date 06/23/2024

By: CMB Environmental & Geological
Services, Inc. Page 30 of 3

Chapman H. Baubee Jr
T. H. W. G.

Page 83 of 517
Received by: CDD 10/13/2024 2:45:57 PM
Released to Imaging: 2/21/2025 11:17:21 AM

Chain-of-Custody Record

Client: Daniel B. Stephens & Associates (geo-logic)
ATTN: JOHN AYRBE
Mailing Address: 6020 Academy NE, Suite 100
Albuquerque, NM 87109
Phone #: 505.822.9400
email or Fax#: Jarybec geo-logic.com
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name: Diamond Back Energy
Energy WLSA #8

Project #: DB 22.1348

GW Monitoring 2024

Project Manager:

JOHN AYRBE, PG

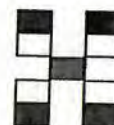
Sampler: Cm Barnhill, PG

On Ice: ☒ Yes ☐ No

of Coolers: 2

Cooler Temp (including CF): (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
10/13/24	1615	H ₂ O	MW-7 Shallow	5x40 mL VIALS	HCL	
10/13/24	1740	H ₂ O	MW-7 Deep	1x20 mL HOPE	NONE	
10/13/24	1615	H ₂ O	MW-7 Shallow Duplicate	1x125 mL Ameg 1/6	NONE	
10/13/24	1615	H ₂ O	MW-7 Shallow Duplicate	↓	↓	
10/13/24	1615	H ₂ O	MW-7 Shallow Duplicate	↓	↓	
10/13/24	18:15	H ₂ O	Field Blank	3x40 mL VIALS	HCL	



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 800 (5D) (GRO / DRO / PMRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	CLF, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
	X					X			X
	X					X			X
	X					X			X
	X					X			X
	X					X			X
						X			

8260 157EX

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
10/13/24	10:15	<u>[Signature]</u>				
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Any Questions?
Please Call CMBC
575.626.1615

UPS Ground S.D.P.
Shipping Document

See instructions on back. Visit UPS.com or call 1-800-PICK-UPS® (800-742-5877) for additional information and Tariff/Terms and Conditions.

TRACKING NUMBER **K305 801 040 6**

SHIPMENT FROM
SHIPPER'S UPS ACCOUNT NO. **1 A F 8 0 2**

REFERENCE NUMBER
DBSEA Energy WLSU #8
NAME **CM Barnhill, PO** TELEPHONE **575-626-1615**

COMPANY
CMB ENVIRONMENTAL

STREET ADDRESS
115 E COLLEGE BLVD 109

CITY AND STATE **ROSWELL NM** ZIP CODE **88201**

DELIVERY TO
NAME **Sample Receiving** TELEPHONE **505-345-3975**

COMPANY **HALL ENVIRONMENTAL** DEPT./FLR.

STREET ADDRESS
4901 HAWKINS NE RM A

CITY AND STATE **ALBUQUERQUE NM** ZIP CODE **87109**



WEIGHT	WHOLE LBS. ONLY	DIMENSIONAL WEIGHT If Applicable	LARGE PACKAGE	SHIPPER RELEASE
			<input type="checkbox"/>	<input type="checkbox"/>

5 GROUND S.D.P. SHIPPING CHARGES		CHARGES	\$
----------------------------------	--	---------	----

6 OPTIONAL SERVICES	<input type="checkbox"/> DECLARED VALUE FOR CARRIAGE \$	AMOUNT	\$
L.O.D. shipping may be available at UPS.com			

7 ADDITIONAL HANDLING CHARGE	<input type="checkbox"/> An Additional Handling Charge applies for certain items. See instructions.	\$
------------------------------	---	----

8 TOTAL CHARGES	\$
-----------------	----

9 RECEIVER'S/THIRD PARTY'S UPS ACCT. NO. OR MAJOR CREDIT CARD NO.	EXPIRATION DATE
1 A F 8 0 2	1

THIRD PARTY'S COMPANY NAME	Hall Environmental Analysis Lab
----------------------------	--

STREET ADDRESS	4901 HAWKINS NE
----------------	------------------------

CITY AND STATE	Albuquerque, NM
----------------	------------------------

ZIP CODE	87109
----------	--------------

10 SHIPPER'S SIGNATURE	X [Signature]
------------------------	----------------------

DATE OF SHIPMENT	06/25/12
------------------	-----------------

All shipments are subject to the terms contained in the UPS Tariff/Terms and Conditions of Service, which are incorporated herein by reference, and are available at UPS.com and local UPS offices.

02129509 1/10 RRD

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UPS Ground S.D.P.
Shipping Document

See instructions on back. Visit UPS.com or call 1-800-PICK-UPS® (800-742-5877) for additional information and Tariff/Terms and Conditions.

TRACKING NUMBER **K305 801 039 9**

SHIPMENT FROM
SHIPPER'S UPS ACCOUNT NO. **1 A F 8 0 2**

REFERENCE NUMBER
DBSEA Energy WLSU #8
NAME **CM Barnhill, PO** TELEPHONE **575-626-1615**

COMPANY
CMB ENVIRONMENTAL

STREET ADDRESS
115 E COLLEGE BLVD 109

CITY AND STATE **ROSWELL NM** ZIP CODE **88201**

DELIVERY TO
NAME **Sample Receiving** TELEPHONE **505-345-3975**

COMPANY **HALL ENVIRONMENTAL** DEPT./FLR.

STREET ADDRESS
4901 HAWKINS NE RM A

CITY AND STATE **ALBUQUERQUE NM** ZIP CODE **87109**



WEIGHT	WHOLE LBS. ONLY	DIMENSIONAL WEIGHT If Applicable	LARGE PACKAGE	SHIPPER RELEASE
			<input type="checkbox"/>	<input type="checkbox"/>

5 GROUND S.D.P. SHIPPING CHARGES		CHARGES	\$
----------------------------------	--	---------	----

6 OPTIONAL SERVICES	<input type="checkbox"/> DECLARED VALUE FOR CARRIAGE \$	AMOUNT	\$
L.O.D. shipping may be available at UPS.com			

7 ADDITIONAL HANDLING CHARGE	<input type="checkbox"/> An Additional Handling Charge applies for certain items. See instructions.	\$
------------------------------	---	----

8 TOTAL CHARGES	\$
-----------------	----

9 RECEIVER'S/THIRD PARTY'S UPS ACCT. NO. OR MAJOR CREDIT CARD NO.	EXPIRATION DATE
1 A F 8 0 2	1

THIRD PARTY'S COMPANY NAME	Hall Environmental Analysis Lab
----------------------------	--

STREET ADDRESS	4901 HAWKINS NE
----------------	------------------------

CITY AND STATE	Albuquerque, NM
----------------	------------------------

ZIP CODE	87109
----------	--------------

10 SHIPPER'S SIGNATURE	X [Signature]
------------------------	----------------------

DATE OF SHIPMENT	06/25/12
------------------	-----------------

All shipments are subject to the terms contained in the UPS Tariff/Terms and Conditions of Service, which are incorporated herein by reference, and are available at UPS.com and local UPS offices.

CMB ENVIRONMENTAL & GEOLOGICAL SERVICES, INC.

WELL DATA FORM

Type Well <input checked="" type="checkbox"/> MW <input type="checkbox"/> Production <input type="checkbox"/> Other _____		Type of Data <input type="checkbox"/> Development <input checked="" type="checkbox"/> Sampling <input type="checkbox"/> Pump Test <input type="checkbox"/> Other _____		Well No. _____ Sheet 1 <u>MW-9D</u> of _____ Sheets					
1. Project <u>Energex WLSU #8</u>		2. Project Location <u>Diamondback Energy</u>		3. Date <u>06/20/2024</u>					
4. Technician <u>C M Barnhill, PG</u>		5. Project Location <u>West Lovington Strawn Unit #8</u> <u>Energex Resources NMCO</u> <u>Case # 1RP-2457</u>							
7. Method <u>Pumping</u> Surging Air Lift <u>Bailing</u> Other _____		8. Manufacturer's Designation of Rig <u>DSR-2001</u>		9. Location of Well (Site, Description) <u>Monitor Well #9 Deep</u>					
Water Levels									
Initial		Final		Final + 24 Hours					
Date: <u>06/20/2024</u> Time: <u>12:10</u>		Date: <u>06/20/2024</u> Time: <u>13:12</u>		Date: _____ Time: _____					
10. Total Depth of Well (from TOC) <u>192.60'</u>		15. Total Depth of Well (from TOC) <u>1</u>		20. Total Depth of Well (from TOC) <u>1</u>					
11. Water Level (from TOC) <u>53.10'</u>		16. Water Level (from TOC) <u>53.15'</u>		21. Water Level (from TOC) <u>1</u>					
12. Water Column Height <u>139.50'</u>	Nom Dia x = gal/ft <input checked="" type="checkbox"/> Sch 40 <input type="checkbox"/> Sch 80 2" <u>0.16</u> 0.1534 4" 0.65 0.5972 6" 1.47 1.3540 8" 2.61 2.3720	17. 3 Well Volumes <u>66.96 Gallons</u>		22. Size and Type of <u>Pump or Bailer</u>					
13. Well Diameter <u>2" SCH 40 PVC MW</u>		18. 5 Well Volumes <u>111.60 Gallons</u>		<u>Geo-Tech SS GeoSub</u> <u>ESP pump</u> <u>1.5" x 3.0 Poly Disposable</u> <u>Bailer & Twine</u>					
14. Well Volume (gal) (s) w.e. height) <u>22.32</u>		19. Purge Volume <u>67 Gallons</u>							
Final Field Analysis									
23. Total Amount of Water Removed <u>67 Gallons</u>		24. Was Well Pumped Dry? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		25. Was water added to well? <u>No</u> Yes <input type="checkbox"/> If yes, source: _____					
				26. Was the Groundwater Sampled <u>Yes</u> No <input type="checkbox"/> If yes, what was the sample number & Date: Sampling Personnel? <u>1255 MW-9D, 06/20/24</u> <u>CMB 1300 TPR M08015 G01001/NA0</u>					
27. Final Parameters		Photo Roll # <u>B Tex 5240</u>		Observations <u>Clear H₂O</u>					
Time <u>12:54</u>	Temp C <u>20.21</u>	Conductivity <u>577</u>	pH <u>7.56</u>	NTUs <u>Clear H₂O</u>	WL <u>53.15</u>				
				Removed <u>67 Gallons</u>	Flow Rate (gpm) <u>2.0</u>				
IF PETROLEUM IS IN THE WELL, DO NOT TAKE pH AND CONDUCTIVITY PARAMETERS									
28. Physical Appearance and Remarks <u>Very clear H₂O</u>									
29. Purgewater disposal method: <u>In Tractor Mounted Tank</u>									
Sampling / Development Parameters									
Time	Temp C	Conductivity	pH	NTUs	WL (from TOC)	Volume (gallons)	Dissolved Oxygen	Flow Rate (gpm)	pHmv/ORP
<u>12:20</u>	<u>17.84</u>	<u>573</u>	<u>7.65</u>	<u>Clear H₂O</u>	<u>53.10'</u>	<u>Initial</u>	<u>4.60</u>	<u>2.0</u>	<u>-30.1/-3.6</u>
<u>12:30</u>	<u>19.70</u>	<u>578</u>	<u>7.57</u>	<u>Clear H₂O</u>	<u>1</u>	<u>20</u>	<u>3.12</u>	<u>2.0</u>	<u>-27.5/-6.9</u>
<u>12:40</u>	<u>19.90</u>	<u>572</u>	<u>7.64</u>	<u>Clear H₂O</u>	<u>1</u>	<u>40</u>	<u>4.41</u>	<u>2.0</u>	<u>-29.7/-7.3</u>
<u>12:54</u>	<u>20.21</u>	<u>577</u>	<u>7.56</u>	<u>Clear H₂O</u>	<u>53.15</u>	<u>67</u>	<u>4.29</u>	<u>2.0</u>	<u>-27.5/-7.4</u>
(1) Note volume and physical character of sediments removed.									
NTU = Nephelometric turbidity units									
WL = Water Level from Top of PVC Casing									
Checked By <u>C M Barnhill PG</u>						Date <u>06/20/2024</u>			

CMB ENVIRONMENTAL & GEOLOGICAL SERVICES, INC.

WELL DATA FORM

Type Well <input checked="" type="checkbox"/> MW <input type="checkbox"/> Production <input type="checkbox"/> Other _____		Type of Data <input type="checkbox"/> Development <input checked="" type="checkbox"/> Sampling <input type="checkbox"/> Pump Test <input type="checkbox"/> Other _____		Well No. <i>MW-9M</i> Sheet 1 of 1 of 1 Sheets	
1. Project <i>Energen WLSU #8</i>		2. Project Location <i>Diamondback Energy</i>		3. Date <i>06/20/2024</i>	
4. Technician <i>Jim Barnhill, PE</i>		5. <i>SW monitoring 2024</i>		6. <i>West Livingston Strawn Unit #8</i>	
7. Method <i>Pumping</i> Surging Air Lift <i>Bailing</i> Other _____		8. Manufacturer's Designation of Rig <i>DSR-2001</i>		9. Location of Well (Site, Description) <i>Monitor well 9 middle</i>	

Water Levels

Initial		Final		Final + 24 Hours	
Date: <i>06/20/24</i> Time: <i>11:30</i>		Date: <i>06/20/24</i> Time: <i>12:07</i>		Date: _____ Time: _____	
10. Total Depth of Well (from TOC) <i>145.37'</i>		15. Total Depth of Well (from TOC) <i>/</i>		20. Total Depth of Well (from TOC) <i>/</i>	
11. Water Level (from TOC) <i>53.15'</i>		16. Water Level (from TOC) <i>53.12'</i>		21. Water Level (from TOC) <i>/</i>	

12. Water Column Height <i>92.22'</i>		Nom Dia <i>Sch 40</i> x = gal/ft Sch 80		17. 3 Well Volumes <i>44.26 Gallons</i>		22. Size and Type of <i>Pump or Bailer</i>	
13. Well Diameter <i>2" SCH 40 PVC MW</i>		2" <i>0.16</i> 0.1534 4" 0.65 0.5972 6" 1.47 1.3540 8" 2.61 2.3720		18. 5 Well Volumes <i>73.776 Gallons</i>		22. <i>Geo-Tech SSG Geo Sub</i> <i>ESB Pump</i> <i>1.5" x 30' poly Disposable</i> <i>Bailer & Tine for Sample</i>	
14. Well Volume (gal) <i>14.755</i> (s) w.e. height				19. Purge Volume <i>45 Gallons</i>			

Final Field Analysis

23. Total Amount of Water Removed <i>45 Gallons</i>		24. Was Well Pumped Dry? <i>No</i>		25. Was water added to well? <i>No</i> Yes _____ If yes, source: _____		26. Was the Groundwater Sampled <i>Yes</i> No _____ If yes, what was the sample number & Date: <i>06/20/24</i> Sampling Personnel? <i>CMB & 12:00 BTX8260, 624/DRG/MRD</i>	
---	--	------------------------------------	--	---	--	--	--

27. Final Parameters		28. <i>western</i>		29. <i>pH</i>		30. <i>NTUs</i>		31. <i>WL</i>		32. <i>Removed</i>		33. <i>Flow Rate</i>		34. <i>Photo Roll #, CMB</i>	
Time <i>11:53</i>	Temp C <i>19.50</i>	Conductivity <i>569</i>	pH <i>7.61</i>	NTUs <i>Clear H₂O</i>	WL <i>53.12</i>	Removed <i>45 Gallons</i>	Flow Rate (gpm) <i>2.0</i>	Observations <i>Clear H₂O</i>							

IF PETROLEUM IS IN THE WELL, DO NOT TAKE pH AND CONDUCTIVITY PARAMETERS

28. Physical Appearance and Remarks <i>Slightly Turbid Initially - Clear Sample.</i>
--

29. Purgewater disposal method: <i>In Trailer mounted Tank</i>
--

Sampling / Development Parameters

Time	Temp C	Conductivity	pH	NTUs	WL (from TOC)	Volume (gallons)	Dissolved Oxygen	Flow Rate (gpm)	pHmv/ORP
<i>11:36</i>	<i>19.76</i>	<i>580</i>	<i>7.67</i>	<i>Slightly Turbid</i>	<i>53.15</i>	<i>Initial</i>	<i>3.44</i>	<i>2.0</i>	<i>-32.0/-33.1</i>
<i>11:46</i>	<i>19.46</i>	<i>569</i>	<i>7.60</i>	<i>Clear H₂O</i>	<i>/</i>	<i>20</i>	<i>5.62</i>	<i>2.0</i>	<i>-26.9/-50.3</i>
<i>11:51</i>	<i>19.54</i>	<i>567</i>	<i>7.58</i>	<i>Clear H₂O</i>	<i>/</i>	<i>30</i>	<i>6.00</i>	<i>2.0</i>	<i>-26.2/-51.4</i>
<i>11:53</i>	<i>19.50</i>	<i>569</i>	<i>7.61</i>	<i>Clear H₂O</i>	<i>53.12</i>	<i>45</i>	<i>6.23</i>	<i>2.0</i>	<i>-26.9/-51.2</i>

(1) Note volume and physical character of sediments removed.

NTU = Nephelometric turbidity units

WL = Water Level from Top of PVC Casing

Checked By *Jim Barnhill, PE*Date *06/20/2024*

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CMB ENVIRONMENTAL & GEOLOGICAL SERVICES, INC.

WELL DATA FORM

Type Well <input checked="" type="checkbox"/> MW <input type="checkbox"/> Production <input type="checkbox"/> Other	Type of Data <input type="checkbox"/> Development <input checked="" type="checkbox"/> Sampling <input type="checkbox"/> Pump Test <input type="checkbox"/> Other	Well No. <i>MW-95</i> Sheet 1 of 1 Sheets
1. Project <i>Energex WLSu #8</i> <i>GW Monitoring 2024</i>	2. Project Location <i>Diamond Back Energy</i> <i>West Lovington Strawn Unit #8</i>	3. Date <i>06/20/2024</i>
4. Technician <i>CMBarnhill PG</i>	<i>Energex Resources NMOC</i> <i>CASE # 1 RP-2457</i>	
7. Method <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Surging <input type="checkbox"/> Air Lift <input type="checkbox"/> Bailing <input type="checkbox"/> Other	8. Manufacturer's Designation of Rig <i>DSR-2001</i>	9. Location of Well (Site, Description) <i>Monitor Well 9 Shallow</i>

Water Levels

Initial	Final	Final + 24 Hours
Date: <i>06/20/2024</i> Time: <i>10:15</i>	Date: <i>06/20/2024</i> Time: <i>10:47</i>	Date: _____ Time: _____
10. Total Depth of Well (from TOC) <i>72.41'</i>	15. Total Depth of Well (from TOC) <i>/</i>	20. Total Depth of Well (from TOC)
11. Water Level (from TOC), <i>53.08</i>	16. Water Level (from TOC) <i>53.08</i>	21. Water Level (from TOC)

12. Water Column Height <i>19.33'</i>	Nom Dia <i>Sch 40</i>	x = gal/ft <i>Sch 40</i>	17. 3 Well Volumes <i>9.27 Gallons</i>	22. Size and Type of Pump or Bailor <i>Geo-Tech 5'S GeoSub ESP Pump</i> <i>1.8' x 3.0' poly Disposable</i> <i>Bac loc & Tube For Sample</i>
13. Well Diameter <i>2" Sch 40 PVC MW</i>	2" <i>0.16</i>	0.1534	18. 5 Well Volumes <i>15.464 Gallons</i>	
14. Well Volume (gal) (s) w.e. height) <i>3.0928</i>	4" <i>0.65</i>	0.5972	19. Purge Volume <i>10 Gallons</i>	
	6" <i>1.47</i>	1.3540		
	8" <i>2.61</i>	2.3720		

Final Field Analysis

23. Total Amount of Water Removed <i>10 Gallons</i>	24. Was Well Pumped Dry? Yes <input checked="" type="checkbox"/> No	25. Was water added to well? <input checked="" type="checkbox"/> No Yes If yes, source:	26. Was the Groundwater Sampled <input checked="" type="checkbox"/> Yes No If yes, what was the sample number & Date: Sampling Personnel? <i>MW 9 Shallow</i> <i>06/20/24 CMBc 10:40</i>
--	--	---	---

Time	Temp C	Conductivity	pH	NTUs	WL	Removed	Flow Rate (gpm)	Photo Roll #, Observations
<i>10:37</i>	<i>19.70</i>	<i>642</i>	<i>7.46</i>	<i>Clear H₂O</i>	<i>53.08</i>	<i>10 Gallons</i>	<i>1.66</i>	<i>Clear H₂O</i>

IF PETROLEUM IS IN THE WELL, DO NOT TAKE pH AND CONDUCTIVITY PARAMETERS

28. Physical Appearance and Remarks <i>Initially Tubing - Clear @ 2.5 Gallons purged</i>
29. Purgewater disposal method: <i>In Trailer mounted Disposal Tank</i>

Sampling / Development Parameters

Time	Temp C	Conductivity	pH	NTUs	WL (from TOC)	Volume (gallons)	Dissolved Oxygen	Flow Rate (gpm)	pHmv/ORP
<i>10:30</i>	<i>20.78</i>	<i>1086</i>	<i>7.10</i>	<i>Clear H₂O</i>	<i>53.08</i>	<i>Initial</i>	<i>5.69</i>	<i>1.66</i>	<i>-3.9/-40.5</i>
<i>10:32</i>	<i>19.77</i>	<i>669</i>	<i>7.58</i>	<i>Clear H₂O</i>	<i>/</i>	<i>2.5</i>	<i>8.29</i>	<i>1.66</i>	<i>-19.2/-47.1</i>
<i>10:34</i>	<i>19.71</i>	<i>478</i>	<i>7.45</i>	<i>Clear H₂O</i>	<i>/</i>	<i>5.0</i>	<i>6.53</i>	<i>1.66</i>	<i>-17.9/-40.6</i>
<i>10:35</i>	<i>19.69</i>	<i>642</i>	<i>7.40</i>	<i>Clear H₂O</i>	<i>/</i>	<i>7.5</i>	<i>6.55</i>	<i>1.66</i>	<i>-18.2/-39.6</i>
<i>10:37</i>	<i>19.70</i>	<i>642</i>	<i>7.46</i>	<i>Clear H₂O</i>	<i>53.08</i>	<i>10.0</i>	<i>6.71</i>	<i>1.66</i>	<i>-21.1/-38.6</i>

(1) Note volume and physical character of sediments removed.

NTU = Nephelometric turbidity units

WL = Water Level from Top of PVC Casing

Checked By

Date

06/20/2024

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Type Well <input checked="" type="checkbox"/> MW <input type="checkbox"/> Production <input type="checkbox"/> Other _____		Type of Data <input type="checkbox"/> Development <input checked="" type="checkbox"/> Sampling <input type="checkbox"/> Pump Test <input type="checkbox"/> Other _____		Well No. <u>MW-8S</u> Sheet 1 of 1 Sheets					
1. Project <u>Energex WLSU #8 GW Monitoring 2024</u>		2. Project Location <u>Diamond Back Energy West Livingston Strawn Unit #8</u>		3. Date <u>06/23/2024</u>					
4. Technician <u>CM Barnhill, PE</u>		5. <u>Energex Resources NMOO Case #1 RP-2457</u>							
7. Method <u>Pumping</u> Surging Air Lift <u>Bailing</u> Other _____		8. Manufacturer's Designation of Rig <u>DSR-2001</u>		9. Location of Well (Site, Description) <u>Monitor Well 8 Shallow</u>					
Water Levels									
Initial		Final		Final + 24 Hours					
Date: <u>06/23/24</u> Time: <u>12:06</u>		Date: <u>06/23/24</u> Time: <u>12:58</u>		Date: _____ Time: _____					
10. Total Depth of Well (from TOC) <u>72.0'</u>		15. Total Depth of Well (from TOC) <u>1</u>		20. Total Depth of Well (from TOC)					
11. Water Level (from TOC) <u>54.55'</u>		16. Water Level (from TOC) <u>54.55'</u>		21. Water Level (from TOC)					
12. Water Column Height <u>17.45'</u>	Nom Dia <u>2"</u>	x = gal/ft Sch 40 0.16 Sch 80 0.1534	17. 3 Well Volumes <u>8.376 Gallons</u>		22. Size and Type of <u>Pump or Bailer</u>				
13. Well Diameter <u>2" SCH 40 PVC MW</u>	4" 0.65	0.5972	18. 5 Well Volumes <u>13.96</u>		<u>Geotech GeoSub Exp</u> <u>Site 70'</u> <u>1.8" x 3.0' poly Disposable</u> <u>Bailer & Twine</u>				
14. Well Volume (gal) (s) w.e. height) <u>2.792</u>	6" 1.47	1.3540	19. Purge Volume <u>10 Gallons</u>						
Final Field Analysis									
23. Total Amount of Water Removed <u>10 Gallons</u>	24. Was Well Pumped Dry? <u>No</u>	25. Was water added to well? <u>No</u>	26. Was the Groundwater Sampled <u>Yes</u> No If yes, what was the sample number & Date: Sampling Personnel? <u>12:40 MW-8S, 06/23/24</u> <u>CMB</u> <u>TRIMOD 8005' (Sed/DNA/MSO)</u>						
27. Final Parameters	Time <u>12:38</u>	Temp C <u>21.55</u>	Conductivity <u>582</u>	pH <u>7.43</u>	NTUs <u>TURBID</u>				
	WL <u>54.55'</u>	Removed <u>10 Gallons</u>	Flow Rate (gpm) <u>1.0</u>	Photo Roll #, <u>BP 8240</u> Observations <u>TURBID CHLORINE</u> <u>FINE BROWN Silt</u>					
IF PETROLEUM IS IN THE WELL, DO NOT TAKE pH AND CONDUCTIVITY PARAMETERS									
28. Physical Appearance and Remarks <u>TURBID BROWN Fine Suspended S: M</u>									
29. Purgewater disposal method: <u>In Trailer Mounted Tank</u>									
Sampling / Development Parameters									
Time	Temp C	Conductivity	pH	NTUs	WL (from TOC)	Volume (gallons)	Dissolved Oxygen	Flow Rate (gpm)	pHmv/ORP
<u>12:28</u>	<u>27.45</u>	<u>611</u>	<u>7.38</u>	<u>TURBID</u>	<u>Back Sit 54.55'</u>	<u>Initial</u>	<u>6.31</u>	<u>1.0</u>	<u>-16.7/-10.3</u>
<u>12:30</u>	<u>23.54</u>	<u>718</u>	<u>7.37</u>	<u>" " "</u>	<u>" " "</u>	<u>2</u>	<u>4.11</u>	<u>1.0</u>	<u>-16.0/-10.0</u>
<u>12:32</u>	<u>21.90</u>	<u>629</u>	<u>7.46</u>	<u>TURBID</u>	<u>Back Sit</u>	<u>4</u>	<u>4.24</u>	<u>1.0</u>	<u>-21.5/-18.6</u>
<u>12:34</u>	<u>21.72</u>	<u>597</u>	<u>7.44</u>	<u>" " "</u>	<u>" " "</u>	<u>6</u>	<u>5.19</u>	<u>1.0</u>	<u>-19.7/-25.0</u>
<u>12:36</u>	<u>21.81</u>	<u>591</u>	<u>7.54</u>	<u>TURBID</u>	<u>Back Sit</u>	<u>8</u>	<u>5.11</u>	<u>1.0</u>	<u>-21.6/-27.9</u>
<u>12:38</u>	<u>21.55</u>	<u>582</u>	<u>7.43</u>	<u>" " "</u>	<u>54.55'</u>	<u>10</u>	<u>5.09</u>	<u>1.0</u>	<u>-18.1/-25.3</u>
(1) Note volume and physical character of sediments removed. NTU = Nephelometric turbidity units WL = Water Level from Top of PVC Casing									
Checked By <u>Christopher Barnhill PE</u>								Date <u>06/23/2024</u>	

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Type Well <input checked="" type="checkbox"/> MW <input type="checkbox"/> Production <input type="checkbox"/> Other _____		Type of Data <input type="checkbox"/> Development <input checked="" type="checkbox"/> Sampling <input type="checkbox"/> Pump Test <input type="checkbox"/> Other _____		Well No. <u>MW-6</u> Sheet 1 of 1 Sheets	
1. Project <u>Energy WLSU #8</u> <u>SW Monitoring 2024</u>		2. Project Location <u>DIAMOND BACK Energy</u> <u>West Lovington Strawn Unit #8</u>		3. Date <u>06/20/2024</u>	
4. Technician <u>C. M. Barnhill, Jr.</u>		Energy Resources NMOC Case # <u>IRP-2457</u>			
7. Method Pumping Surging Air Lift <u>Bailing</u> Other _____		8. Manufacturer's Designation of Rig <u>DSR-2001</u>		9. Location of Well (Site, Description) <u>Monitor Well #6</u>	

Water Levels		
Initial	Final	Final + 24 Hours
Date: <u>06/20/2024</u> Time: <u>15:00</u>	Date: <u>06/20/24</u> Time: <u>15:40</u>	Date: _____ Time: _____
10. Total Depth of Well (from TOC) <u>73.20</u>	15. Total Depth of Well (from TOC)	20. Total Depth of Well (from TOC)
11. Water Level (from TOC) <u>59.10</u>	16. Water Level (from TOC) <u>59.55</u>	21. Water Level (from TOC)

12. Water Column Height <u>14.10'</u>	Nom Dia <u>2"</u> x = gal/ft Sch 40 0.16 Sch 80 0.1534 4" 0.65 0.5972 6" 1.47 1.3540 8" 2.61 2.3720	17.3 Well Volumes <u>6.768 Gallons</u>	22. Size and Type of Pump or Bailer <u>1.8" x 3.0' poly Disposable Bailer</u> <u>Twine</u>
13. Well Diameter <u>2" Sch 40 PVC MW</u>		18.5 Well Volumes <u>11.28 Gallons</u>	
14. Well Volume (gal) (s) w.e. height <u>2.256</u>		19. Purge Volume <u>7 Gallons</u>	

Final Field Analysis			
23. Total Amount of Water Removed <u>7 Gallons</u>	24. Was Well Pumped Dry? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	25. Was water added to well? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, source: _____	26. Was the Groundwater Sampled <u>Yes</u> No If yes, what was the sample number & Date: Sampling Personnel? <u>15:35 CMB</u> <u>MW-6, 06/20/24</u> <u>TRH MOD 8015 GND/DRG/MRD</u> <u>PEX 8260</u>

27. Final Parameters									
Time	Temp C	Conductivity	pH	NTUs	WL	Removed	Flow Rate (gpm)	Photo Roll #	Observations
<u>15:33</u>	<u>19.60</u>	<u>3997</u>	<u>7.56</u>	<u>Clear H₂O</u>	<u>59.55</u>	<u>7 Gallons</u>	<u>0.25</u>	<u>Clear H₂O</u>	

IF PETROLEUM IS IN THE WELL, DO NOT TAKE pH AND CONDUCTIVITY PARAMETERS

28. Physical Appearance and Remarks <u>Clear H₂O - High Conductivity</u>
29. Purgewater disposal method: <u>IN Trailer mounted Tank</u>

Sampling / Development Parameters									
Time	Temp C	Conductivity	pH	NTUs	WL (from TOC)	Volume (gallons)	Dissolved Oxygen	Flow Rate (gpm)	pHmv/ORP
<u>15:10</u>	<u>19.35</u>	<u>3739</u>	<u>7.53</u>	<u>Clear H₂O</u>	<u>59.10'</u>	<u>Initial</u>	<u>6.41</u>	<u>0.25</u>	<u>-25.8/-29.3</u>
<u>15:17</u>	<u>19.64</u>	<u>3947</u>	<u>7.57</u>	<u>Clear H₂O</u>	<u>/</u>	<u>2</u>	<u>6.55</u>	<u>0.25</u>	<u>-27.4/-39.6</u>
<u>15:22</u>	<u>19.39</u>	<u>3974</u>	<u>7.58</u>	<u>Clear H₂O</u>	<u>/</u>	<u>4</u>	<u>6.68</u>	<u>0.25</u>	<u>-28.1/-47.8</u>
<u>15:33</u>	<u>19.60</u>	<u>3997</u>	<u>7.56</u>	<u>Clear H₂O</u>	<u>59.55</u>	<u>7.0</u>	<u>6.31</u>	<u>0.25</u>	<u>-27.3/-50.5</u>

(1) Note volume and physical character of sediments removed.
NTU = Nephelometric turbidity units
WL = Water Level from Top of PVC Casing

Checked By <u>C. M. Barnhill, Jr.</u>	Date <u>06/20/2024</u>
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Type Well <input checked="" type="checkbox"/> MW <input type="checkbox"/> Production <input type="checkbox"/> Other _____		Type of Data <input type="checkbox"/> Development <input checked="" type="checkbox"/> Sampling <input type="checkbox"/> Pump Test <input type="checkbox"/> Other _____		Well No. <u>MW-5</u> Sheet 1 of 1 Sheets	
1. Project <u>Energy WLSu #8</u>		2. Project Location <u>Diamond Back Energy</u>		3. Date <u>06/20/2024</u>	
4. Technician <u>CM Barahill, PE</u>		5. Project Location <u>West Livingston Strawn Unit #8</u> <u>Energy Resources, NMOC</u> <u>Case # 1RP-2457</u>			
7. Method Pumping Surging Air Lift <u>Bailing</u> Other _____		8. Manufacturer's Designation of Rig <u>DSR-2001</u>		9. Location of Well (Site, Description) <u>Monitor Well #5</u>	

Water Levels		
Initial	Final	Final + 24 Hours
Date: <u>06/20/2024</u> Time: <u>14:11</u>	Date: <u>06/20/2024</u> Time: <u>14:50</u>	Date: _____ Time: _____
10. Total Depth of Well (from TOC) <u>70.36'</u>	15. Total Depth of Well (from TOC) <u>/</u>	20. Total Depth of Well (from TOC) <u>/</u>
11. Water Level (from TOC) <u>56.50'</u>	16. Water Level (from TOC) <u>56.50'</u>	21. Water Level (from TOC) <u>/</u>

12. Water Column Height <u>13.86'</u>	Nom Dia <u>2"</u> x = gal/ft Sch 40 0.16 Sch 80 0.1534 4" 0.65 0.5972 6" 1.47 1.3540 8" 2.61 2.3720	17. 3 Well Volumes <u>6.65 Gallons</u>	22. Size and Type of Pump or <u>Bailer</u> <u>1.8" x 3.0' poly Disposable Bailer & Twine</u>
13. Well Diameter <u>2" SCH 40 PVC MW</u>		18. 5 Well Volumes <u>11.088 Gallons</u>	
14. Well Volume (gal) (s) w.e. height) <u>2.2176</u>		19. Purge Volume <u>6.65 Gallons</u>	

Final Field Analysis			
23. Total Amount of Water Removed <u>6.75 Gallons</u>	24. Was Well Pumped Dry? <u>No</u>	25. Was water added to well? <u>No</u> If yes, source: _____	26. Was the Groundwater Sampled <u>Yes</u> No If yes, what was the sample number & Date: Sampling Personnel? <u>CMBA 14:42</u> <u>MW-5, 06/20/2024</u>
27. Final Parameters Time <u>14:40</u> Temp C <u>18.97</u> Conductivity <u>614</u> pH <u>7.37</u> NTUs <u>slightly turbid</u> WL <u>56.50'</u> Removed <u>6.75 Gallons</u> Flow Rate (gpm) <u>0.25</u> Photo Roll #, Observations <u>slightly turbid</u>			
IF PETROLEUM IS IN THE WELL, DO NOT TAKE pH AND CONDUCTIVITY PARAMETERS			
28. Physical Appearance and Remarks <u>Clear H₂O to slightly turbid Brown Silt</u>			
29. Purgewater disposal method: <u>in Trailer mounted Tank</u>			

Sampling / Development Parameters									
Time	Temp C	Conductivity	pH	NTUs	WL (from TOC)	Volume (gallons)	Dissolved Oxygen	Flow Rate (gpm)	pHmv/ORP
<u>14:20</u>	<u>19.23</u>	<u>616</u>	<u>7.40</u>	<u>11.20</u>	<u>56.50'</u>	<u>Initial</u>	<u>8.28</u>	<u>0.25</u>	<u>-17.3/-20.4</u>
<u>14:27</u>	<u>18.99</u>	<u>613</u>	<u>7.36</u>	<u>slightly turbid</u>	<u>/</u>	<u>2</u>	<u>8.56</u>	<u>0.25</u>	<u>-15.9/-15.3</u>
<u>14:33</u>	<u>19.02</u>	<u>615</u>	<u>7.34</u>	<u>" " "</u>	<u>/</u>	<u>4</u>	<u>8.69</u>	<u>0.25</u>	<u>-15.2/-17.4</u>
<u>14:40</u>	<u>18.97</u>	<u>614</u>	<u>7.37</u>	<u>slight</u>	<u>56.50'</u>	<u>6.75</u>	<u>8.81</u>	<u>0.25</u>	<u>-15.9/-20.1</u>

(1) Note volume and physical character of sediments removed.
 NTU = Nephelometric turbidity units
 WL = Water Level from Top of PVC Casing

Checked By <u>CM Barahill PE</u>	Date <u>06/20/2024</u>
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Appendix E

June 2024

Laboratory Report



Environment Testing

1

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11

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. John Ayarbe
Daniel B. Stephens & Associates Inc.
6020 Academy Road NE
Suite 100
Albuquerque, New Mexico 87109

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JOB DESCRIPTION

Diamond Back Energy
Energy WLSU #8

JOB NUMBER

885-6908-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information.

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



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

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Laboratory Job ID: 885-6908-1
SDG: Energy WLSU #8

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Definitions/Glossary

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

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: Daniel B. Stephens & Associates Inc.
Project: Diamond Back Energy

Job ID: 885-6908-1

Job ID: 885-6908-1

Eurofins Albuquerque

Job Narrative 885-6908-1

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 are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample 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 samples were received on 6/25/2024 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 3.9°C and 4.4°C.

Gasoline Range Organics

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

GC/MS VOA

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

Diesel Range Organics

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.

Eurofins Albuquerque

Client Sample Results

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Client Sample ID: MW-9 Shallow

Lab Sample ID: 885-6908-1

Date Collected: 06/20/24 10:40

Matrix: Water

Date Received: 06/25/24 10:00

Method: SW846 8015D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		0.050	mg/L			07/04/24 08:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130		07/04/24 08:06	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			07/03/24 20:23	1
Ethylbenzene	ND		1.0	ug/L			07/03/24 20:23	1
Toluene	ND		1.0	ug/L			07/03/24 20:23	1
Xylenes, Total	ND		1.5	ug/L			07/03/24 20:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		70 - 130		07/03/24 20:23	1
Toluene-d8 (Surr)	101		70 - 130		07/03/24 20:23	1
4-Bromofluorobenzene (Surr)	99		70 - 130		07/03/24 20:23	1
Dibromofluoromethane (Surr)	100		70 - 130		07/03/24 20:23	1

Method: SW846 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0	mg/L		06/27/24 15:29	07/01/24 14:19	1
Motor Oil Range Organics [C28-C40]	ND		5.0	mg/L		06/27/24 15:29	07/01/24 14:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	122		46 - 159	06/27/24 15:29	07/01/24 14:19	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	29		10	mg/L			06/29/24 12:19	20

Eurofins Albuquerque

Client Sample Results

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Client Sample ID: MW-9 Middle

Lab Sample ID: 885-6908-2

Date Collected: 06/20/24 12:00

Matrix: Water

Date Received: 06/25/24 10:00

Method: SW846 8015D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		0.050	mg/L			07/04/24 09:19	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130				07/04/24 09:19	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			07/03/24 20:52	1
Ethylbenzene	ND		1.0	ug/L			07/03/24 20:52	1
Toluene	ND		1.0	ug/L			07/03/24 20:52	1
Xylenes, Total	ND		1.5	ug/L			07/03/24 20:52	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 130				07/03/24 20:52	1
Toluene-d8 (Surr)	100		70 - 130				07/03/24 20:52	1
4-Bromofluorobenzene (Surr)	100		70 - 130				07/03/24 20:52	1
Dibromofluoromethane (Surr)	99		70 - 130				07/03/24 20:52	1

Method: SW846 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0	mg/L		06/27/24 15:29	07/01/24 14:31	1
Motor Oil Range Organics [C28-C40]	ND		5.0	mg/L		06/27/24 15:29	07/01/24 14:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	123		46 - 159			06/27/24 15:29	07/01/24 14:31	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	33		10	mg/L			06/29/24 12:44	20

Eurofins Albuquerque

Client Sample Results

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Client Sample ID: MW-9 Deep

Lab Sample ID: 885-6908-3

Date Collected: 06/20/24 13:00

Matrix: Water

Date Received: 06/25/24 10:00

Method: SW846 8015D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		0.050	mg/L			07/04/24 09:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130				07/04/24 09:44	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			07/03/24 21:21	1
Ethylbenzene	ND		1.0	ug/L			07/03/24 21:21	1
Toluene	ND		1.0	ug/L			07/03/24 21:21	1
Xylenes, Total	ND		1.5	ug/L			07/03/24 21:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		70 - 130				07/03/24 21:21	1
Toluene-d8 (Surr)	99		70 - 130				07/03/24 21:21	1
4-Bromofluorobenzene (Surr)	98		70 - 130				07/03/24 21:21	1
Dibromofluoromethane (Surr)	99		70 - 130				07/03/24 21:21	1

Method: SW846 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0	mg/L		06/27/24 15:29	07/01/24 14:44	1
Motor Oil Range Organics [C28-C40]	ND		5.0	mg/L		06/27/24 15:29	07/01/24 14:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	136		46 - 159			06/27/24 15:29	07/01/24 14:44	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	35		10	mg/L			06/29/24 13:33	20

Eurofins Albuquerque

Client Sample Results

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Client Sample ID: MW-1

Lab Sample ID: 885-6908-4

Date Collected: 06/20/24 14:00

Matrix: Water

Date Received: 06/25/24 10:00

Method: SW846 8015D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		0.050	mg/L			07/04/24 10:08	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130				07/04/24 10:08	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			07/03/24 21:49	1
Ethylbenzene	ND		1.0	ug/L			07/03/24 21:49	1
Toluene	ND		1.0	ug/L			07/03/24 21:49	1
Xylenes, Total	ND		1.5	ug/L			07/03/24 21:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		70 - 130				07/03/24 21:49	1
Toluene-d8 (Surr)	101		70 - 130				07/03/24 21:49	1
4-Bromofluorobenzene (Surr)	99		70 - 130				07/03/24 21:49	1
Dibromofluoromethane (Surr)	102		70 - 130				07/03/24 21:49	1

Method: SW846 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0	mg/L		06/27/24 15:29	07/01/24 14:56	1
Motor Oil Range Organics [C28-C40]	ND		5.0	mg/L		06/27/24 15:29	07/01/24 14:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	132		46 - 159			06/27/24 15:29	07/01/24 14:56	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	28		10	mg/L			06/29/24 14:23	20

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Client Sample Results

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Client Sample ID: MW-5

Lab Sample ID: 885-6908-5

Date Collected: 06/20/24 14:42

Matrix: Water

Date Received: 06/25/24 10:00

Method: SW846 8015D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		0.050	mg/L			07/04/24 10:32	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 130				07/04/24 10:32	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			07/04/24 03:04	1
Ethylbenzene	ND		1.0	ug/L			07/04/24 03:04	1
Toluene	ND		1.0	ug/L			07/04/24 03:04	1
Xylenes, Total	ND		1.5	ug/L			07/04/24 03:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		70 - 130				07/04/24 03:04	1
Toluene-d8 (Surr)	100		70 - 130				07/04/24 03:04	1
4-Bromofluorobenzene (Surr)	97		70 - 130				07/04/24 03:04	1
Dibromofluoromethane (Surr)	102		70 - 130				07/04/24 03:04	1

Method: SW846 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0	mg/L		06/27/24 15:29	07/01/24 15:09	1
Motor Oil Range Organics [C28-C40]	ND		5.0	mg/L		06/27/24 15:29	07/01/24 15:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	134		46 - 159			06/27/24 15:29	07/01/24 15:09	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	28		10	mg/L			06/29/24 14:47	20

Eurofins Albuquerque

Client Sample Results

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Client Sample ID: MW-6

Lab Sample ID: 885-6908-6

Date Collected: 06/20/24 15:35

Matrix: Water

Date Received: 06/25/24 10:00

Method: SW846 8015D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		0.050	mg/L			07/04/24 10:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130		07/04/24 10:57	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			07/04/24 03:32	1
Ethylbenzene	ND		1.0	ug/L			07/04/24 03:32	1
Toluene	ND		1.0	ug/L			07/04/24 03:32	1
Xylenes, Total	ND		1.5	ug/L			07/04/24 03:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		70 - 130		07/04/24 03:32	1
Toluene-d8 (Surr)	98		70 - 130		07/04/24 03:32	1
4-Bromofluorobenzene (Surr)	96		70 - 130		07/04/24 03:32	1
Dibromofluoromethane (Surr)	102		70 - 130		07/04/24 03:32	1

Method: SW846 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0	mg/L		06/27/24 15:29	07/01/24 15:21	1
Motor Oil Range Organics [C28-C40]	ND		5.0	mg/L		06/27/24 15:29	07/01/24 15:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	126		46 - 159	06/27/24 15:29	07/01/24 15:21	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	980		50	mg/L			07/03/24 13:17	100

Eurofins Albuquerque

Client Sample Results

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Client Sample ID: MW-4

Lab Sample ID: 885-6908-7

Date Collected: 06/23/24 09:45

Matrix: Water

Date Received: 06/25/24 10:00

Method: SW846 8015D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		0.050	mg/L			07/04/24 11:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130		07/04/24 11:22	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			07/04/24 04:01	1
Ethylbenzene	ND		1.0	ug/L			07/04/24 04:01	1
Toluene	ND		1.0	ug/L			07/04/24 04:01	1
Xylenes, Total	ND		1.5	ug/L			07/04/24 04:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		70 - 130		07/04/24 04:01	1
Toluene-d8 (Surr)	99		70 - 130		07/04/24 04:01	1
4-Bromofluorobenzene (Surr)	99		70 - 130		07/04/24 04:01	1
Dibromofluoromethane (Surr)	103		70 - 130		07/04/24 04:01	1

Method: SW846 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0	mg/L		06/27/24 15:29	07/01/24 15:34	1
Motor Oil Range Organics [C28-C40]	ND		5.0	mg/L		06/27/24 15:29	07/01/24 15:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	130		46 - 159	06/27/24 15:29	07/01/24 15:34	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	140		10	mg/L			06/29/24 16:26	20

Eurofins Albuquerque

Client Sample Results

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Client Sample ID: MW-2

Lab Sample ID: 885-6908-8

Date Collected: 06/23/24 10:40

Matrix: Water

Date Received: 06/25/24 10:00

Method: SW846 8015D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		0.050	mg/L			07/04/24 11:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		70 - 130				07/04/24 11:46	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			07/04/24 04:29	1
Ethylbenzene	ND		1.0	ug/L			07/04/24 04:29	1
Toluene	ND		1.0	ug/L			07/04/24 04:29	1
Xylenes, Total	ND		1.5	ug/L			07/04/24 04:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		70 - 130				07/04/24 04:29	1
Toluene-d8 (Surr)	99		70 - 130				07/04/24 04:29	1
4-Bromofluorobenzene (Surr)	100		70 - 130				07/04/24 04:29	1
Dibromofluoromethane (Surr)	104		70 - 130				07/04/24 04:29	1

Method: SW846 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0	mg/L		06/27/24 15:29	07/01/24 16:01	1
Motor Oil Range Organics [C28-C40]	ND		5.0	mg/L		06/27/24 15:29	07/01/24 16:01	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	128		46 - 159			06/27/24 15:29	07/01/24 16:01	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1300		50	mg/L			07/08/24 09:55	100

Eurofins Albuquerque

Client Sample Results

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Client Sample ID: MW-3

Lab Sample ID: 885-6908-9

Date Collected: 06/23/24 11:30

Matrix: Water

Date Received: 06/25/24 10:00

Method: SW846 8015D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		0.050	mg/L			07/04/24 12:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 130		07/04/24 12:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			07/04/24 04:58	1
Ethylbenzene	ND		1.0	ug/L			07/04/24 04:58	1
Toluene	ND		1.0	ug/L			07/04/24 04:58	1
Xylenes, Total	ND		1.5	ug/L			07/04/24 04:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		70 - 130		07/04/24 04:58	1
Toluene-d8 (Surr)	100		70 - 130		07/04/24 04:58	1
4-Bromofluorobenzene (Surr)	96		70 - 130		07/04/24 04:58	1
Dibromofluoromethane (Surr)	103		70 - 130		07/04/24 04:58	1

Method: SW846 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0	mg/L		06/27/24 15:32	07/01/24 16:14	1
Motor Oil Range Organics [C28-C40]	ND		5.0	mg/L		06/27/24 15:32	07/01/24 16:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	126		46 - 159	06/27/24 15:32	07/01/24 16:14	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	27		10	mg/L			06/29/24 17:16	20

Eurofins Albuquerque

Client Sample Results

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Client Sample ID: MW-8 Shallow

Lab Sample ID: 885-6908-10

Date Collected: 06/23/24 12:40

Matrix: Water

Date Received: 06/25/24 10:00

Method: SW846 8015D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		0.050	mg/L			07/04/24 12:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130				07/04/24 12:35	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			07/04/24 05:27	1
Ethylbenzene	ND		1.0	ug/L			07/04/24 05:27	1
Toluene	ND		1.0	ug/L			07/04/24 05:27	1
Xylenes, Total	ND		1.5	ug/L			07/04/24 05:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		70 - 130				07/04/24 05:27	1
Toluene-d8 (Surr)	100		70 - 130				07/04/24 05:27	1
4-Bromofluorobenzene (Surr)	100		70 - 130				07/04/24 05:27	1
Dibromofluoromethane (Surr)	102		70 - 130				07/04/24 05:27	1

Method: SW846 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0	mg/L		06/27/24 15:32	07/01/24 16:27	1
Motor Oil Range Organics [C28-C40]	ND		5.0	mg/L		06/27/24 15:32	07/01/24 16:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	131		46 - 159			06/27/24 15:32	07/01/24 16:27	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	23		10	mg/L			06/29/24 17:40	20

Eurofins Albuquerque

Client Sample Results

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Client Sample ID: MW-8 Middle

Lab Sample ID: 885-6908-11

Date Collected: 06/23/24 13:45

Matrix: Water

Date Received: 06/25/24 10:00

Method: SW846 8015D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		0.050	mg/L			07/04/24 13:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130				07/04/24 13:00	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			07/04/24 05:55	1
Ethylbenzene	ND		1.0	ug/L			07/04/24 05:55	1
Toluene	ND		1.0	ug/L			07/04/24 05:55	1
Xylenes, Total	ND		1.5	ug/L			07/04/24 05:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		70 - 130				07/04/24 05:55	1
Toluene-d8 (Surr)	99		70 - 130				07/04/24 05:55	1
4-Bromofluorobenzene (Surr)	96		70 - 130				07/04/24 05:55	1
Dibromofluoromethane (Surr)	103		70 - 130				07/04/24 05:55	1

Method: SW846 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0	mg/L		06/27/24 15:32	07/01/24 16:40	1
Motor Oil Range Organics [C28-C40]	ND		5.0	mg/L		06/27/24 15:32	07/01/24 16:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	124		46 - 159			06/27/24 15:32	07/01/24 16:40	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24		10	mg/L			06/29/24 18:30	20

Eurofins Albuquerque

Client Sample Results

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Client Sample ID: MW-8 Deep

Lab Sample ID: 885-6908-12

Date Collected: 06/23/24 15:05

Matrix: Water

Date Received: 06/25/24 10:00

Method: SW846 8015D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		0.050	mg/L			07/04/24 13:24	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130				07/04/24 13:24	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			07/04/24 06:24	1
Ethylbenzene	ND		1.0	ug/L			07/04/24 06:24	1
Toluene	ND		1.0	ug/L			07/04/24 06:24	1
Xylenes, Total	ND		1.5	ug/L			07/04/24 06:24	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		70 - 130				07/04/24 06:24	1
Toluene-d8 (Surr)	96		70 - 130				07/04/24 06:24	1
4-Bromofluorobenzene (Surr)	97		70 - 130				07/04/24 06:24	1
Dibromofluoromethane (Surr)	103		70 - 130				07/04/24 06:24	1

Method: SW846 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0	mg/L		06/27/24 15:32	07/01/24 16:54	1
Motor Oil Range Organics [C28-C40]	ND		5.0	mg/L		06/27/24 15:32	07/01/24 16:54	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	129		46 - 159			06/27/24 15:32	07/01/24 16:54	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	29		10	mg/L			06/29/24 18:54	20

Eurofins Albuquerque

Client Sample Results

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Client Sample ID: MW-7 Shallow

Lab Sample ID: 885-6908-13

Date Collected: 06/23/24 16:15

Matrix: Water

Date Received: 06/25/24 10:00

Method: SW846 8015D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		0.050	mg/L			07/04/24 13:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130				07/04/24 13:49	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			07/04/24 06:52	1
Ethylbenzene	ND		1.0	ug/L			07/04/24 06:52	1
Toluene	ND		1.0	ug/L			07/04/24 06:52	1
Xylenes, Total	ND		1.5	ug/L			07/04/24 06:52	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		70 - 130				07/04/24 06:52	1
Toluene-d8 (Surr)	99		70 - 130				07/04/24 06:52	1
4-Bromofluorobenzene (Surr)	95		70 - 130				07/04/24 06:52	1
Dibromofluoromethane (Surr)	104		70 - 130				07/04/24 06:52	1

Method: SW846 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0	mg/L		06/27/24 15:32	07/01/24 17:07	1
Motor Oil Range Organics [C28-C40]	ND		5.0	mg/L		06/27/24 15:32	07/01/24 17:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	134		46 - 159			06/27/24 15:32	07/01/24 17:07	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	69		10	mg/L			06/29/24 19:19	20

Eurofins Albuquerque

Client Sample Results

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Client Sample ID: MW-7 Deep

Lab Sample ID: 885-6908-14

Date Collected: 06/23/24 17:40

Matrix: Water

Date Received: 06/25/24 10:00

Method: SW846 8015D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		0.050	mg/L			07/04/24 14:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130				07/04/24 14:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			07/04/24 07:21	1
Ethylbenzene	ND		1.0	ug/L			07/04/24 07:21	1
Toluene	ND		1.0	ug/L			07/04/24 07:21	1
Xylenes, Total	ND		1.5	ug/L			07/04/24 07:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		70 - 130				07/04/24 07:21	1
Toluene-d8 (Surr)	97		70 - 130				07/04/24 07:21	1
4-Bromofluorobenzene (Surr)	97		70 - 130				07/04/24 07:21	1
Dibromofluoromethane (Surr)	104		70 - 130				07/04/24 07:21	1

Method: SW846 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0	mg/L		06/27/24 15:32	07/01/24 17:20	1
Motor Oil Range Organics [C28-C40]	ND		5.0	mg/L		06/27/24 15:32	07/01/24 17:20	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	123		46 - 159			06/27/24 15:32	07/01/24 17:20	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	73		10	mg/L			06/29/24 19:44	20

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Client Sample Results

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Client Sample ID: MW-7 Shallow Duplicate

Lab Sample ID: 885-6908-15

Date Collected: 06/23/24 16:15

Matrix: Water

Date Received: 06/25/24 10:00

Method: SW846 8015D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		0.050	mg/L			07/04/24 14:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130				07/04/24 14:38	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			07/04/24 07:49	1
Ethylbenzene	ND		1.0	ug/L			07/04/24 07:49	1
Toluene	ND		1.0	ug/L			07/04/24 07:49	1
Xylenes, Total	ND		1.5	ug/L			07/04/24 07:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		70 - 130				07/04/24 07:49	1
Toluene-d8 (Surr)	99		70 - 130				07/04/24 07:49	1
4-Bromofluorobenzene (Surr)	97		70 - 130				07/04/24 07:49	1
Dibromofluoromethane (Surr)	106		70 - 130				07/04/24 07:49	1

Method: SW846 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0	mg/L		06/27/24 15:32	07/01/24 17:33	1
Motor Oil Range Organics [C28-C40]	ND		5.0	mg/L		06/27/24 15:32	07/01/24 17:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	127		46 - 159			06/27/24 15:32	07/01/24 17:33	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	75		10	mg/L			06/29/24 20:09	20

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Client Sample Results

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Client Sample ID: Field Blank

Lab Sample ID: 885-6908-18

Date Collected: 06/23/24 18:15

Matrix: Water

Date Received: 06/25/24 10:00

Method: SW846 8015D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		0.050	mg/L			07/04/24 15:03	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130				07/04/24 15:03	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			07/04/24 08:18	1
Ethylbenzene	ND		1.0	ug/L			07/04/24 08:18	1
Toluene	ND		1.0	ug/L			07/04/24 08:18	1
Xylenes, Total	ND		1.5	ug/L			07/04/24 08:18	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		70 - 130				07/04/24 08:18	1
Toluene-d8 (Surr)	100		70 - 130				07/04/24 08:18	1
4-Bromofluorobenzene (Surr)	97		70 - 130				07/04/24 08:18	1
Dibromofluoromethane (Surr)	104		70 - 130				07/04/24 08:18	1

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QC Sample Results

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Method: 8015D - Nonhalogenated Organics using GC/MS -Modified (Gasoline Range Organics)

Lab Sample ID: MB 885-7932/3

Matrix: Water

Analysis Batch: 7932

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		0.050	mg/L			07/04/24 07:42	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130				07/04/24 07:42	1

Lab Sample ID: LCS 885-7932/2

Matrix: Water

Analysis Batch: 7932

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics [C6 - C10]	0.500	0.445		mg/L		89	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	106		70 - 130				

Lab Sample ID: 885-6908-1 MS

Matrix: Water

Analysis Batch: 7932

Client Sample ID: MW-9 Shallow

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics [C6 - C10]	ND		0.500	0.446		mg/L		89	49 - 136
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	109		70 - 130						

Lab Sample ID: 885-6908-1 MSD

Matrix: Water

Analysis Batch: 7932

Client Sample ID: MW-9 Shallow

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	ND		0.500	0.439		mg/L		88	49 - 136	1	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	107		70 - 130								

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

Lab Sample ID: MB 885-7872/30

Matrix: Water

Analysis Batch: 7872

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			07/04/24 02:35	1
Ethylbenzene	ND		1.0	ug/L			07/04/24 02:35	1
Toluene	ND		1.0	ug/L			07/04/24 02:35	1

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QC Sample Results

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

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

Lab Sample ID: MB 885-7872/30

Matrix: Water

Analysis Batch: 7872

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		1.5	ug/L			07/04/24 02:35	1
Surrogate	%Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		70 - 130				07/04/24 02:35	1
Toluene-d8 (Surr)	99		70 - 130				07/04/24 02:35	1
4-Bromofluorobenzene (Surr)	101		70 - 130				07/04/24 02:35	1
Dibromofluoromethane (Surr)	101		70 - 130				07/04/24 02:35	1

Lab Sample ID: MB 885-7872/4

Matrix: Water

Analysis Batch: 7872

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			07/03/24 13:12	1
Ethylbenzene	ND		1.0	ug/L			07/03/24 13:12	1
Toluene	ND		1.0	ug/L			07/03/24 13:12	1
Xylenes, Total	ND		1.5	ug/L			07/03/24 13:12	1
Surrogate	%Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)							07/03/24 13:12	1
Toluene-d8 (Surr)							07/03/24 13:12	1
4-Bromofluorobenzene (Surr)							07/03/24 13:12	1
Dibromofluoromethane (Surr)							07/03/24 13:12	1

Lab Sample ID: LCS 885-7872/29

Matrix: Water

Analysis Batch: 7872

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	20.1	22.4		ug/L		111	70 - 130
Toluene	20.2	22.2		ug/L		110	70 - 130
Surrogate	%Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	99		70 - 130				
Toluene-d8 (Surr)	98		70 - 130				
4-Bromofluorobenzene (Surr)	103		70 - 130				
Dibromofluoromethane (Surr)	99		70 - 130				

Lab Sample ID: LCS 885-7872/3

Matrix: Water

Analysis Batch: 7872

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	20.1	23.0		ug/L		114	70 - 130
Toluene	20.2	22.9		ug/L		114	70 - 130

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QC Sample Results

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

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

Lab Sample ID: LCS 885-7872/3

Matrix: Water

Analysis Batch: 7872

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		70 - 130
Toluene-d8 (Surr)	99		70 - 130
4-Bromofluorobenzene (Surr)	102		70 - 130
Dibromofluoromethane (Surr)	101		70 - 130

Method: 8015D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-7523/1-A

Matrix: Water

Analysis Batch: 7694

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 7523

	MB	MB							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil	Fac
Diesel Range Organics [C10-C28]	ND		1.0	mg/L		06/27/24 15:29	07/01/24 13:54	1	
Motor Oil Range Organics [C28-C40]	ND		5.0	mg/L		06/27/24 15:29	07/01/24 13:54	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil	Fac
Di-n-octyl phthalate (Surr)	133		46 - 159			06/27/24 15:29	07/01/24 13:54	1	

Lab Sample ID: LCS 885-7523/2-A

Matrix: Water

Analysis Batch: 7694

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7523

		Spike	LCS	LCS					%Rec
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	
Diesel Range Organics [C10-C28]		2.50	2.75		mg/L		110	57 - 147	
Surrogate	LCS	LCS							
Di-n-octyl phthalate (Surr)	%Recovery	Qualifier	Limits						
	120		46 - 159						

Lab Sample ID: 885-6908-15 MS

Matrix: Water

Analysis Batch: 7694

Client Sample ID: MW-7 Shallow Duplicate

Prep Type: Total/NA

Prep Batch: 7523

	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Diesel Range Organics [C10-C28]	ND		2.50	2.76		mg/L		110	33 - 161
Surrogate	MS	MS							
Di-n-octyl phthalate (Surr)	%Recovery	Qualifier	Limits						
	117		46 - 159						

Lab Sample ID: 885-6908-15 MSD

Matrix: Water

Analysis Batch: 7694

Client Sample ID: MW-7 Shallow Duplicate

Prep Type: Total/NA

Prep Batch: 7523

	Sample	Sample	Spike	MSD	MSD				%Rec	RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	Limit
Diesel Range Organics [C10-C28]	ND		2.50	2.57		mg/L		103	33 - 161	7 20

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QC Sample Results

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Method: 8015D - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 885-6908-15 MSD

Matrix: Water

Analysis Batch: 7694

Client Sample ID: MW-7 Shallow Duplicate

Prep Type: Total/NA

Prep Batch: 7523

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
Di-n-octyl phthalate (Surr)	123		46 - 159

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-7768/4

Matrix: Water

Analysis Batch: 7768

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	mg/L			06/29/24 11:05	1

Lab Sample ID: LCS 885-7768/5

Matrix: Water

Analysis Batch: 7768

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	5.00	4.64		mg/L		93	90 - 110

Lab Sample ID: MRL 885-7768/3

Matrix: Water

Analysis Batch: 7768

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	0.500	0.543		mg/L		109	50 - 150

Lab Sample ID: MB 885-7923/4

Matrix: Water

Analysis Batch: 7923

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	mg/L			07/03/24 10:35	1

Lab Sample ID: LCS 885-7923/5

Matrix: Water

Analysis Batch: 7923

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	5.00	4.93		mg/L		99	90 - 110

Lab Sample ID: MRL 885-7923/3

Matrix: Water

Analysis Batch: 7923

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	0.500	0.555		mg/L		111	50 - 150

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QC Sample Results

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 885-8058/4

Matrix: Water

Analysis Batch: 8058

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	mg/L			07/08/24 08:45	1

Lab Sample ID: LCS 885-8058/5

Matrix: Water

Analysis Batch: 8058

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	5.00	4.70		mg/L		94	90 - 110

Lab Sample ID: MRL 885-8058/3

Matrix: Water

Analysis Batch: 8058

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	0.500	0.547		mg/L		109	50 - 150

QC Association Summary

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

GC/MS VOA

Analysis Batch: 7872

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6908-1	MW-9 Shallow	Total/NA	Water	8260B	
885-6908-2	MW-9 Middle	Total/NA	Water	8260B	
885-6908-3	MW-9 Deep	Total/NA	Water	8260B	
885-6908-4	MW-1	Total/NA	Water	8260B	
885-6908-5	MW-5	Total/NA	Water	8260B	
885-6908-6	MW-6	Total/NA	Water	8260B	
885-6908-7	MW-4	Total/NA	Water	8260B	
885-6908-8	MW-2	Total/NA	Water	8260B	
885-6908-9	MW-3	Total/NA	Water	8260B	
885-6908-10	MW-8 Shallow	Total/NA	Water	8260B	
885-6908-11	MW-8 Middle	Total/NA	Water	8260B	
885-6908-12	MW-8 Deep	Total/NA	Water	8260B	
885-6908-13	MW-7 Shallow	Total/NA	Water	8260B	
885-6908-14	MW-7 Deep	Total/NA	Water	8260B	
885-6908-15	MW-7 Shallow Duplicate	Total/NA	Water	8260B	
885-6908-18	Field Blank	Total/NA	Water	8260B	
MB 885-7872/30	Method Blank	Total/NA	Water	8260B	
MB 885-7872/4	Method Blank	Total/NA	Water	8260B	
LCS 885-7872/29	Lab Control Sample	Total/NA	Water	8260B	
LCS 885-7872/3	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 7932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6908-1	MW-9 Shallow	Total/NA	Water	8015D	
885-6908-2	MW-9 Middle	Total/NA	Water	8015D	
885-6908-3	MW-9 Deep	Total/NA	Water	8015D	
885-6908-4	MW-1	Total/NA	Water	8015D	
885-6908-5	MW-5	Total/NA	Water	8015D	
885-6908-6	MW-6	Total/NA	Water	8015D	
885-6908-7	MW-4	Total/NA	Water	8015D	
885-6908-8	MW-2	Total/NA	Water	8015D	
885-6908-9	MW-3	Total/NA	Water	8015D	
885-6908-10	MW-8 Shallow	Total/NA	Water	8015D	
885-6908-11	MW-8 Middle	Total/NA	Water	8015D	
885-6908-12	MW-8 Deep	Total/NA	Water	8015D	
885-6908-13	MW-7 Shallow	Total/NA	Water	8015D	
885-6908-14	MW-7 Deep	Total/NA	Water	8015D	
885-6908-15	MW-7 Shallow Duplicate	Total/NA	Water	8015D	
885-6908-18	Field Blank	Total/NA	Water	8015D	
MB 885-7932/3	Method Blank	Total/NA	Water	8015D	
LCS 885-7932/2	Lab Control Sample	Total/NA	Water	8015D	
885-6908-1 MS	MW-9 Shallow	Total/NA	Water	8015D	
885-6908-1 MSD	MW-9 Shallow	Total/NA	Water	8015D	

GC Semi VOA

Prep Batch: 7523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6908-1	MW-9 Shallow	Total/NA	Water	3511	
885-6908-2	MW-9 Middle	Total/NA	Water	3511	
885-6908-3	MW-9 Deep	Total/NA	Water	3511	

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QC Association Summary

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

GC Semi VOA (Continued)

Prep Batch: 7523 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6908-4	MW-1	Total/NA	Water	3511	
885-6908-5	MW-5	Total/NA	Water	3511	
885-6908-6	MW-6	Total/NA	Water	3511	
885-6908-7	MW-4	Total/NA	Water	3511	
885-6908-8	MW-2	Total/NA	Water	3511	
885-6908-9	MW-3	Total/NA	Water	3511	
885-6908-10	MW-8 Shallow	Total/NA	Water	3511	
885-6908-11	MW-8 Middle	Total/NA	Water	3511	
885-6908-12	MW-8 Deep	Total/NA	Water	3511	
885-6908-13	MW-7 Shallow	Total/NA	Water	3511	
885-6908-14	MW-7 Deep	Total/NA	Water	3511	
885-6908-15	MW-7 Shallow Duplicate	Total/NA	Water	3511	
MB 885-7523/1-A	Method Blank	Total/NA	Water	3511	
LCS 885-7523/2-A	Lab Control Sample	Total/NA	Water	3511	
885-6908-15 MS	MW-7 Shallow Duplicate	Total/NA	Water	3511	
885-6908-15 MSD	MW-7 Shallow Duplicate	Total/NA	Water	3511	

Analysis Batch: 7694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6908-1	MW-9 Shallow	Total/NA	Water	8015D	7523
885-6908-2	MW-9 Middle	Total/NA	Water	8015D	7523
885-6908-3	MW-9 Deep	Total/NA	Water	8015D	7523
885-6908-4	MW-1	Total/NA	Water	8015D	7523
885-6908-5	MW-5	Total/NA	Water	8015D	7523
885-6908-6	MW-6	Total/NA	Water	8015D	7523
885-6908-7	MW-4	Total/NA	Water	8015D	7523
885-6908-8	MW-2	Total/NA	Water	8015D	7523
885-6908-9	MW-3	Total/NA	Water	8015D	7523
885-6908-10	MW-8 Shallow	Total/NA	Water	8015D	7523
885-6908-11	MW-8 Middle	Total/NA	Water	8015D	7523
885-6908-12	MW-8 Deep	Total/NA	Water	8015D	7523
885-6908-13	MW-7 Shallow	Total/NA	Water	8015D	7523
885-6908-14	MW-7 Deep	Total/NA	Water	8015D	7523
885-6908-15	MW-7 Shallow Duplicate	Total/NA	Water	8015D	7523
MB 885-7523/1-A	Method Blank	Total/NA	Water	8015D	7523
LCS 885-7523/2-A	Lab Control Sample	Total/NA	Water	8015D	7523
885-6908-15 MS	MW-7 Shallow Duplicate	Total/NA	Water	8015D	7523
885-6908-15 MSD	MW-7 Shallow Duplicate	Total/NA	Water	8015D	7523

HPLC/IC

Analysis Batch: 7768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6908-1	MW-9 Shallow	Total/NA	Water	300.0	
885-6908-2	MW-9 Middle	Total/NA	Water	300.0	
885-6908-3	MW-9 Deep	Total/NA	Water	300.0	
885-6908-4	MW-1	Total/NA	Water	300.0	
885-6908-5	MW-5	Total/NA	Water	300.0	
885-6908-7	MW-4	Total/NA	Water	300.0	
885-6908-9	MW-3	Total/NA	Water	300.0	
885-6908-10	MW-8 Shallow	Total/NA	Water	300.0	

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QC Association Summary

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

HPLC/IC (Continued)

Analysis Batch: 7768 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6908-11	MW-8 Middle	Total/NA	Water	300.0	
885-6908-12	MW-8 Deep	Total/NA	Water	300.0	
885-6908-13	MW-7 Shallow	Total/NA	Water	300.0	
885-6908-14	MW-7 Deep	Total/NA	Water	300.0	
885-6908-15	MW-7 Shallow Duplicate	Total/NA	Water	300.0	
MB 885-7768/4	Method Blank	Total/NA	Water	300.0	
LCS 885-7768/5	Lab Control Sample	Total/NA	Water	300.0	
MRL 885-7768/3	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 7923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6908-6	MW-6	Total/NA	Water	300.0	
MB 885-7923/4	Method Blank	Total/NA	Water	300.0	
LCS 885-7923/5	Lab Control Sample	Total/NA	Water	300.0	
MRL 885-7923/3	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 8058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-6908-8	MW-2	Total/NA	Water	300.0	
MB 885-8058/4	Method Blank	Total/NA	Water	300.0	
LCS 885-8058/5	Lab Control Sample	Total/NA	Water	300.0	
MRL 885-8058/3	Lab Control Sample	Total/NA	Water	300.0	

Lab Chronicle

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Client Sample ID: MW-9 Shallow

Lab Sample ID: 885-6908-1

Date Collected: 06/20/24 10:40

Matrix: Water

Date Received: 06/25/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	7932	CM	EET ALB	07/04/24 08:06
Total/NA	Analysis	8260B		1	7872	JR	EET ALB	07/03/24 20:23
Total/NA	Prep	3511			7523	DH	EET ALB	06/27/24 15:29
Total/NA	Analysis	8015D		1	7694	DH	EET ALB	07/01/24 14:19
Total/NA	Analysis	300.0		20	7768	JT	EET ALB	06/29/24 12:19

Client Sample ID: MW-9 Middle

Lab Sample ID: 885-6908-2

Date Collected: 06/20/24 12:00

Matrix: Water

Date Received: 06/25/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	7932	CM	EET ALB	07/04/24 09:19
Total/NA	Analysis	8260B		1	7872	JR	EET ALB	07/03/24 20:52
Total/NA	Prep	3511			7523	DH	EET ALB	06/27/24 15:29
Total/NA	Analysis	8015D		1	7694	DH	EET ALB	07/01/24 14:31
Total/NA	Analysis	300.0		20	7768	JT	EET ALB	06/29/24 12:44

Client Sample ID: MW-9 Deep

Lab Sample ID: 885-6908-3

Date Collected: 06/20/24 13:00

Matrix: Water

Date Received: 06/25/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	7932	CM	EET ALB	07/04/24 09:44
Total/NA	Analysis	8260B		1	7872	JR	EET ALB	07/03/24 21:21
Total/NA	Prep	3511			7523	DH	EET ALB	06/27/24 15:29
Total/NA	Analysis	8015D		1	7694	DH	EET ALB	07/01/24 14:44
Total/NA	Analysis	300.0		20	7768	JT	EET ALB	06/29/24 13:33

Client Sample ID: MW-1

Lab Sample ID: 885-6908-4

Date Collected: 06/20/24 14:00

Matrix: Water

Date Received: 06/25/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	7932	CM	EET ALB	07/04/24 10:08
Total/NA	Analysis	8260B		1	7872	JR	EET ALB	07/03/24 21:49
Total/NA	Prep	3511			7523	DH	EET ALB	06/27/24 15:29
Total/NA	Analysis	8015D		1	7694	DH	EET ALB	07/01/24 14:56
Total/NA	Analysis	300.0		20	7768	JT	EET ALB	06/29/24 14:23

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Lab Chronicle

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Client Sample ID: MW-5

Date Collected: 06/20/24 14:42

Date Received: 06/25/24 10:00

Lab Sample ID: 885-6908-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	7932	CM	EET ALB	07/04/24 10:32
Total/NA	Analysis	8260B		1	7872	JR	EET ALB	07/04/24 03:04
Total/NA	Prep	3511			7523	DH	EET ALB	06/27/24 15:29
Total/NA	Analysis	8015D		1	7694	DH	EET ALB	07/01/24 15:09
Total/NA	Analysis	300.0		20	7768	JT	EET ALB	06/29/24 14:47

Client Sample ID: MW-6

Date Collected: 06/20/24 15:35

Date Received: 06/25/24 10:00

Lab Sample ID: 885-6908-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	7932	CM	EET ALB	07/04/24 10:57
Total/NA	Analysis	8260B		1	7872	JR	EET ALB	07/04/24 03:32
Total/NA	Prep	3511			7523	DH	EET ALB	06/27/24 15:29
Total/NA	Analysis	8015D		1	7694	DH	EET ALB	07/01/24 15:21
Total/NA	Analysis	300.0		100	7923	JT	EET ALB	07/03/24 13:17

Client Sample ID: MW-4

Date Collected: 06/23/24 09:45

Date Received: 06/25/24 10:00

Lab Sample ID: 885-6908-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	7932	CM	EET ALB	07/04/24 11:22
Total/NA	Analysis	8260B		1	7872	JR	EET ALB	07/04/24 04:01
Total/NA	Prep	3511			7523	DH	EET ALB	06/27/24 15:29
Total/NA	Analysis	8015D		1	7694	DH	EET ALB	07/01/24 15:34
Total/NA	Analysis	300.0		20	7768	JT	EET ALB	06/29/24 16:26

Client Sample ID: MW-2

Date Collected: 06/23/24 10:40

Date Received: 06/25/24 10:00

Lab Sample ID: 885-6908-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	7932	CM	EET ALB	07/04/24 11:46
Total/NA	Analysis	8260B		1	7872	JR	EET ALB	07/04/24 04:29
Total/NA	Prep	3511			7523	DH	EET ALB	06/27/24 15:29
Total/NA	Analysis	8015D		1	7694	DH	EET ALB	07/01/24 16:01
Total/NA	Analysis	300.0		100	8058	RC	EET ALB	07/08/24 09:55

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Lab Chronicle

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Client Sample ID: MW-3

Date Collected: 06/23/24 11:30

Date Received: 06/25/24 10:00

Lab Sample ID: 885-6908-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	7932	CM	EET ALB	07/04/24 12:11
Total/NA	Analysis	8260B		1	7872	JR	EET ALB	07/04/24 04:58
Total/NA	Prep	3511			7523	DH	EET ALB	06/27/24 15:32
Total/NA	Analysis	8015D		1	7694	DH	EET ALB	07/01/24 16:14
Total/NA	Analysis	300.0		20	7768	JT	EET ALB	06/29/24 17:16

Client Sample ID: MW-8 Shallow

Date Collected: 06/23/24 12:40

Date Received: 06/25/24 10:00

Lab Sample ID: 885-6908-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	7932	CM	EET ALB	07/04/24 12:35
Total/NA	Analysis	8260B		1	7872	JR	EET ALB	07/04/24 05:27
Total/NA	Prep	3511			7523	DH	EET ALB	06/27/24 15:32
Total/NA	Analysis	8015D		1	7694	DH	EET ALB	07/01/24 16:27
Total/NA	Analysis	300.0		20	7768	JT	EET ALB	06/29/24 17:40

Client Sample ID: MW-8 Middle

Date Collected: 06/23/24 13:45

Date Received: 06/25/24 10:00

Lab Sample ID: 885-6908-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	7932	CM	EET ALB	07/04/24 13:00
Total/NA	Analysis	8260B		1	7872	JR	EET ALB	07/04/24 05:55
Total/NA	Prep	3511			7523	DH	EET ALB	06/27/24 15:32
Total/NA	Analysis	8015D		1	7694	DH	EET ALB	07/01/24 16:40
Total/NA	Analysis	300.0		20	7768	JT	EET ALB	06/29/24 18:30

Client Sample ID: MW-8 Deep

Date Collected: 06/23/24 15:05

Date Received: 06/25/24 10:00

Lab Sample ID: 885-6908-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	7932	CM	EET ALB	07/04/24 13:24
Total/NA	Analysis	8260B		1	7872	JR	EET ALB	07/04/24 06:24
Total/NA	Prep	3511			7523	DH	EET ALB	06/27/24 15:32
Total/NA	Analysis	8015D		1	7694	DH	EET ALB	07/01/24 16:54
Total/NA	Analysis	300.0		20	7768	JT	EET ALB	06/29/24 18:54

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Lab Chronicle

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Client Sample ID: MW-7 Shallow

Lab Sample ID: 885-6908-13

Date Collected: 06/23/24 16:15

Matrix: Water

Date Received: 06/25/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	7932	CM	EET ALB	07/04/24 13:49
Total/NA	Analysis	8260B		1	7872	JR	EET ALB	07/04/24 06:52
Total/NA	Prep	3511			7523	DH	EET ALB	06/27/24 15:32
Total/NA	Analysis	8015D		1	7694	DH	EET ALB	07/01/24 17:07
Total/NA	Analysis	300.0		20	7768	JT	EET ALB	06/29/24 19:19

Client Sample ID: MW-7 Deep

Lab Sample ID: 885-6908-14

Date Collected: 06/23/24 17:40

Matrix: Water

Date Received: 06/25/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	7932	CM	EET ALB	07/04/24 14:14
Total/NA	Analysis	8260B		1	7872	JR	EET ALB	07/04/24 07:21
Total/NA	Prep	3511			7523	DH	EET ALB	06/27/24 15:32
Total/NA	Analysis	8015D		1	7694	DH	EET ALB	07/01/24 17:20
Total/NA	Analysis	300.0		20	7768	JT	EET ALB	06/29/24 19:44

Client Sample ID: MW-7 Shallow Duplicate

Lab Sample ID: 885-6908-15

Date Collected: 06/23/24 16:15

Matrix: Water

Date Received: 06/25/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	7932	CM	EET ALB	07/04/24 14:38
Total/NA	Analysis	8260B		1	7872	JR	EET ALB	07/04/24 07:49
Total/NA	Prep	3511			7523	DH	EET ALB	06/27/24 15:32
Total/NA	Analysis	8015D		1	7694	DH	EET ALB	07/01/24 17:33
Total/NA	Analysis	300.0		20	7768	JT	EET ALB	06/29/24 20:09

Client Sample ID: Field Blank

Lab Sample ID: 885-6908-18

Date Collected: 06/23/24 18:15

Matrix: Water

Date Received: 06/25/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	7932	CM	EET ALB	07/04/24 15:03
Total/NA	Analysis	8260B		1	7872	JR	EET ALB	07/04/24 08:18

Laboratory References:

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

Eurofins Albuquerque

Accreditation/Certification Summary

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Diamond Back Energy

Job ID: 885-6908-1
SDG: Energy WLSU #8

Laboratory: Eurofins Albuquerque

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-26-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
300.0		Water	Chloride
8015D		Water	Gasoline Range Organics [C6 - C10]
8015D	3511	Water	Diesel Range Organics [C10-C28]
8015D	3511	Water	Motor Oil Range Organics [C28-C40]
8260B		Water	Benzene
8260B		Water	Ethylbenzene
8260B		Water	Toluene
8260B		Water	Xylenes, Total
Oregon	NELAP	NM100001	02-26-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
8015D		Water	Gasoline Range Organics [C6 - C10]

Chain-of-Custody Record

Client: Daniel B. Stephens & Associates, Inc.
 (a geologic Co) ATTN: JOHN AYRBE
 Mailing Address: 10020 Academy NE, Suite 100
Albuquerque, NM 87109
 Phone #: 505.822.9400
 email or Fax#: JAYRBE@geo-logic.com
 QA/QC Package: Jayrbe
☒ Standard ☐ Level 4 (Full Validation)
 Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other _____
☐ EDD (Type) _____

Turn-Around Time:

☒ Standard ☐ RushProject Name: Diamond Back Energy
Emergen WLSU #8Project #: DB 22, 1348
EW Monitoring 2024

Project Manager:

JOHN AYRBE, PGSampler: CM BARNHILL, PKOn Ice: ☒ Yes ☐ No# of Coolers: 2 4.4±0=4.4°CCooler Temp (including CF): 3.9±0=3.9 (°C)

Container Type and #

Preservative Type

HEAL No. Y001

Date	Time	Matrix	Sample Name
06/20/24	10:40	H ₂ O	MW-9 shallow
06/20/24	12:00	H ₂ O	MW-9 middle
06/20/24	1300	H ₂ O	MW-9 deep
06/20/24	1400	H ₂ O	MW-6 MW-1
06/20/24	14:42	H ₂ O	MW-5
06/20/24	15:35	H ₂ O	MW-6
06/23/24	0945	H ₂ O	MW-4
06/23/24	10:40	H ₂ O	MW-2
06/23/24	11:30	H ₂ O	MW-3
06/23/24	12:40	H ₂ O	MW-8 shallow
06/23/24	13:45	H ₂ O	MW-8 middle
06/23/24	15:05	H ₂ O	MW-8 Deep

5X40 ML VOA'S

HCL

1

1X170ML HOPE

None

2

1X125ML AMBER/B

None

3

4

5

6

7

8

9

10

11

12

Received by:

Via:

Date:

Time:

SCMups6/25/241000

Received by:

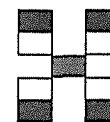
Via:

Date:

Time:

Remarks:

Any Questions? Please
Call CMBC
575.626.1615



HALL ENVIROI

ANALYSIS LAB

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM

Tel. 505-345-3975 Fax 505-345-4107



885-6908 COC

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015(CRO/PRO/PRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, P, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	BTEX 8260
X	X				X	X			X	X
X	X				X	X			X	X
X	X				X	X			X	X
X	X				X	X			X	X
X	X				X	X			X	X
X	X				X	X			X	X
X	X				X	X			X	X
X	X				X	X			X	X
X	X				X	X			X	X
X	X				X	X			X	X
X	X				X	X			X	X

Age Group	Number of People
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11

Login Sample Receipt Checklist

Client: Daniel B. Stephens & Associates Inc.

Job Number: 885-6908-1

SDG Number: Energy WLSU #8

Login Number: 6908**List Number: 1****Creator: McQuiston, Steven****List Source: Eurofins Albuquerque**

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.	N/A	
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	

Appendix F

Historical Data

Historical Water Quality Data

Well ID	Chloride Concentration (ppm)											
	2002 Q4	2009 Q1	2009 Q4	2009 Q3	2010 Q2	2010 Q1	2012 Q4	2015 Q4	2016 Q4	2016 Q3	2016 Q2	2016 Q1
MW-1	-	-	-	-	-	-	27	27.6	27.7	29.8	19.5	24.5
MW-2	-	-	-	-	-	-	130	821	869	1450	674	493
MW-3	-	-	-	-	-	-	28	28.5	28	29.7	21.4	24.6
MW-4	-	-	-	-	-	-	390	193	227	255	123	136
MW-5	-	-	-	-	-	-	23	25.1	28.2	26.9	20.2	24
MW-6	-	-	-	-	-	-	-	544	1420	1410	1570	1360
MW-7D	-	-	-	-	-	-	-	-	-	-	-	-
MW-7S	-	-	-	-	-	-	-	-	-	-	-	-
MW-8D	-	-	-	-	-	-	-	-	-	-	-	-
MW-8M	-	-	-	-	-	-	-	-	-	-	-	-
MW-8S	-	-	-	-	-	-	-	-	-	-	-	-
MW-9D	-	-	-	-	-	-	-	-	-	-	-	-
MW-9M	-	-	-	-	-	-	-	-	-	-	-	-
MW-9S	-	-	-	-	-	-	-	-	-	-	-	-
Pond Water Well	-	-	-	-	-	-	-	-	-	-	-	-
WLSU #11 windmill	-	31	-	-	-	-	-	-	-	-	-	-
WLSU #20 water well	-	26	-	-	-	-	-	-	-	-	-	-
WLSU #8 water well	99	298	2485	4331	440	1101	-	-	-	-	-	-
WLSU #8 Windmill	-	-	-	-	-	-	-	-	-	-	-	-
Battery A water Well	-	28	-	-	-	-	-	-	-	-	-	-
House Water Well	-	-	-	-	-	-	-	-	-	-	-	-

Historical Water Quality Data

Well ID	Chloride Concentration (ppm)										
	2017 Q4	2017 Q3	2017 Q2	2017 Q1	2018 Q4	2018 Q3	2018 Q2	2018 Q1	2022 Q1	2023 Q2	2024 Q2
MW-1	30.5	28.8	26.4	26.7	26.4	29.1	28.2	29.6	26	28	28
MW-2	836	526	2500	980	1240	1500	1260	1320	1200	1400	1300
MW-3	29.7	27.1	26.9	27.4	26.5	27	27.3	-	25	26	27
MW-4	217	187	153	154	187	181	180	-	230	300	140
MW-5	29.1	40.8	25.6	26.2	25.9	25.7	26.6	-	25	26	28
MW-6	1220	1070	2570	1370	983	1120	1200	1250	1000	1000	980
MW-7D	-	-	-	-	-	-	-	-	34	52	73
MW-7S	-	-	-	-	-	-	-	-	38	56	69
MW-8D	-	-	-	-	-	-	-	-	40	30	29
MW-8M	-	-	-	-	-	-	-	-	46	24	24
MW-8S	-	-	-	-	-	-	-	-	20	24	23
MW-9D	-	-	-	-	-	-	-	-	29	34	35
MW-9M	-	-	-	-	-	-	-	-	46	33	33
MW-9S	-	-	-	-	-	-	-	-	27	27	29
Pond Water Well	-	-	-	-	-	-	-	-	32	30	-
WLSU #11 windmill	-	-	-	-	-	-	-	-	-	23	-
WLSU #20 water well	-	-	-	-	-	-	-	-	-	-	-
WLSU #8 water well	-	-	-	-	-	-	-	-	-	-	-
WLSU #8 Windmill	-	-	-	-	-	-	-	-	24	-	-
Battery A water Well	-	-	-	-	-	-	-	-	-	-	-
House Water Well	-	-	-	-	-	-	-	-	32	38	-

Historical Water Level Elevation Data

Well ID	Water Level Elevation (feet msl)											
	2012 Q4	2016 Q1	2016 Q2	2016 Q3	2016 Q4	2017 Q1	2017 Q2	2017 Q3	2017 Q4	2021 Q3	2022 1Q	2024 2Q
MW-1	3,922.16	3,919.17	3,919.15	3,919.16	3,919.05	3,919.10	3,919.04	3,919.05	3,919.16	-	3,918.44	3,918.07
MW-2	3,917.72	3,917.22	3,917.22	3,917.22	3,917.42	3,917.17	3,917.39	3,917.42	3,917.39	-	3,916.57	3,916.15
MW-3	3,920.93	3,917.54	3,917.54	3,917.53	3,917.43	3,917.48	3,917.38	3,917.43	3,917.53	-	3,916.91	3,916.52
MW-4	3,919.79	3,917.13	3,917.13	3,917.13	3,917.00	3,917.08	3,916.99	3,917.00	3,916.99	-	3,916.57	3,916.19
MW-5	3,919.29	3,918.83	3,918.83	3,918.83	3,918.83	3,918.77	3,918.70	3,918.83	3,918.70	-	3,918.30	3,917.93
MW-6	-	3,917.56	3,917.52	3,917.54	3,917.45	3,917.52	3,917.40	3,917.45	3,917.54	-	3,916.99	3,917.07
MW-7S	-	-	-	-	-	-	-	-	-	3,914.60	3,914.70	3,914.33
MW-7M	-	-	-	-	-	-	-	-	-	3,914.73	3,914.73	-
MW-7D	-	-	-	-	-	-	-	-	-	3,914.61	3,914.81	3,915.41
MW-8S	-	-	-	-	-	-	-	-	-	3,915.27	3,915.26	3,914.92
MW-8M	-	-	-	-	-	-	-	-	-	3,915.10	3,915.30	3,914.95
MW-8D	-	-	-	-	-	-	-	-	-	3,915.09	3,915.29	3,914.89
MW-9S	-	-	-	-	-	-	-	-	-	3,919.12	3,919.08	3,918.72
MW-9M	-	-	-	-	-	-	-	-	-	3,919.15	3,919.08	3,918.70
MW-9D	-	-	-	-	-	-	-	-	-	3,919.69	3,918.97	3,918.72

Site Characterization Report

WLSU #8

OCD Case No. 1RP-2457

Lea County, New Mexico

Prepared for
Energen Resources Corporation
Midland, Texas

Prepared by



6020 Academy NE, Suite 100
Albuquerque, New Mexico 87109
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DB22.1348

May 30, 2023



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Site Characterization Report
Energen WLSU #8

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1. Introduction

Daniel B. Stephens & Associates, Inc. (DBS&A) prepared this site characterization report on behalf of Energen Resources Corporation (Energen) regarding New Mexico Energy, Minerals and Natural Resources Department (NMEMNRD) Oil Conservation Division (OCD) case number 1RP-2457—a chloride release at West Lovington Strawn Unit (WLSU) #8 in Lea County, New Mexico (the site). Energen, the former unit operator, identified the release in 2009.

This report details investigative actions undertaken by Energen since the incident's discovery, and provides a characterization of the site. The investigative actions demonstrate that the extent of chloride impacts to groundwater is limited to the area immediately east of WLSU #8. Water quality data show that chloride concentrations at the site's monitor wells are stable.

Section 2 provides a physical description of the site, and summarizes its operational and investigative histories. Section 3 describes the installation of three monitor well nests in 2021, which were added to the site's existing monitor well network to further define the lateral and vertical extents of impacts to groundwater. Section 4 describes groundwater monitoring activities conducted at the site subsequent to the installation of the additional monitor well nests. Section 5 discusses groundwater conditions at and downgradient of the site based on both historical and recent monitoring data. It also presents the results of contaminant transport modeling. Concluding remarks are provided in Section 6.

2. Background

The following subsections describe the physical layout of the site and summarize its operational and groundwater investigative histories.

2.1 Physical Description

The site is located in Section 34, Township 15 South, Range 35 East in OCD unit letter 'L,' approximately 2.5 miles northwest of the city of Lovington, New Mexico. The site is situated on an approximately 2.4-acre footprint. The WLSU #8-R injection well is located near the center of the site (Figure 1). A battery of seven aboveground storage tanks (ASTs) is situated on the eastern edge of the site. A network of aboveground pipe spans the site's perimeter, including permanent pipelines and flexible temporary tubing.



Site Characterization Report Energen WLSU #8

The WLSU #8 water well was located north of the tank battery near the northeast corner of the site (Figure 1). It was plugged and abandoned in 2015.

The site is constructed on Ogallala Formation, which is locally about 190 feet thick and predominantly composed of well-sorted, poorly to well-consolidated fine sand. A surficial layer of caliche is present throughout the site. It is 1.8 feet to more than 7.5 feet thick. The Ogallala Formation comprises the primary regional aquifer system in the area. It can be locally characterized as an unconfined aquifer with approximately 130 feet of saturated thickness based on site data. The water table is approximately 60 feet below ground surface (bgs). The Ogallala Formation locally overlies the Triassic Dockum Group, which behaves as an effective confining layer.

2.2 Operational History

The WLSU #8 well (formerly known as the Snyder F Com well) was initially drilled as a production well in 1994 (NMOCD, 1994). It was drilled to a depth of 11,872 feet bgs and into the Strawn Formation. The well is triple cased and cemented to the surface, including 391 feet of 13.375-inch surface casing set in Class 3 cement.

In 2001, Energen became the unit operator of the West Lovington Strawn Unit and continued production of the WLSU #8 well. In 2006, the WLSU #8 well was sidetracked and recompleted from approximately 4,800 to 11,887 feet bgs due to downhole problems (NMOCD, 2006a). A pit was constructed at the northeast corner of the site immediately north of the former WLSU #8 water well location to support drilling operations. OCD approved the pit's closure on October 10, 2006 (NMOCD, 2006b). Energen ceased production at the site in 2008 and converted the WLSU #8 production well into an injection well for enhanced oil recovery. Injection operations commenced in January 2010, at which point the well was redesignated as WLSU #8-R.

The WLSU #8 water well is believed to have been drilled in 1995 by an unknown driller (Terracon, 2016). Although a drilling application for the water well was submitted and approved by the Office of the State Engineer (OSE), the well was never registered (GST, 2013). The water well was plugged and abandoned in 2015.

2.3 Release Discovery and Response

In March 2009, Energen collected water quality samples from existing water wells in the WLSU #8 vicinity, as required by OCD before they could commence injection at WLSU #8-R.

Site Characterization Report
Energen WLSU #8

These wells included the Battery "A" water well, the WLSU #11 windmill, the WLSU #20 water well, and the WLSU #8 water well. Concentrations of all analytes sampled for were below the New Mexico Water Quality Control Commission (NMWQCC) standards numerated in Section 3103 of 20.6.2 NMAC (Section 3103 standards), with the exception of chloride concentration at the WLSU #8 water well. The chloride concentration at this well was 298 milligrams per liter (mg/L), just above the standard of 250 mg/L.

Energen submitted a release notification and corrective action form (C-141) to OCD on October 26, 2009 that outlined the discovery of the elevated chloride concentration at the WLSU #8 water well and requested permission to investigate the release (Appendix A). On December 22, 2009, Energen performed a pumping test at the WLSU #8 water well with permission from OCD (per Case No. 14356, Order No. R10448-E) and the Roswell District Office of the OSE. During the initial 10 days of pumping, 15,464 barrels of water was extracted, and the chloride concentration decreased from 3,692 to 1,420 mg/L, as documented in a January 11, 2010 e-mail from Andy Cobb to Larry Johnson (NMEMNRD) (Energen, 2010).

In 2012, Energen had five monitor wells installed at the site (MW-1 through MW-5) (Figure 1). Well logs are provided in Appendix B. Soil samples were collected from the boreholes for the monitor wells, and water quality samples were collected from the monitor wells after their construction (GST, 2013). The samples were submitted to Hall Environmental Analysis Laboratory, Inc. (HEAL) in Albuquerque, New Mexico. The soil and water quality samples were analyzed for chloride and hydrocarbon concentrations (volatile organic compounds [VOCs] and polycyclic aromatic hydrocarbons [PAHs]). The water quality samples were also analyzed for major ion and metal concentrations. The maximum soil chloride concentration was 63 milligrams per kilogram (mg/kg), recorded at MW-4 at 0 to 2 feet bgs. This concentration is well below the closure criteria of 10,000 mg/kg for soils where depth to groundwater is 51 to 100 feet bgs, as specified in 19.15.29.12 NMAC. With the exception of MW-2 and MW-4, water quality samples collected from the monitor wells were at background levels (less than 50 mg/L), and meet the Section 3103 standard for chloride. Chloride concentrations at MW-2 and MW-4 were 130 and 390 mg/L, respectively (Figure 2). Chloride was the only analyte detected at a concentration above a Section 3103 standard. GeoScience Technologies (GST, 2013) submitted a monitor well completion and initial site characterization report to OCD on May 29, 2013 documenting the monitor well installations.

On September 24, 2015, the WLSU #8 water well was plugged and abandoned, and MW-6 was installed approximately 10 feet east of the water well's former location. These activities were



Site Characterization Report Energen WLSU #8

conducted in accordance with a proposal submitted to and approved by OCD (Terracon, 2015). The well log for MW-6 is provided in Appendix B. Soil samples were collected during the drilling of the borehole for MW-6 and were submitted to XENCO Laboratories, Inc. in Midland, Texas for analysis. The maximum soil chloride concentration was 14.5 mg/kg, measured at a depth of 5 feet bgs. Terracon (2017) documented the activities and laboratory analytical results in a report submitted to OCD on March 29, 2017. The report also provided results of 2016 quarterly groundwater monitoring. A similar monitoring report documenting quarterly 2017 quarterly groundwater monitoring was submitted to OCD on March 27, 2018 (Terracon, 2018). Water quality at MW-2 and MW-6 continually exceeded the Section 3103 standard for chloride between 2015 and 2018, while the water quality results at MW-4 exceeded it only once (Figure 2).

In September 2021, Energen had nested monitor wells MW-7, MW-8, and MW-9 installed upgradient and downgradient (Figure 1) of the site to further define the lateral and vertical extents of chloride impacts to groundwater. CMB Environmental and Geological Services, Inc. (CMB) provided oversight of the drilling and construction activities. Installation of these wells is documented in Section 3.

3. September 2021 Nested Monitor Well Installations

In September 2021, three monitor well nests (MW-7, MW-8, and MW-9) were installed to supplement the existing WLSU #8 monitor well network and further characterize groundwater conditions. The monitor well nests were sited and constructed in accordance with a work plan that was submitted to OCD (Price, 2021).

Cascade Drilling of Peralta, New Mexico drilled boreholes for and constructed the monitor well nests. The boreholes were drilled using the sonic drilling method. At each drilling site, a single borehole was advanced to the bottom of the Ogallala Aquifer (approximately 190 feet bgs). The upper portions of the boreholes were advanced using a 10-inch-diameter drill bit, while the lower portions of the boreholes were advanced using an 8-inch-diameter drill bit. Three 2-inch-diameter monitor wells were constructed within each borehole to establish a nest.

The monitor wells are constructed of 2-inch-diameter, Schedule (SCH) 40 polyvinyl chloride (PVC) casings with 0.020-inch slotted screens and 2-foot sumps. Monitor well screens are set at



Site Characterization Report Energen WLSU #8

different discrete depths to allow for water quality sampling at the top, middle, and bottom of the aquifer. Individual monitor wells of each nest are distinguished by an 's' for shallow, 'm' for middle, and 'd' for deep in the well ID (e.g., MW-7s, MW-7m, MW-7d). The shallow wells are completed across the water table with 20-foot screens. The middle and deep wells have 15-foot screens. Filter pack consisting of 10/20 silica sand is placed within the annulus across each screen interval. The filter packs are isolated from one another by hydrated bentonite. The surface completions include concrete pads and locking steel risers.

Locations of the three monitor well nests are shown in Figure 1. Well logs are provided in Appendix B, and descriptions are summarized as follow:

- *MW-7 (downgradient)*: The location of this monitor well nest is approximately 80 feet north and 575 feet east of the former WLSU #8 water well location. The borehole was advanced to a total depth 197.5 feet bgs. The Triassic Dockum Group was encountered at 188 feet bgs. The shallow well is screened from 50.0 to 70.0 feet bgs, the middle well is screened from 126.0 to 141.0 feet bgs, and the deep well is screened from 173.5 to 188.5 feet bgs.
- *MW-8 (downgradient)*: The location of this monitor well nest is approximately 350 feet south and 575 feet east of the former WLSU #8 water well location. The borehole was advanced to a total depth of 197.5 feet bgs. The Triassic Dockum Group was encountered at 191 feet bgs. The shallow well is screened from 50.0 to 70.0 feet bgs, the middle well is screened from 129.5 to 144.5 feet bgs, and the deep well is screened from 176.5 to 191.5 feet bgs.
- *MW-9 (upgradient)*: The location of this monitor well nest is approximately 225 feet north and 510 feet west of the former WLSU #8 water well location. The borehole was advanced to a total depth of 197.5 feet bgs. The Triassic Dockum Group was encountered at 190 feet bgs. The shallow well is screened from 50.0 to 70.0 feet bgs, the middle well is screened from 128.0 to 143.0 feet bgs, and the deep well is screened from 175.0 to 190.0 feet bgs.

Surveyed coordinates and top of casing elevations for the monitor well nests and other WLSU #8 monitor wells are reported in Table 1. John West Surveying Company surveyed all the monitor wells on November 16, 2022 (Appendix C). Well construction information and initial depth to water measurements for the monitor well nests are provided in Table 2.

Soil samples were collected from the boreholes for the nested monitor wells at regular intervals and submitted to HEAL. Chloride was not detected in any of the soil samples at a reporting limit of 60 mg/kg (Appendix D).



4. March 2022 Groundwater Monitoring

On March 15 and 16, 2022, CMB conducted groundwater monitoring at the WLSU #8 wells (including the three new nests) and nearby supply wells. Water quality samples were collected and submitted to HEAL. Water quality results for samples from MW-2 and MW-6 exceeded the Section 3103 standard for chloride, with chloride concentrations of 1,200 and 1,000 mg/L, respectively. Water quality results for samples from the other site monitor wells meet the Section 3103 standard for chloride, including the samples collected at downgradient monitor well nests MW-7 and MW-8. The chloride concentration of the water quality sample collected from MW-4 was 230 mg/L.

Water quality samples collected from the three nearby supply wells meet the Section 3103 standard for chloride, with chloride concentrations at background levels (less than 50 mg/L). The three nearby supply wells include (1) the WLSU #11 windmill, located approximately 0.6 mile northwest of the site, (2) a pond well, and (3) a house well located approximately 0.7 mile southeast of the site at Mr. Daniel Fields's residence. The WLSU #11 windmill had a chloride concentration of 24 mg/L, and both the pond and domestic wells had a chloride concentration of 32 mg/L.

Samples from the WLSU #8 monitor well network collected during the March 2022 monitoring event were split with Mr. Daniel Fields's consultant, who submitted them to Envirotech, Inc. (Envirotech) for analyses. The analytical results for the split samples are similar to those of the primary samples that CMB submitted to HEAL. For example, with the exception of the chloride results for the sample collected from MW-9D, the differences in the chloride results between the two laboratories are less than 15 percent (Table 3). The chloride results for the sample collected from MW-9D differ by 42 percent (i.e., 29 mg/L vs. 44.4 mg/L); these two chloride concentrations are at background levels.

Appendix D provides the HEAL and Envirotech analytical laboratory reports for the primary and split samples.

5. Groundwater Characteristics

DBS&A compiled available groundwater level and water quality data for the site. These data are presented as hydrographs and in time-series plots of chloride concentrations (Figure 2). The compiled data are also provided in Appendix E. These data were used to support the



evaluations presented in Section 5.1 and 5.2. Section 5.3 describes advection-dispersion modeling that was conducted to provide additional characterization of groundwater flow and chloride transport at the site.

5.1 Groundwater Flow Direction and Velocity

Figure 3 is a potentiometric surface map constructed from March 2022 water level measurements. The water level data presented in the potentiometric surface map show that the groundwater gradient is toward the east-southeast at 0.0035 foot per foot (ft/ft). This groundwater flow direction and gradient are consistent with those of previous monitoring events that were conducted in 2016 and 2017 (Terracon, 2017 and 2018).

DBS&A evaluated variability of the groundwater flow direction and gradient by preparing a rose diagram based on historical water level data at the WLSU #8 site monitor wells (Figure 4). The rose diagram shows the historical groundwater flow direction and magnitude of hydraulic gradient for the period 2012 to 2022. The direction and gradient were calculated for combinations of three monitor wells, as follows: (1) MW-1, MW-2, and MW-5, (2) MW-2, MW-4, and MW-5, (3) MW-2, MW-4, and MW-6, and (4) MW-3, MW-4, and MW-5. Except for two calculations based on 2012 water level measurements that appear anomalous, the direction of groundwater flow is consistently to the east-southeast at a gradient of approximately 0.002 to 0.004 ft/ft.

The average linear groundwater flow velocity was calculated using Darcy's Law, as follows:

$$v = \frac{K (h_1 - h_2)}{n_e l} \quad (1)$$

where v = average linear velocity (feet per day [ft/d])

K = hydraulic conductivity (ft/d)

n_e = effective porosity (dimensionless)

h_2 = hydraulic head (elevation) downgradient (feet)

h_1 = hydraulic head (elevation) upgradient (feet)

l = distance between h_1 and h_2 (feet)

The hydraulic gradient is 0.0035 ft/ft based on the March 2022 potentiometric surface map (Figure 3). The hydraulic conductivity (K) of 22 feet per day (ft/d) and effective porosity (n_e) of 0.25 are taken from the OSE's groundwater model for Lea County (Musharrafieh and Chudnoff, 1999). Based on these parameter values, the calculated groundwater flow velocity is 0.3 ft/d



(110 feet per year [ft/yr]). The hydraulic conductivity of the Ogallala Aquifer is variable, and the average linear groundwater flow velocity could be lower, or as high as several feet per day.

5.2 Groundwater Chloride Distribution

Chloride concentrations in regional groundwater have historically been elevated in the area of the former location of the WLSU #8 water well (i.e., at MW-2 and MW-6). The chloride concentration at MW-4 has also occasionally exceeded the Section 3103 standard for chloride, with concentrations ranging from 123 to 390 mg/L (Figure 2). Figure 5 shows the current vertical and horizontal distributions of chloride at the site. Wells MW-2 and MW-6 are the only wells with chloride concentrations above the Section 3103 standard of 250 mg/L. These two wells are located immediately downgradient of the former location of the WLSU #8 water well. Wells MW-2 and MW-6 are approximately 120 feet southeast and 10 feet east, respectively, of the former location of the WLSU #8 water well. The chloride concentration at MW-4 is typically around the Section 3103 standard, and was 230 mg/L in March 2022. Well MW-4 is approximately 225 feet south-southeast of the former location of the WLSU #8 water well. The chloride concentrations at the WLSU #8 site monitor wells appear stable (Figure 2).

The extent of chloride impacts to groundwater is limited to the area immediately east of the former location of the WLSU #8 water well (Figure 5). Monitor well nests MW-7 and MW-8 were installed downgradient of the former location of the WLSU #8 water well, MW-2, and MW-6. The water quality samples collected from these nests meet Section 3103 standards, with chloride concentrations ranging from 20 to 46 mg/L (Figure 5). This range is typical of background levels, and similar to chloride concentrations recorded at upgradient monitor wells (i.e., MW-1, MW-5, and MW-9). The absence of elevated chloride concentrations at MW-7 and MW-8 indicates that chloride impacts to regional groundwater are limited to the vicinity of the former location of the WLSU #8 water well.

The chloride concentrations of the March 2022 water quality samples collected at the nested monitor wells are similar (Figure 5). For instance, the chloride concentrations at MW-8 were 20 mg/L (shallow), 46 mg/L (middle), and 40 mg/L (deep). Similar trends were seen at MW-7 and MW-9 (Figure 5). These water quality data demonstrate that density stratification of chloride is not present.

Figure 6 shows the chloride concentrations at the three Fields water wells, in addition to those at the WLSU #8 site. The water wells are the WLSU #11 windmill (upgradient) and the pond and house wells (both downgradient). The chloride concentrations at the three water wells are at



Site Characterization Report Energen WLSU #8

background levels (less than 50 mg/L) and meet Section 3103 standards (Appendix D). The analytical results therefore do not exhibit adverse impacts at these wells.

The calculated average linear groundwater flow velocity is 0.3 ft/d (110 ft/yr) (Section 5.1). Based on this velocity, groundwater impacts from the former location of the WLSU #8 water well would have reached MW-7 by now. Chloride is a conservative ion, meaning that it typically does not interact with other dissolved ions or aquifer materials, and therefore travels at about the same rate as groundwater. Well MW-7 is 690 feet southeast (downgradient) of the former WLSU #8 water well location, where elevated chloride concentrations were first observed in 2009. Given the distance to MW-7 (690 feet) and flow velocity (110 ft/yr), chloride-impacted groundwater would have reached MW-7 in approximately 6 years (by 2016). The absence of increased chloride concentrations at MW-7 suggests that chloride-impacted groundwater is diluted to background chloride concentrations through mixing (i.e., diffusion and dispersion) before reaching MW-7. The travel-time calculation presented here does not include processes such as diffusion and dispersion that can cause concentrations of dissolved constituents to decrease with distance from a source area.

5.3 Advection-Dispersion Modeling

DBS&A simulated the transport of chloride-impacted groundwater in the WLSU #8 vicinity using ATRANS-EXCEL (ATRANS). ATRANS is a three-dimensional advection dispersion model that uses analytical transport solutions to determine the concentration of dissolved constituents across time and distance away from a source (S.S. Papadopoulos, 2016). It can be used to consider advection, dispersion, sorption, and first-order transformation reaction processes, and assumes that groundwater flow is steady and uniform. DBS&A used ATRANS to evaluate the degree to which elevated chloride concentrations could become natural diluted as groundwater travels away from the former location of the WLSU #8 water well.

DBS&A parameterized the ATRANS model using the same hydraulic properties as the calculation of the average linear groundwater flow velocity (Section 5.2): (1) hydraulic conductivity of 22 ft/d, (2) effective porosity of 0.25, and (3) hydraulic gradient to the southeast at 0.0035 ft/ft. The model domain was set at 1,000 square-feet with 800 cells. Longitudinal, transverse, and vertical dispersivity values were assigned values of 10^{-2} , 10^{-3} , and 10^{-4} feet. The effective diffusion coefficient was set to zero. The chloride source was simulated as a two-dimensional rectangular patch placed near the former location of the WLSU #8 water well location (20 feet wide and 5 feet deep) with a constant chloride concentration of 2,500 mg/L. The model was run at 1-year timesteps until a steady-state condition was achieved.



Site Characterization Report Energen WLSU #8

ATRANS simulated results are presented in Figure 7. Steady-state conditions were achieved at the site within 10 years. The simulated results show that dispersion effectively dilutes chloride concentrations to less than 250 mg/L 230 feet downgradient of the source, and to background levels 840 feet downgradient of the source (Figure 7). The ATRANS simulated results generally agree with the box model presented in Price (2021), which showed that chloride would attenuate to background levels within 600 feet of the source.

Despite some uncertainty about the timing and extent of the chloride release at the WLSU #8 site, the ATRANS simulated results demonstrate that elevated chloride concentrations are attenuated by dispersion to background levels within several hundred feet of the site. This is consistent with the water quality data collected to date at the existing monitor wells.

6. Conclusions and Recommendation

In March 2009, Energen (the former WLSU #8 operator) sampled several water wells in the vicinity of the WLSU #8 site. Chloride was detected at the WLSU #8 water well at a concentration of 298 mg/L, above the Section 3103 standard of 250 mg/L. Energen submitted a C-141 form to OCD in October 2009 notifying them of the elevated chloride concentration at the WLSU #8 water well. Since the discovery of the elevated chloride concentration, Energen has installed a total of nine monitor wells at the site. Five monitor wells were installed in 2012 (MW-1 through MW-5), one monitor well was installed in 2016 (MW-6), and three monitor well nests were installed in 2021 (MW-7 through MW-9). The WLSU #8 water well was plugged and abandoned in 2015.

The monitor well nests were installed in 2021 to supplement the exiting WLSU #8 monitor well network and further characterize groundwater conditions upgradient and downgradient of the site. They are also used to monitor the vertical distribution of chloride. The new monitor well nests, along with the other monitor wells and three Fields water wells, were sampled in March 2022. Water quality at the wells show that chloride impacts to groundwater are limited to the area immediately east of the WLSU #8 site (Figure 6). Wells MW-2 and MW-6 were the only wells in March 2022 with water quality results that exceed the Section 3103 standard for chloride. Chloride concentrations at downgradient monitor wells MW-7 and MW-8 met the Section 3103 standard for chloride and were at background level (less than 50 mg/L). This includes each of the screened intervals of the two monitor wells nests (MW-7 and MW-8).



Site Characterization Report Energen WLSU #8

Chloride concentrations at the site's monitor wells appear stable (Figure 2). The absence of increased chloride concentrations at downgradient monitor wells MW-7 and MW-8 and general stability of chloride concentrations at the site monitor wells suggest that the chloride impacts to groundwater are being naturally attenuated (through diffusion and dispersion) to background levels several hundred feet downgradient of the site.

DBS&A recommends annual groundwater monitoring at the nine site wells to help confirm that the chloride plume is stable and not migrating further from the site.

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Site Characterization Report
Energen WLSU #8

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S.S. Papadopoulos & Associates, Inc. (S.S. Papadopoulos). 2016. *ATRANS-EXCEL version 1.10*. July 4, 2016.

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Figures

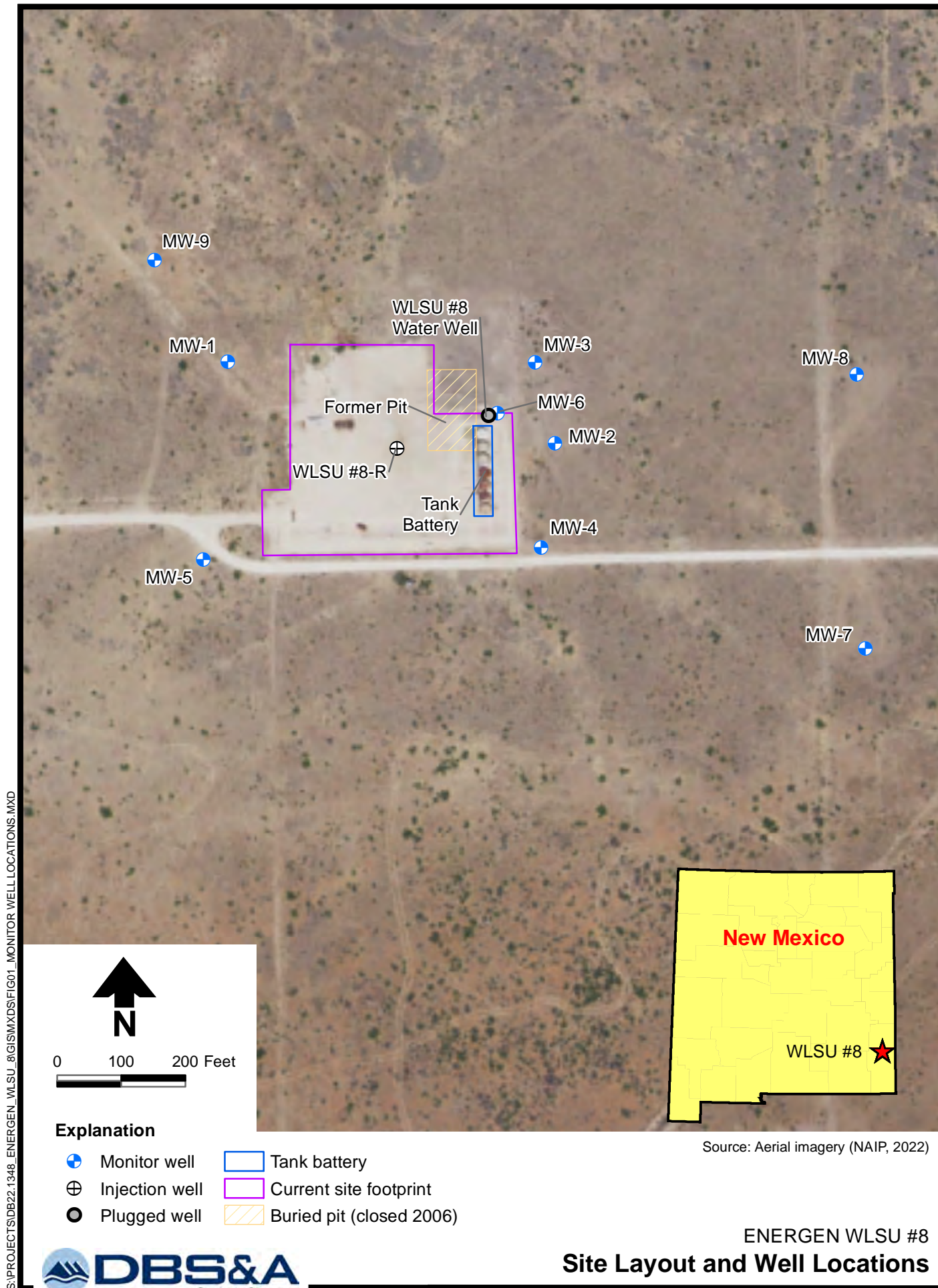
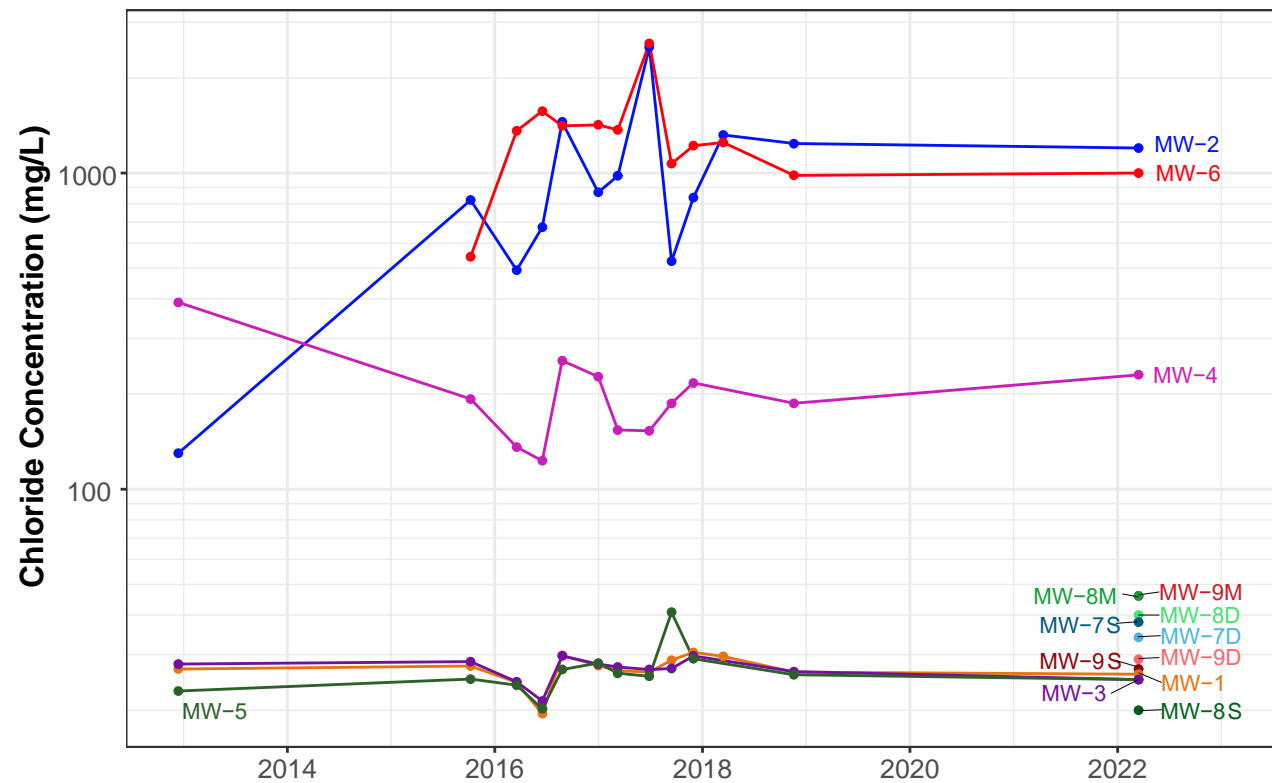
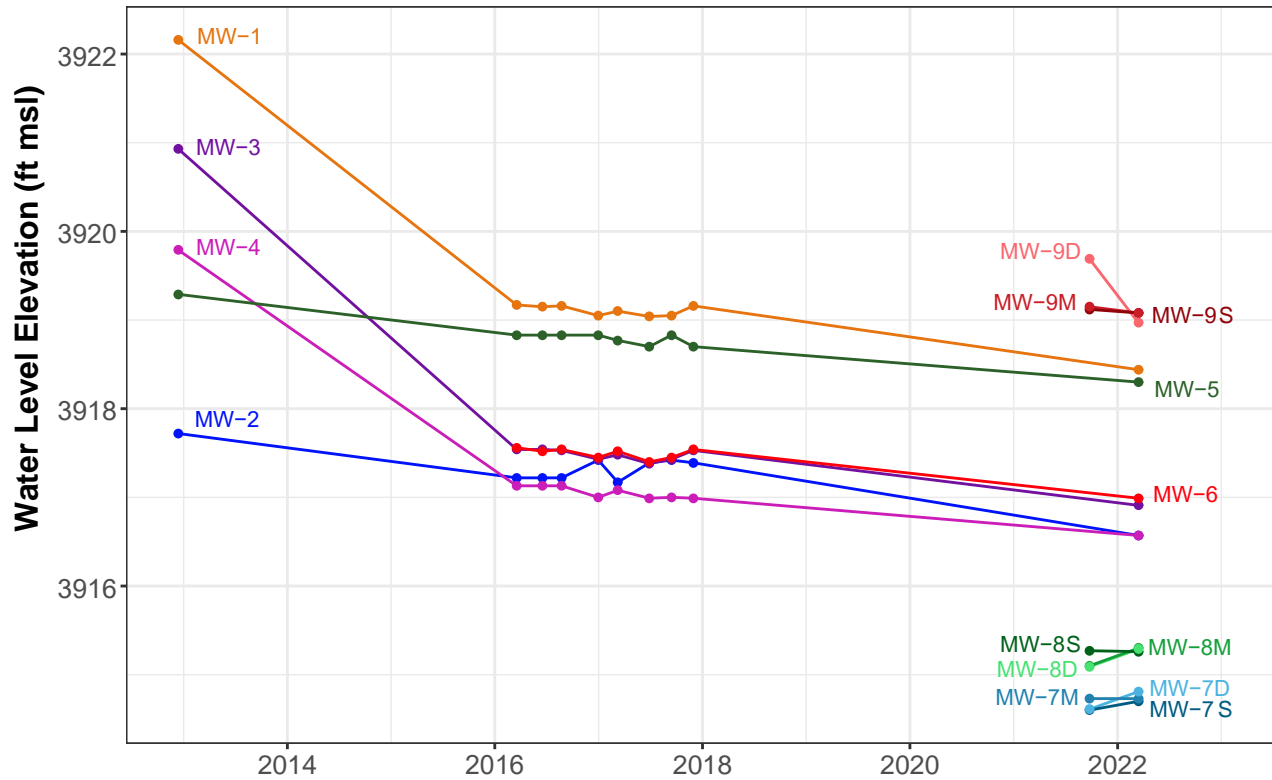


Figure 1

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ENERGEN WLSU #8
Monitor Well Hydrographs and
Chloride Concentrations

Figure 2



DB22.1348/5/2023

a Geo-Logic Company

DB22.1348/5/2023

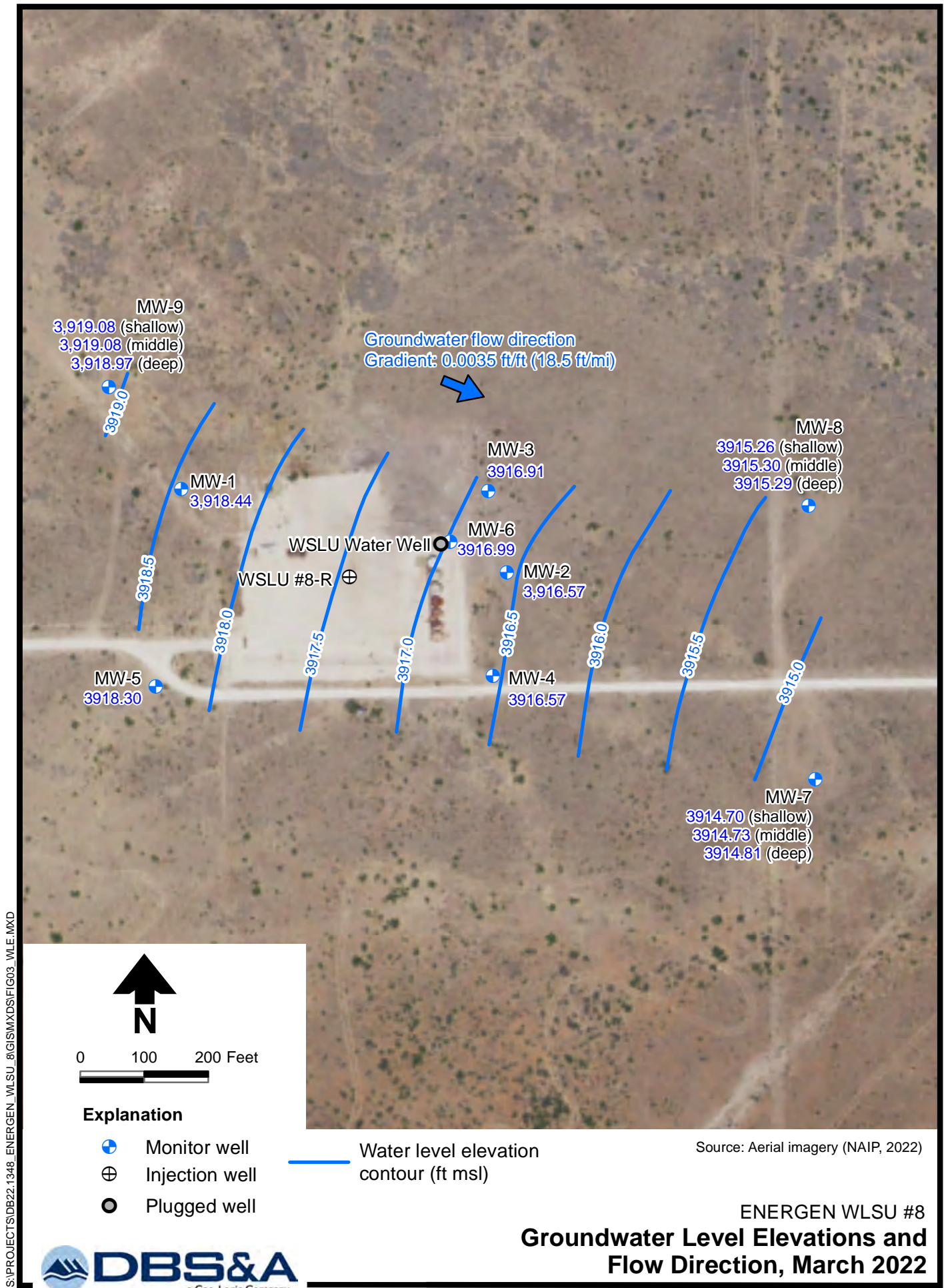
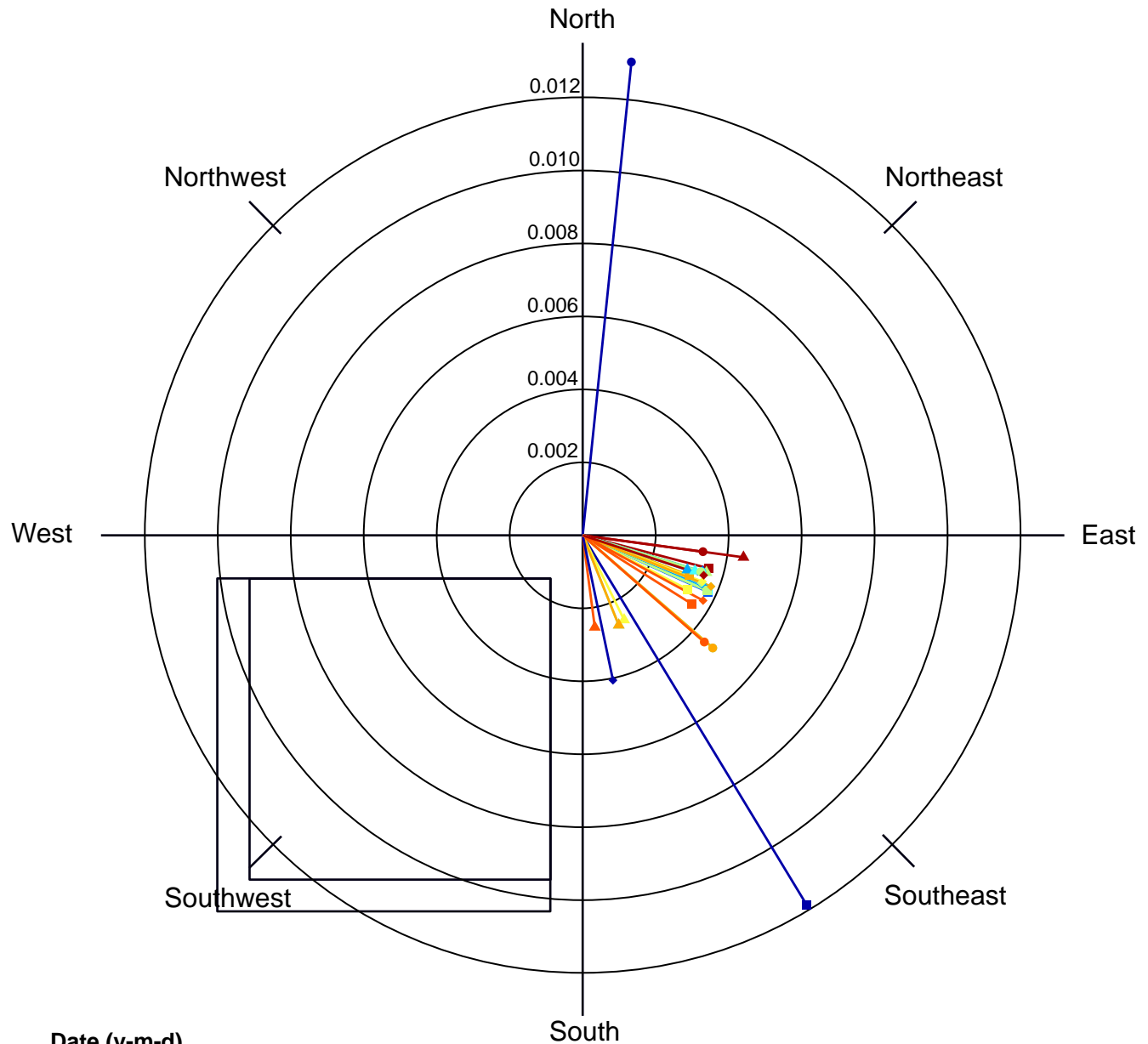


Figure 3

S:\Projects\DB22.1348_Energen_WLSU_8\VR_Drawings\AI\RoseDiagram.ai

**Date (y-m-d)**

- 2012-12-13
- 2016-03-18
- 2016-06-16
- 2016-08-23
- 2016-12-30
- 2017-03-09
- 2017-06-28
- 2017-09-14
- 2017-11-30
- 2022-03-15

Monitor Well Combination

- MW-1, MW-2, MW-5
- MW-2, MW-4, MW-5
- ▲ MW-2, MW-4, MW-6
- ◆ MW-3, MW-4, MW-5

Note: Gradient and direction of groundwater flow calculated between various sets of three monitor wells throughout the period of record. The radial axis corresponds to the magnitude of the hydraulic gradient (ft/ft).

ENERGEN WLSU #8
ENERGEN WLSU #8
Rose Diagram of Historical
Groundwater Flow Directions



DB22.1348/5/2023

DB22.1348/5/2023

Figure 4

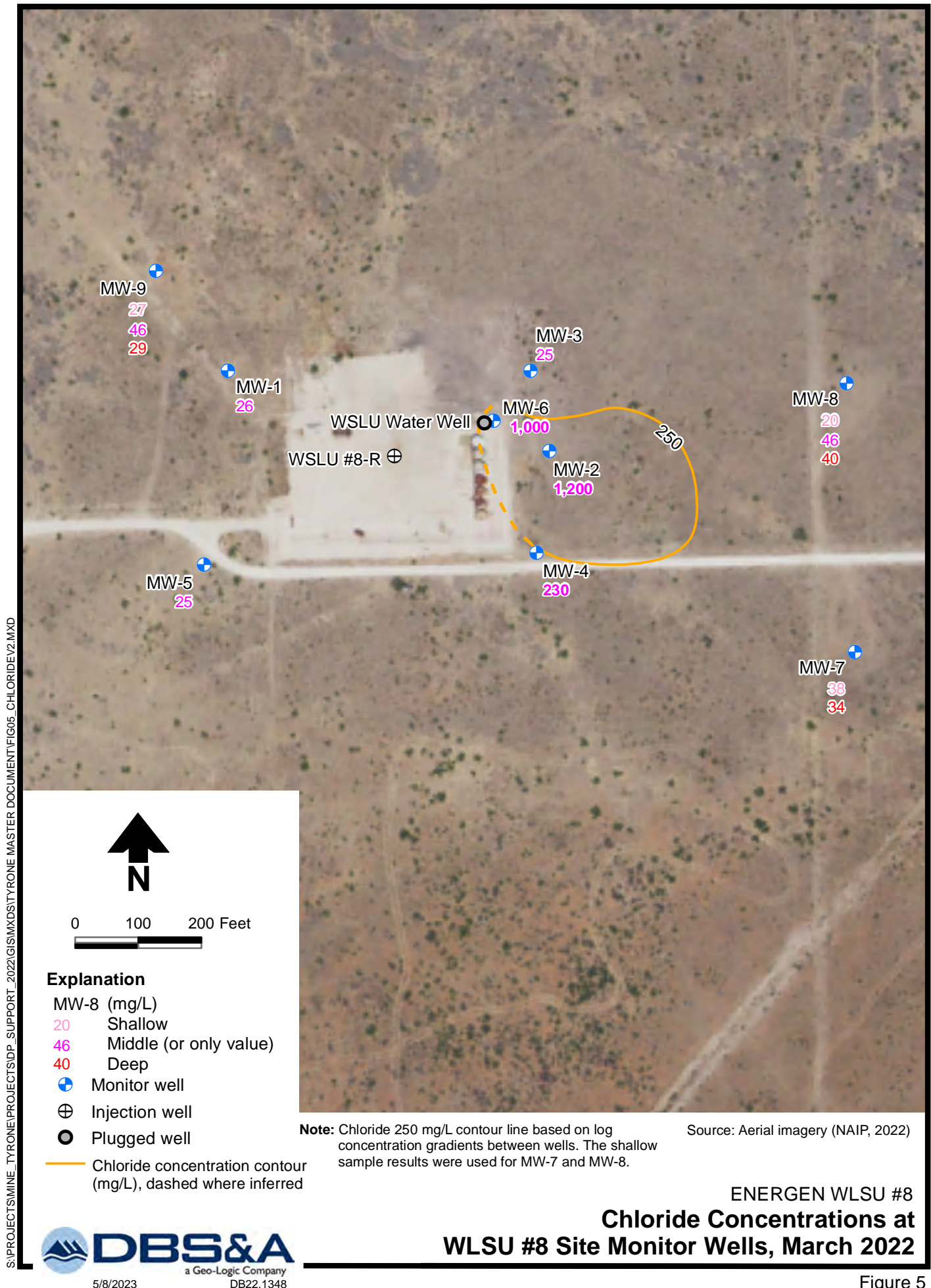


Figure 5

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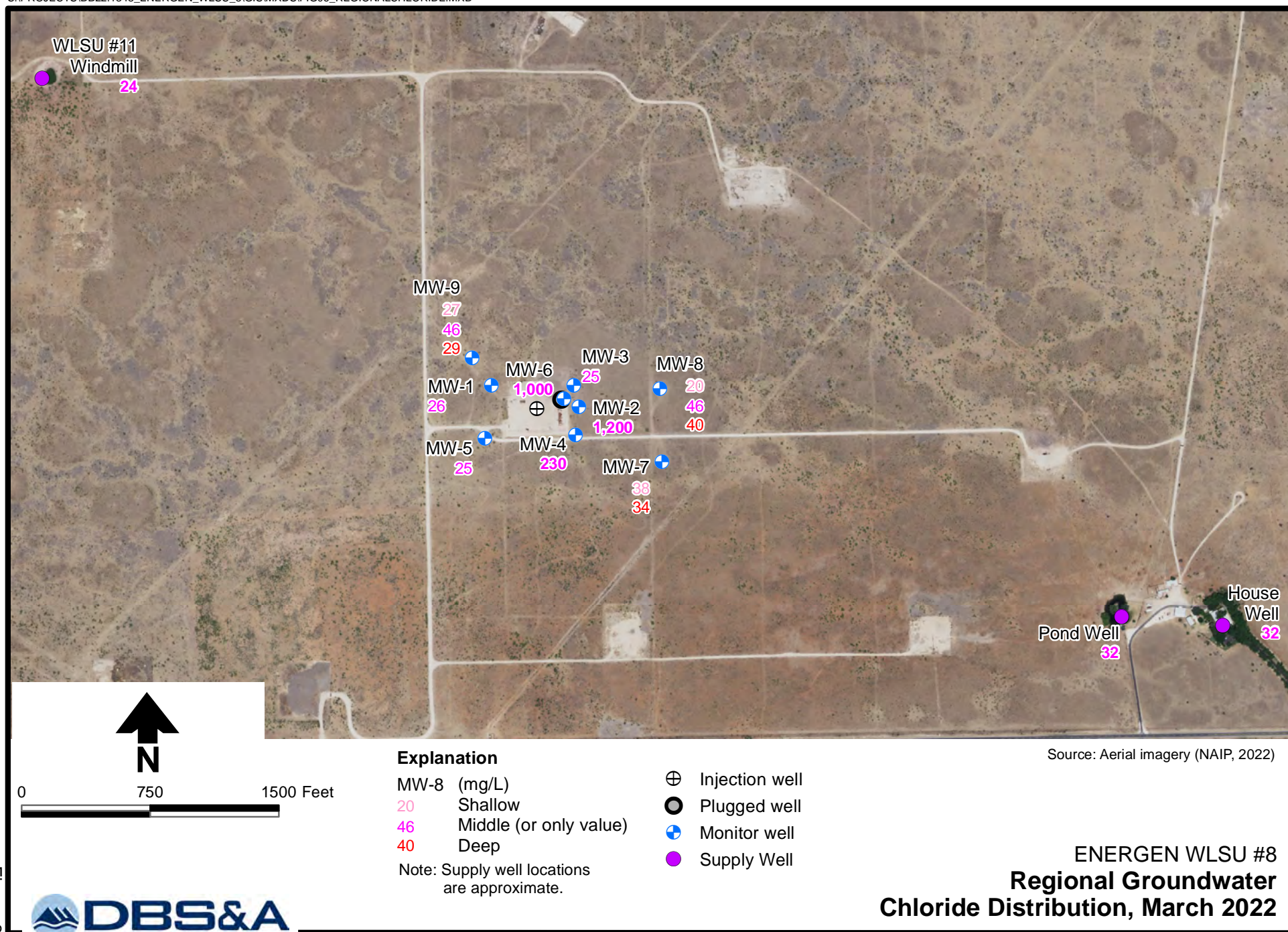


Figure 6

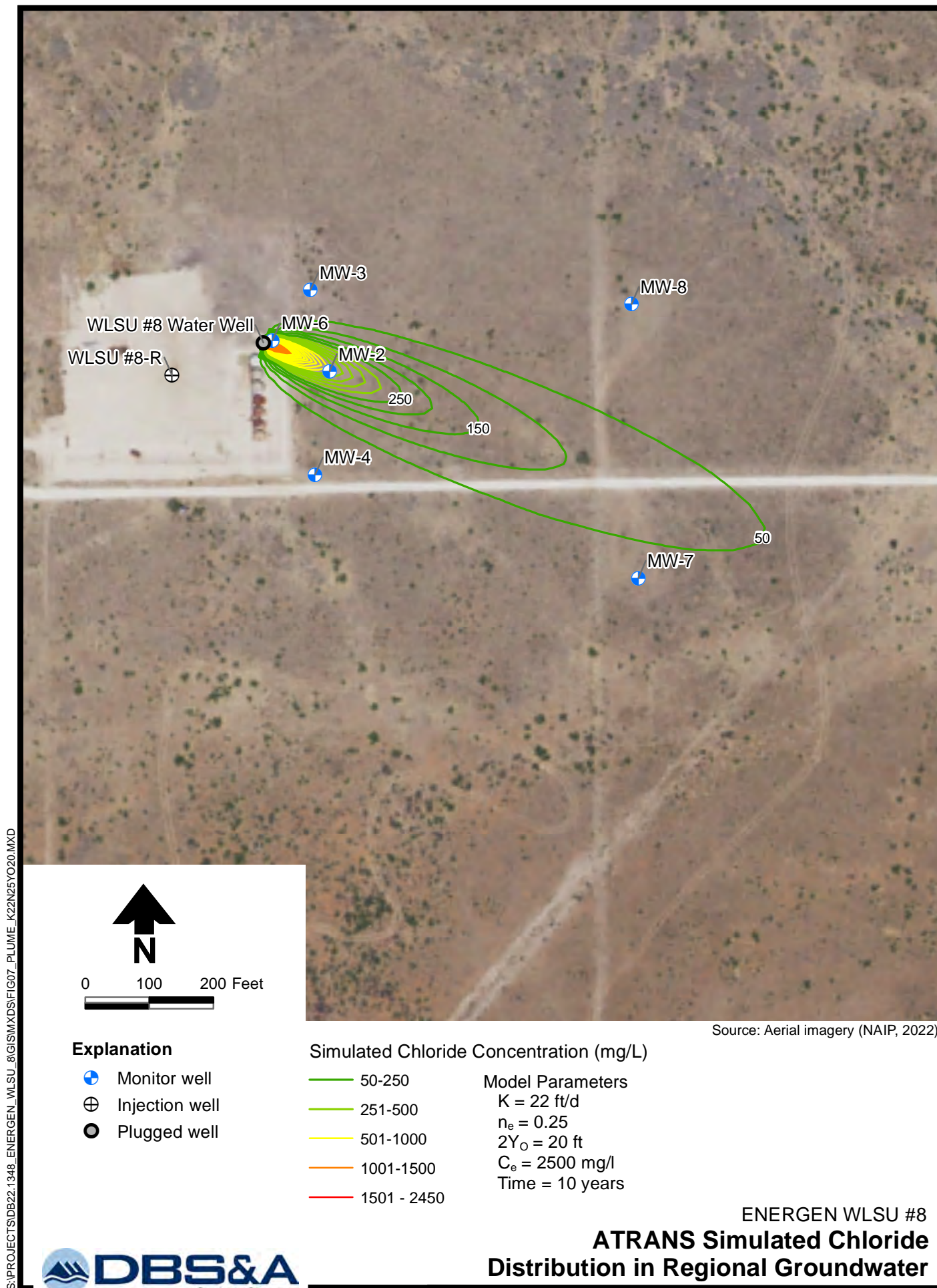


Figure 7

Tables



Site Characterization Report Energen WLSU #8

Table 1. Monitor Well Survey Information, November 2021

Designation	OSE Permit No.	Completion Date	Coordinates ^a (feet)		Ground Surface Elevation ^b (feet msl)	Top of Casing Elevation ^b (feet msl)
			Northing	Easting		
MW-1	L-13218-POD1	12/12/2012	718754.5	826775.5	3,973.05	3,975.52
MW-2	L-13218-POD2	12/12/2012	718624.4	827284.4	3,972.55	3,974.76
MW-3	L-13218-POD3	12/12/2012	718751.1	827254.9	3,973.86	3,976.67
MW-4	L-13218-POD5	12/13/2012	718462.6	827262.2	3,971.80	3,974.52
MW-5	L-13218-POD4	12/13/2012	718446.9	826735.6	3,971.78	3,974.43
MW-6	L-13218-POD6	9/14/2015	718672.3	827195.6	3,972.74	3,976.17
MW-7	L-15194-POD1	9/22/2021	718301.7	827766.4	3,969.65	3,969.41 (deep) 3,969.43 (middle) 3,969.45 (shallow)
MW-8	L-15194-POD2	9/18/2021	718728.7	827755.9	3,969.75	3,969.29 (deep) 3,969.30 (middle) 3,969.47 (shallow)
MW-9	L-15194-POD3	9/14/2021	718914.0	826662.6	3,972.15	3,971.82 (deep) 3,971.85 (middle) 3,971.80 (shallow)

^a NAD 1983 - New Mexico East Zone.

^b NAD 1998 Vertical Datum

OSE = Office of the State Engineer

msl = Above mean sea level

May 30, 2023

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Site Characterization Report
Energen WLSU #8

Table 2. Completion Information of Monitor Well Nests

Designation	Casing Material and Diameter	Screen Interval (feet bgs)		Total Borehole Depth (feet bgs)	Total Well Depth (feet bgs)	Depth to Water (feet btoc)	Depth to Water Measurement Date
		Top	Bottom				
MW-7S	2-inch SCH 40 PVC blank casing and 2-inch SCH 40 PVC 0.020-inch slotted screen	50.0	70.0	197.5	72.0	54.85	9/24/2021
MW-SM		126.0	141.0		143.0	54.70	9/24/2021
MW-7D		173.5	188.5		190.5	54.80	9/24/2021
MW-8S		50.0	70.0	197.5	72.0	54.20	9/24/2021
MW-8M		129.5	144.5		146.5	54.20	9/24/2021
MW-8D		176.5	191.5		193.5	54.20	9/24/2021
MW-9S		50.0	70.0	197.5	72.0	52.68	9/24/2021
MW-9M		128.0	143.0		145.0	52.70	9/24/2021
MW-9D		175.0	190.0		192.0	52.13	9/24/2021

bgs = Below ground surface

btoc = Below top of casing

SCH = Schedule

PVC = Polyvinyl chloride

May 30, 2023

DB22.1348 | T02_Cmpltn Info.docx



Site Characterization Report
Energen WLSU #8

Table 3. March 2022 Split Sample Chloride Concentration Comparison

Sample Location	Sample Date	Hall Environmental Analysis Laboratory		Envirotech Laboratory		Difference in Concentration (mg/L)	Chloride Percent Difference
		Chloride ^a (mg/L)	Analysis Date	Chloride ^b (mg/L)	Analysis Date		
MW-1	3/15/2022	26	3/21/2022	29.4	3/19/2022	-3.4	12.3 %
MW-2	3/16/2022	1,200	3/21/2022	1,350	3/19/2022	-150.0	11.8%
MW-3	3/15/2022	25	3/21/2022	27.9	3/19/2022	-2.9	11.0 %
MW-4	3/16/2022	230	3/21/2022	260	3/19/2022	-30.0	12.2%
MW-5	3/15/2022	25	3/21/2022	29	3/19/2022	-4.0	14.8 %
MW-6	3/15/2022	1,000	3/21/2022	1,140	3/19/2022	-140	13.1 %
MW-7D	3/16/2022	34	3/21/2022	38.5	3/19/2022	-4.5	12.4%
MW-7S	3/16/2022	38	3/21/2022	40.5	3/19/2022	-2.5	6.4%
MW-8D	3/16/2022	40	3/21/2022	44.6	3/19/2022	-4.6	10.9%
MW-8M	3/16/2022	46	3/21/2022	50.5	3/19/2022	-4.5	9.3%
MW-8S	3/16/2022	20	3/21/2022	22.8	3/19/2022	-2.8	13.1%
MW-9D	3/15/2022	29	3/21/2022	44.4	3/19/2022	-15.4	42.0 %
MW-9M	3/15/2022	46	3/21/2022	51.5	3/19/2022	-5.5	11.3 %
MW-9S	3/15/2022	27	3/21/2022	29.4	3/19/2022	-2.4	8.5 %

^a Analyzed using U.S. Environmental Protection Agency (EPA) method 300.0

^b Analyzed using EPA method 300.0/9056A

mg/L = Milligrams per liter

May 30, 2023

DB22.1348 | T03_SplitSamples2022.docx

Appendix A

C-141 Forms

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Energen Resources Corporation	Contact: Andrew Cobb
Address: 3300 North A St. Bldg. 4, Ste. 100 Midland, Tx. 79705	Telephone No. 432-687-1155
Facility Name: West Lovington Strawn Unit	Facility Type: Fresh Water Well @ WLSU #8 well 30-025-32291

Surface Owner: Dan Field	Mineral Owner: N/A	Lease No. N/A
--------------------------	--------------------	---------------

LOCATION OF RELEASE

API

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
L	34	15S	35E	1980	FNL	660	FWL	Lea

Latitude 32° 58' 19.1"

Longitude 103° 24' 06.5"

WTR 55'

NATURE OF RELEASE

Type of Release: Unknown	Volume of Release	Volume Recovered
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Sampling of fresh water well near the WLSU #8 well shows elevated chloride levels.

Describe Area Affected and Cleanup Action Taken.*
Will begin investigation into cause of the elevated levels and remediate to approved standard.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Andrew Cobb	OIL CONSERVATION DIVISION	
Printed Name: Andrew Cobb	Approved by District Supervisor: [Signature] ENVIRONMENTAL ENGINEER	
Title: Sr. Safety & Environmental Specialist	Approval Date: 3.19.10	Expiration Date: 5.19.10
E-mail Address: andy.cobb@energen.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 10-26-09 Phone: 432-686-3599		IRP# 10-3-2457

* Attach Additional Sheets If Necessary

Date: **Jan 29, 2021**

Ramona Marquez
New Mexico Oil Conservation Division

RE: ***Energen Resources Corporation West Lovington Strawn Unit No. 8
UL "L" Section 34-Township 15 South, Range 35 East, Lea County New Mexico
OCD No. 1RP-2457
Delineation of Ground Water***

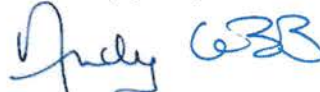
Dear Ms. Marquez:

I write this letter at the request of Brad Billings of the New Mexico Oil Conservation Division to provide evidence of authorization of Wayne Price of Price, LLC to, consistent with the understanding set forth in this letter, represent and submit documents on behalf of Energen Resources Corporation ("Energen"). Energen is a wholly owned subsidiary of Diamondback Energy, Inc.

Mr. Price has been retained by Energen to consult and advise concerning claims of groundwater contamination associated with the West Lovington Strawn Unit No. 8. In that regard he has been authorized to submit documents on behalf of Energen to the New Mexico Oil Conservation Division, and in particular to submit those documents necessary to obtain approval for the installation of four additional ground water monitoring wells, as set forth in his letter of January 4, 2021 to Mr. Brad Billings and subsequent communication between he and Mr. Billings.

I trust that this gives you the information necessary to properly document the authorization of Mr. Price to act on behalf of Energen.

Very truly yours,


Andy Cobb

From: **Wayne Price** wayneprice@q.com
Subject: 1RP-2457 Amended
Date: January 19, 2021 at 8:25 AM
To: EMNRD Billings Bradford Bradford.Billings@state.nm.us
Cc: Wayne Price wayneprice@q.com, Richard Olson rolson@hinklelawfirm.com, Clayton Barnhill cmbenviro@gmail.com

Dear Brad,

Please find attached the amended plan pursuant to our recent telephone conference call. I will also insert this E-mail and aerial view showing the additional MW-10 down-gradient well and the moved location of the up-gradient MW-9 well in your new electronic submittal system. Per your phone instructions we may begin the project.

Thank you for your assistance.

Wayne Price-Price LLC
7 SYCAMORE LANE
GLENWOOD NM 88039
wayneprice@q.com
505-715-2809



January 05, 2021

Mr. Brad Billings-NMOCD-Albuquerque Office,
5200 Oakland Avenue, N.E. Suite 100, 87113
Via E-mail: EMNRD Billings Bradford <Bradford.Billings@state.nm.us

Reference: Energen Resources Corporation
West Lovington Strawn Unit#8
UL "L" Sec 34-TS15S Rg 35E
Lea County, NM
OCD Case # 1RP-2457

Subject: Delineation of Groundwater

Dear Brad,

On behalf of the Energen Resources Corporation Project, Price LLC (Wayne Price) request OCD approval to install three (3) additional groundwater monitoring wells at the above reference location. The objective is to further define the vertical and horizontal extent of contamination at the site.

Our plan is to install an up-gradient well and two additional down-gradient wells. Please refer to the attached aerial plat for approximate locations. The attachment includes a simple dilution box model that assisted in determining the down-gradient distance for these wells. The estimated depth was taken from area wells logs and "Triassic" Red Bed maps for the area. (REF: USGS Hydrologic Investigation Atlas HA-62) complete report enclosed for reference.

The down-gradient well locations were place in order to assure future protection of known fresh water resources in the area.

Each well will be an EPA approved type nested well containing three isolated 2" well bores with isolation seals and proper sand/gravel pack, all completed in a 6" PVC casing. The top well will be equipped with 20 foot slotted screen, 5 feet above he current water level and 15 ft. below. The second well will be similar in construction and will have 15 feet of screen in the mid-range of the aquifer, and the third well will have 15 feet of screen for monitoring the bottom of the aquifer.

This will allow samples to be collected at the top, middle and bottom of the aquifer to pick up floating hydrocarbons or density gradient constituents such as chlorides.

Before installation of additional monitor wells, we plan on collecting water samples from each existing monitor well for WQCC volatiles, semi -volatiles, metals, and

inorganic constituents to establish a new baseline and constituents of concern (COC's).

The first round of sampling of the three new wells will also include these COC's. Attached is the most recent water analysis that was collected in 2018 with up-dated site plat. The 2019 event is missing, and we will report the next results in the first quarter of 2021.

Once the new wells have been installed, levels measured, we will utilize EPA protocols, properly purge with Ph., Conductivity, and Temperature measurements to ensure we are obtaining a stabilized sample before collecting, preserve, and then analyzed at an approved Laboratory.

A report will be sent to you with findings, conclusions and recommendations.

If you have any questions, concerns or comments please contact me at wayneprice@q.com or 505-715-2809.

Sincerely,



Wayne Price-Price LLC
7 Sycamore Ln
Glenwood, NM 88039

CC: Richard Olson-Hinkle Shanor LLP
Bill B. Caraway-Deputy General Counsel Diamondback Energy
Andy Cobb-Diamondback Energy Inc.
Clay Barnhill-CMB Environmental & Geological Services
Wayne Price-Jr BSME Environmental Engineer

Attachments:

- 1- Aerial view of proposed wells.
- 2- GW Model.
- 3- USGS- Geography, Geology and Groundwater and Histoy.
- 4- Annotated Site Map with most recent Chlorides.
- 5- Nov 2018 analytical result report



Dilution Box Model
Energen Resources-W. Lov. Strawn Unit #8
UL I-Sec 34-Ts15S-R34E
OCD 1RP-2457

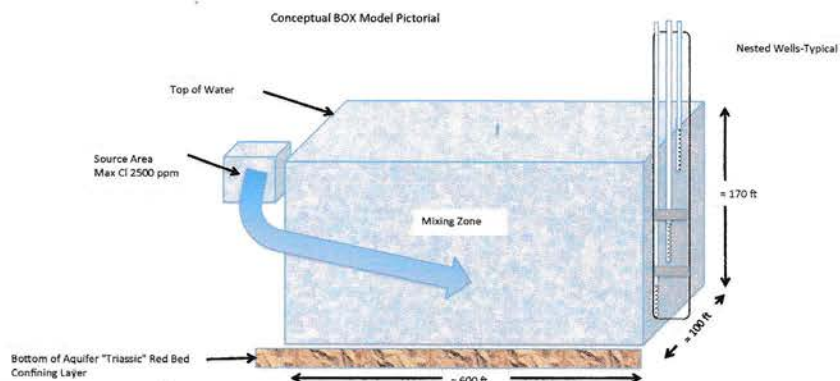
Model Objective: To determine a reasonable distance for installing down-gradient monitor wells to define the outer limit of the contamination.

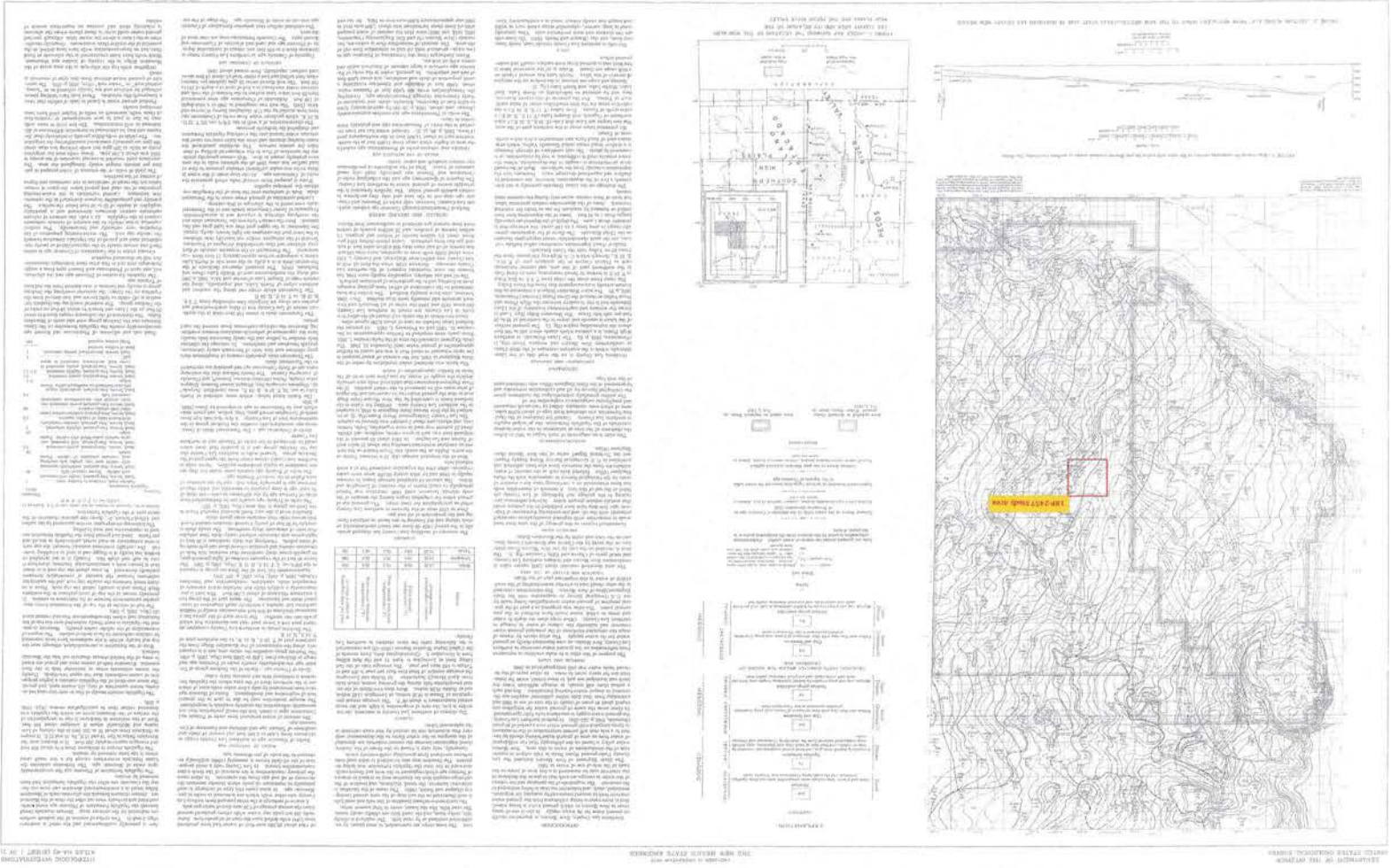
Model Description: A simple volumetric dilution model that compares the estimated source volume at certain worst case concentration of Chlorides, to an estimated volume of down-gradient fresh water, and calculates the DAF (Dilution Attenuation Factor) for the site. By varying the down-gradient length (a manual reiterative process), then the assumptions provides a calculated distance for the installation of down-gradient wells. Model assumptions for the initial source area was taken from the site diagram and initial depth estimated. The mixing zone lateral width of 100 feet was used as several EPA DAF models use this default dimension. The depth was determine from the estimated depth of the first confinin layer in the Ogalla aquifer in this area.

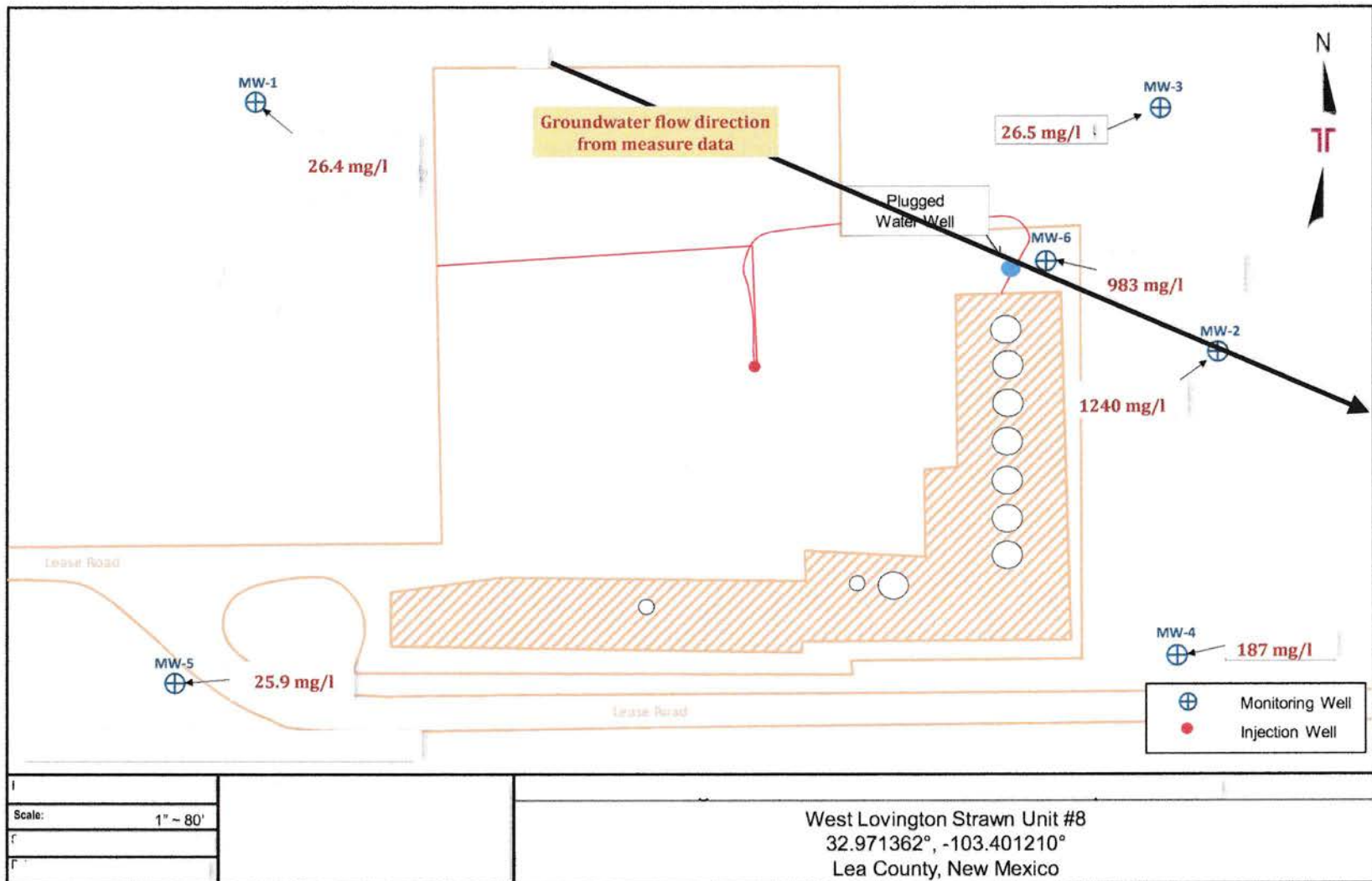
Model Limitations: This model is for estimation of MW placement, and only provides an Initial starting point. Depending upon future sampling results will actual determine future delineation work.

Model Results: The model results indicate that the wells can be approximately 600 ft down-gradient and still maintain a Chloride level of the natural background.

	Wide ft	Sat thickness Depth ft	Length ft	VOL Ft3	Gal/ft3		
Source Area Volume	50	50	50	125000	7.46	932,500	Gallons
Diluted Volume Down-Gradient	100	170	600	10200000	7.46	76,092,000	Gallons
						81.6 DAF	
Source		2,500 ppm		2500 PPM			
Diluted down Gradient			2500/DAF=	31 PPM		Estimated Chlorides within statistical range for background	







**Plat copied from OCD Well File Annotated by Price LLC to show the Nov 2018 chloride sample results:
Analysis attached herein. Jan 05, 2021**



Certificate of Analysis Summary 606107

Terracon Lubbock, Lubbock, TX

Project Name: West Lovington Strawn Unit #8

Project Id: AR157026

Contact: Brett Dennis

Project Location:

Date Received in Lab: Tue Nov-20-18 08:45 am

Report Date: 29-NOV-18

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	606107-001	606107-002	606107-003	606107-004	606107-005	606107-006
	Field Id:	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6
	Depth:						
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	Sampled:	Nov-19-18 13:25	Nov-19-18 14:45	Nov-19-18 14:15	Nov-19-18 13:50	Nov-19-18 12:55	Nov-19-18 15:20
Chloride by EPA 300	Extracted:	Nov-28-18 15:00	Nov-28-18 15:00	Nov-28-18 15:00	Nov-28-18 15:00	Nov-28-18 15:00	Nov-28-18 15:00
	Analyzed:	Nov-28-18 16:21	Nov-28-18 16:59	Nov-28-18 17:11	Nov-28-18 17:23	Nov-28-18 17:36	Nov-28-18 17:48
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Chloride		26.4 12.5	1240 250	26.5 12.5	187 25.0	25.9 12.5	983 250

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager

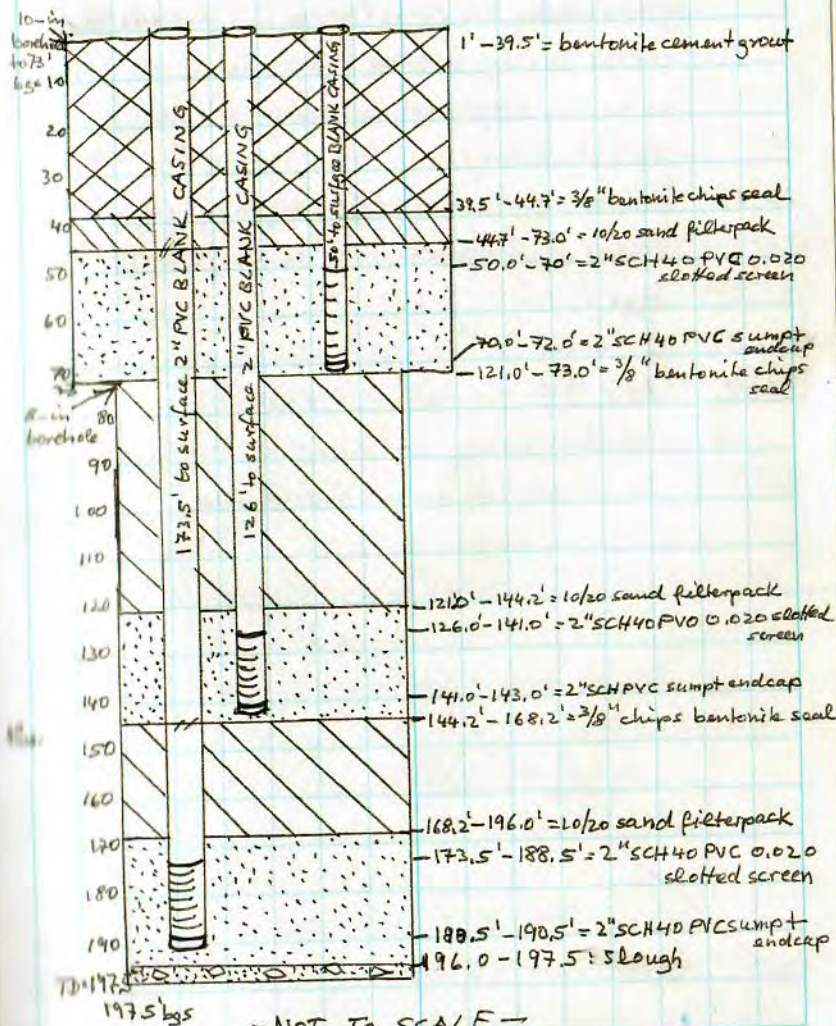
[illegible]

Appendix B

Monitor Well Logs

Location Diamondback Energy Date 9/22/21
 Project / Client West Lovington Strawn Unit #5
 Charge Resources OCD Case #1 RP -2457

WELL COMPLETION MW-7
SCHEMATIC OF TRIPLE NESTED MW-7
MW-7 (DEEP) + MW-7 (MIDDLE) + MW-7 (SHALLOW)
- NOT TO SCALE -



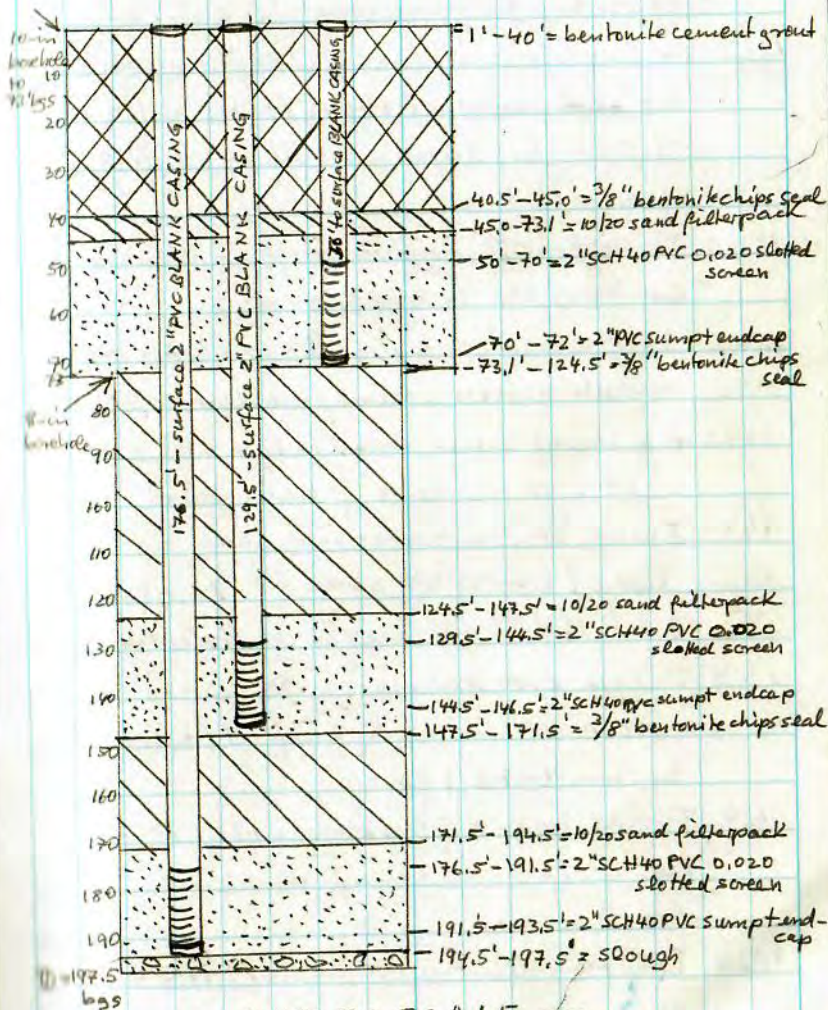
Location Diamondback Energy Date 9/18/21

Project / Client West Lovington Strawn Unit #8

Energy Resources Case # ⁰⁰⁰ 1 RP-2457

WELL COMPLETION MW-8

SCHEMATIC OF TRIPLE NESTED MW-8
mw-8 (CD sep) + mw-8 (middle) + mw-8 (SCHALLOW)
- NOT TO SCALE -



- NOT TO SCALE -

- L R -

Return to the Rain

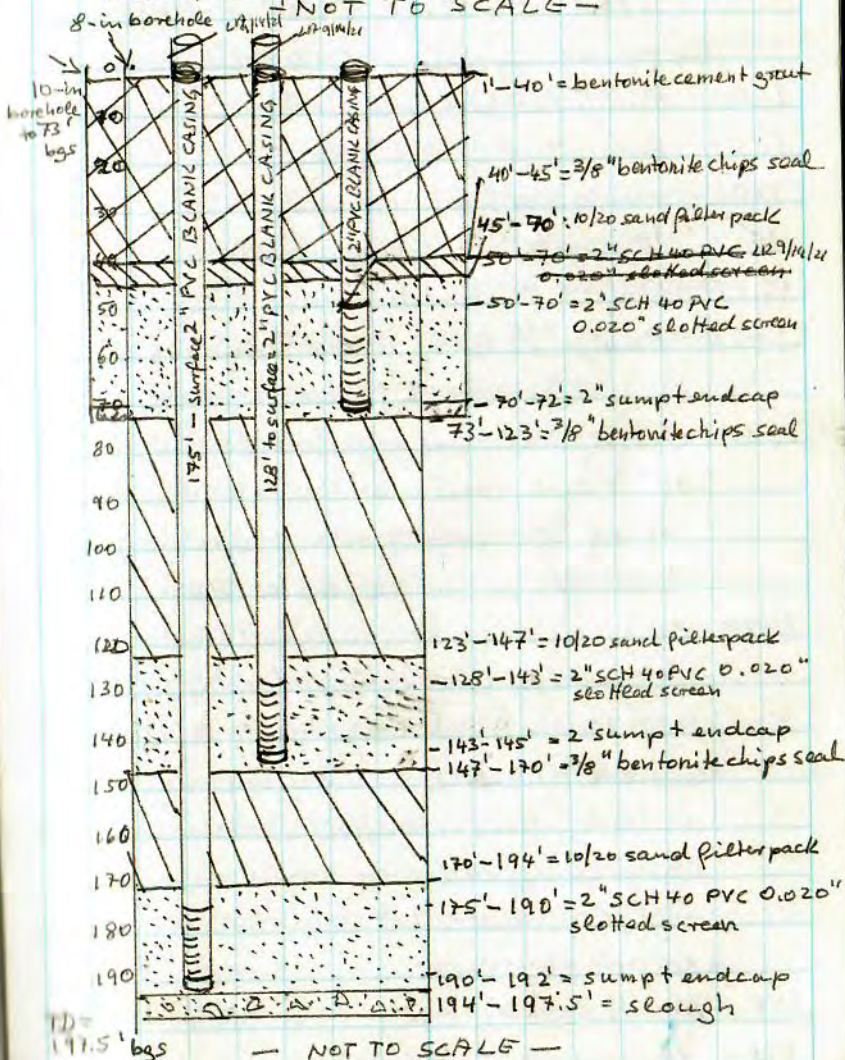
Location Great Diamondback Energy Date 9/14/21

LA 9/14/21

Project / Client West Lorington Strawn Unit # 8Energy Resources Corp OGD Case # IRP - 2457WELL COMPLETION mw-9SCHEMATIC OF TRIPLE NESTED mw-9:

mw-9 (Deep) + mw-9 (middle) + mw-9 (shallow)

NOT TO SCALE -



-LA-

Rite in the Rain

CMB Environmental & Geological Services, Inc. Boring ID: PW-7

Project: Energy Resources OCD
 Case # 1 RP-2457 Sheet: 7 of 4
 Location: West Lovington Strawn Unit #8
 Client: Diamondback Energy Job number:
 Driller: Trey Cain Total depth: 197.5' bgs
 Drilling method: Sonic Core CLS-600 Roto Sonic Boring diameter: 10-in to 73 ft bgs; 8-in to 197.5' bgs
 Boring date: 9/19/21 - 9/23/21 Logged by: P. Anderson
 Water level: Date measured:

depth (ft)	SAMPLE			standard penetration test results	SOIL DESCRIPTION Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS Monitoring well installation, geotechnical properties, analytical tests, instrumentation
	interval	number	recovery (inches)				
0	top soil			0-0.7'	Topsoil: fine sand/silt/clay + organic matter (7.5 YR 5/4) and white caliche at 0.5' bgs; dry		
			SS	++	0-7.5': caliche / sandstone; very pale brown (10 YR 8/2); fine to medium sand; well indurated; dry		0-7.5': PID = 5.4 ppm
			SS	+++	7.5'-12.5': sandstone / caliche - same as above		7.5'-12.5': PID = 3.1 ppm
10			SS	++	12.5'-17.5': sandstone / caliche - same as above		12.5'-17.5': PID = 0.3 ppm
			SS	+++	17.5'-20.0' sandstone / caliche - same as above		17.5'-20.0' = PID = 3.0 ppm
20			SS	++	20.0'-25.0' sandstone / caliche - same as above		20.0'-25.0': PID = 2.2 ppm
			SS	+++	25.0'-30.0' ss / caliche - same as above		25.0'-30.0': PID = 2.8 ppm
30			SP	++	30.0'-32.0' = sugarlike sand; light brown (7.5 YR 6/4); fine grained, well sorted, moist.		30.0'-37.5': PID = 3.6 ppm
32			SS/SP	++	32.0'-37.5': sand with thin ss-layers; pink (7.5 YR 8/3); very fine to fine sand; ss slightly calcareous; damp.		
40			SS/SP	++	32.0'-37.5' same as above (7.5 YR 7/4) pink; subangular to subrounded		
			SS/SP	++	37.5'-45.0' = same as above		
			SS/SP	++	(44'-45' calcareous sandstone layers.		
			SS/SP	++	45'-48' same as above		
48			SS/SP	++	48'-52.5' sugarlike sand, light reddish brown (5 YR 6/4); well sorted;		
50			SP	++	fine grained sand; subrounded; moist		49'-51' = capillary fringe (= very moist)
			SP	++	At 49'-51' = very moist		
			SP	++	At 51'-53.5' gray (mottled) (no odor detected), wet.		52.5'-53.5': PID = 14.6 ppm
60			SP	++	55.0'-60.0': sugarlike fine sand; reddish yellow (5 YR 6/6); well sorted, subrounded, irregular thin ss layers which are slightly calcareous; saturated.		

CMB Environmental & Geological Services, Inc.

Boring ID: mco-7

Project: Enogen Resources O.C.D
 Case # IRP 2457
 Location: West Lovington Strawn Unit #8
 Client: Diamond Back Energy
 Driller: Trey Cain
 Drilling method: Sonic Core (LS-600 Roto Sonic)
 Boring date: 9/19/21 - 9/23/21
 Water level: _____

Sheet: 2 of 4
 Job number: _____
 Total depth: 197.5' bgs
 Boring diameter: 10-in to 73 ft bgs / 8-in to 197.5' bgs
 Logged by: C. Anderson
 Date measured: _____

depth (ft)	SAMPLE			standard penetration test results	SOIL DESCRIPTION Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS Monitoring well installation, geotechnical properties, analytical tests, instrumentation
	interval	number	recovery (inches)				
60			SP		60'-70': sugary like sand; reddish yellow CSYR 6/6; subrounded; well sorted; irregular thin layers of slightly calcareous sandstone; saturated		
70			SP		70'-80': sugary like sand; - same as above -		
80			SP		80'-85': sugary like sand; - same as above -		
83.0			SS		(83'-84' = calcareous sandstone)		
84.0			SP		85.0'-87.5': sugary like sand - same as above -		
86.5			SS		At 86.5'-87.5' = calcareous SS		
87.5			SP		87.5'-97.5' sugary like sand; reddish yellow CSYR 6/6; subrounded; well sorted; thin saturated; CSS very rare to non-existent		
90			SP		97.5'-107.5' = sugary like sand - same as above -		
100			SP		107.5'-117.5' = sugary like sand - same as above -		
110			SP		At 112.5'-114.0': grey mottled material At 115.0'-115.5' = calcareous sandstone		
115-115.5			SP		117.5'-127.5' sugary like sand; same as above		
120							

CMB Environmental & Geological Services, Inc. Boring ID: mw-7

Project: Emergen Resources OCD Case # 7RP - ²⁴⁵⁷ Sheet: 3 of 4
 Location: West Lovington Strawn Unit # 8
 Client: Diamondback Energy Job number: _____
 Driller: Trey Cain Total depth: 197.5' bgs
 Drilling method: Sonic Core CLS-600 Roto * Boring diameter: 10" to 73' bgs and 8" to 197.5' bgs
 Boring date: 9/19/21 - 9/23/21 Logged by: A. Anderson
 Water level: _____ Date measured: _____

depth (ft)	SAMPLE			standard penetration test results	SOIL DESCRIPTION Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS Monitoring well installation, geotechnical properties, analytical tests, instrumentation
	interval	number	recovery (inches)				
120			SP				
127.5			SP		127.5' - 137.5': sugarelike sand reddish yellow (5YR 6/6); fine sand; subrounded; well sorted, saturated.		
130			SP		NO ss at all		
140			SP		137.5' - 147.5': sugarelike sand same as above		
147.5			SP		At 147.5' - 148.5': ss; very hard with gray staining above		Note: 147.5' - 148.5' above the ss gray sugarsand PID: 2.4 ppm "vinyl-color" very hard drilling
148.5			SS		148.5' - 157.5': sugarelike sand;		
150			SP		fine sand subrounded, well sorted; wet;		
			SP		At 155' some very fine sand without distinct contact; looks more yellowish red than reddish yellow (5YR 6/6) → (5YR 5/6)		
160			SP		157.5' - 167.5': sugarelike sand; fine sand, subrounded, well sorted, wet; has trace of very fine sand and silt/clay; getting denser.		
			SP		167.5' - 177.5': sugarelike sand; more yellowish red looking than reddish yellow; some very fine sand/silt/clay in matrix; wet to very moist;		
170			SP		very dense.		
			SP		177.5' - 186.0': sugarelike sand - as above -		
180			SP		At 183': driller reports very dense formation; slightly more very fine sand/silt/clay with increasing depth →		

continued on p. 4 of 4

CMB Environmental & Geological Services, Inc. Boring ID: mw-7

Project: Emergen Resources OCD Capex IRP-2457 Sheet: 4 of 4
 Location: West Lovington Strawn Unit #8
 Client: Diamondback Energy Job number:
 Driller: Trey Cain Total depth: 197.5 ft bgs
 Drilling method: Sonic Core CLS-600 Rotar Service Boring diameter: 10" to 73 ft bgs and 8" to 197.5 ft bgs
 Boring date: 9/19/21 - 9/23/21 Logged by: A. Anderson
 Water level: Date measured:

depth (ft)	SAMPLE			standard penetration test results	SOIL DESCRIPTION Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS Monitoring well installation, geotechnical properties, analytical tests, instrumentation
	interval	number	recovery (inches)				
180					See previous p. 3, continued: occasional mm-size rounded rock fragment / pebbles, very moist		
186					186.0 - 188.0' : very fine sand (trace fine)		
188				SP/SM	medium sand; color more reddish brown; subangular to subrounded, slightly calcareous; 5-7% silt/clay; wet to moist, dense.		
190				SM/SC	188.0 - 195.0 = very fine sand with silty-clayey matrix; color more to reddish hues; slightly calcareous with mottled appearance, very dense; moist (incl. the rock fragments) pebbles from previous wells).		NOTE: 188' bgs "TAHSSIC" Red Bed bottom screen - 188.5' bgs
195				SH/SC	195.0 - 196.0 = siltstone: very fine sand/silt/clay, light greenish gray (GLFY 1/7.1); moist to damp.		
196				Siltstone	196.0' - 197.5' : silt; silty-clayey, very fine (subangular) sand; rarely mm-size rounded pebbles; red (2.5YR 5/6); dry; hard drilling; slightly calcareous with bedding planes (2) similar to previous wells with horizontal fracturing along irregular thin clay layers.		
TD = 197.5				ML ML			

CMB Environmental & Geological Services, Inc. Boring ID: MW-8

Project: Emergen Resources OCD
 Location: Case # 1 RP-2457
 Client: West Lovington Strawn Unit #8
 Driller: Diamondback Energy
 Drilling method: Foster Maples
 Boring date: 9/15/21 - 9/17/21
 Water level: SonicCore CLS-600 Roto Sonic
 Sheet: 1 of 4
 Job number: _____
 Total depth: _____
 Boring diameter: _____
 Logged by: L. Anderson
 Date measured: _____

depth (ft)	SAMPLE				SOIL DESCRIPTION Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS Monitoring well installation, geotechnical properties, analytical tests, instrumentation
	interval	number	recovery (inches)	standard penetration test results			
0				(2)	0-0.9': Top soil; brown 7.5YR 4/2 fine sand with silt/clay + organic matter; dry; white caliche fragments		0-2.5': PID =
7.3				45	0.9'-7.3': caliche, white, dry, very hard		2.5-7.5': PID =
10				SP	0.9'-7.3': sandstone/caliche; very pale brown (10YR 8/2); fine to medium grain; well indurated		7.5'-15.0': PID =
12.5				SP	7.3'-12.5': sugary sand; pink (5YR 7/4); very fine to fine sand; subrounded to subangular, dry; 5% caliche nodules, well sorted		15.0'-17.5': PID =
17.5				SS/SP	12.5'-17.5': sandstone; pinkish white (7.5YR 8/2); layers of SS with very fine to fine sand layers; caliche cemented (calcareous); very hard, dry. (17'-27' SS less frequent)		
20				SS/SP	At 12.5': sand + minor SS		
27.0				SP	27.0' - 49.0' = sand (pink 5YR 8/3)		
30					49.0' - 57.5' = sugary sand, mostly very fine to fine, subangular to subrounded grains, well sorted; sporadic (irregular) thin calcareous SS-layers, dry. The transition to sugary sand is gradual		
40				SP	47.5' - 50 ft damp reddish yellow (5Y 6/4)		
47.5					49' = sugary sand; pink (5YR 7/4); fine grained, sub-rounded, well sorted		47.5' - 50.0' = damp
50				SP	50'-52.5' very moist = capillary fringe. 52'-55' = wet		50.0' - 52.5' = very moist = capillary fringe
57.5					At 55' = saturated		52.0' - 55.0' = wet
60					At 51' - 52': moderate/light gray discoloration		57.5' - 67.5' = sugary sand, continued on p. 2
					reddish yellow (5YR 6/6)		50.0' - 52.5' = saturated SS! PID (50-52.5) oppm.

CMB Environmental & Geological Services, Inc. Boring ID: MW-8

1 RP-2457

Project: Energex Resources OCD Case # Sheet: 2 of 4
 Location: West Lovington Strawn Unit #8
 Client: Diamondback Energy Job number: _____
 Driller: Justin Maples / Trey Carlin Total depth: _____
 Drilling method: Sonic Core (LS-600 Roto Sonic) Boring diameter: _____
 Boring date: 9/15/21 - 9/17/21 Logged by: L. Anderson
 Water level: _____ Date measured: _____

depth (ft)	SAMPLE			standard penetration test results	SOIL DESCRIPTION Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS Monitoring well installation, geotechnical properties, analytical tests, instrumentation
	interval	number	recovery (inches)				
60			SP		continued from p. 1 subrounded fine sand; saturated, denser than above, some thin layers of sandstone of same fine sand interspersed.		
67.5					67.5' - 77.5' : sugarsand		
70			SP		same as above some irregular layers with calcareous cementation		
80					77.5' - 87.5' : Sugarsand		
			SP		same as above at 78' - 80' : medium gray discoloration		78' - 80' = P ID = 6.9 ppm
90					87.5' - 97.5' : sugarsand		
			SP		same as above At 93' no more SS inclusions		
100					97.5' - 107.5' : sugarsand		
			SP		same as above		
107 -					107.5' - 117.5' : Sugarsand		
110			SP		same as above sandstone layers minor SS inclusions: → at 112.0' - 112.3' bgs → at 116.6' - 117.0' bgs		
120					117.5' - 127.5' : sugarsand same as above		

CMB Environmental & Geological Services, Inc. Boring ID: mw-8

Project: Energex Resources OCD
 Location: Case # 1 R P - 2457
 Client: West Covington Strauss Unit #48
 Driller: Diamond back Energy
 Drilling method: Trey Cain
 Boring date: Sonic Core CLS-600 Roto Sonic
 Water level: 9/15/21 - 9/18/21 9/17/21

Sheet: 3 of 4
 Job number: _____
 Total depth: _____
 Boring diameter: _____
 Logged by: L. Anderson
 Date measured: _____

depth (ft)	SAMPLE			standard penetration test results	SOIL DESCRIPTION Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS Monitoring well installation, geotechnical properties, analytical tests, instrumentation
	interval	number	recovery (inches)				
120			SP		117.5' - 127.5' on last previous page		
127.5			SP		127.5' - 137.5' = sugarsand reddish yellow (5YR 6/6); fine sand, subrounded, well sorted; wet		
130			SP				
137.5			SP		137.5' - 145.0': sugarsand, same as above		
140			SP		At 138' - 140' medium gray striae. overall hard drilling		NOTE: 138' - 140' = gray striae
145			SP		145' - 155' = sugarsand same as above		
148-150			SP				
150			SP				
155			SP		155' - 157.5' = sugarsand same as above		
157.5			SP		157.5' - 167.5' = sugarsand		
160			SP		color slightly more towards yellowish red probably due to trace of clay (1%), but still fine sand, subrounded, hard drilling; wet; well sorted.		
167.5			SP		167.5' - 177.5' = sugarsand		
170			SP		with 1% clay, reddish yellow (5YR 6/6); well sorted, wet, getting denser still		
177.5			SP		177.5' - 187.5' on page 4 of 4 (see below!)		
180							

Project:	<u>Energy Resources OGD Case# 12RP-</u>	Sheet:	<u>4 of 4</u>
Location:	<u>West Lovington Shallow Unit #8</u>		
Client:	<u>Diamondback Energy</u>	Job number:	
Driller:	<u>Trey Cain</u>	Total depth:	<u>197.5' bgs</u>
Drilling method:	<u>Sonic Core (LS-600 Roto Sonic)</u>	Boring diameter:	<u>10" to 73' bgs and 8" to 197.5' bgs</u>
Boring date:	<u>9/15/21 - 9/17/21</u>	Logged by:	<u>L. Anderson</u>
Water level:		Date measured:	

Released to Imaging: 2/21/2025 11:17:21 AM

CMB Environmental & Geological Services, Inc. Boring ID: MW-9

1 RP-2457

Project: Emergen Resources OCD Case#
 Location: West Lovington Strata Unit #8
 Client: Diamondback Energy
 Driller: Justen Maples
 Drilling method: Sonic Core (LS-600 Rotasonic)
 Boring date: 9/9/21 - 9/13/21
 Water level:

Sheet: 1 of 4
 Job number:
 Total depth: 197.5' bgs
 Boring diameter: 10-in to 70' and 8-in to 197.5'
 Logged by: P. Anderson
 Date measured:

depth (ft)	SAMPLE				SOIL DESCRIPTION	graphical log	COMMENTS
	interval	number	recovery (inches)	standard penetration test results (CPT)			
1					0-0.7': top soil; dark brown (7.5YR 3/3)		
2.5					caliche medium/fine sand silt, clay, roots; dense, moist. At 0.5' start mm-size caliche nodules (white)		2.5'-10.0': PID=2.1 ppm
4					0.7'-2.5': caliche, white, dry		
6					2.5'-7.5': calcareous SS; pinkish to white		
7.5					7.5-8' (R 3/2); very hard, calcich nodules		
10					to 6-in diam; pea-size rounded gravel (trace)		
12					7.5'-25.5': calcareous SS; well indurated,		
14					pink (5YR 8/3); well indurated,		10'-20': PID=0.4 ppm
16					- same as above -		
18					* calcium carbonate cemented sandstone		
19.5					19.5'-52.5':		
22					sandstone SS; pink (5YR 7/3)		
24					24'-52.5' with irregular layers of well sorted SP.		
26					The SS visible in the SS are trace of mm-size subrounded rock fragments; CaCO ₃ cemented.		
28							
30					caliche fragments less than 10%; Dry		
32							
34							
36							
38							
40					At 39'-50' pinkish gray (5YR 7/2), dry.		
42							
44							
46							
48							
49					At 49' moist formation: well sorted		
50					sugar sand with small irregular lenses of SS; fine subrounded sand; white to gray pink.		52.5'-55.0': PID=99.9 ppm
52					52.5'-57.0': very moist = capillary fringe! (pink 5YR 7/4)		55.0'-57.0': PID=145.8 ppm
52.5					At 52' saturated		
54					54.5'-60.0' gray discoloration		
56					60.0'-61.0' sand "vine"-like color		60.0'-61.0': PID=17.0 ppm
58							
60							

CMB Environmental & Geological Services, Inc. Boring ID: MW-9

Project: Energizer Resources Corp. OCD Case # 1R22457 Sheet: 2 of 4
 Location: West Lovington Shallow Unit #8
 Client: Diamondback Energy Job number: _____
 Driller: Justin Mayhew Total depth: 197.5'
 Drilling method: Sonic Core (LS-600 Roto sonic) Boring diameter: 10-in to 70' and 8-in to 197.5'
 Boring date: 9/9/21 - 9/13/21 Logged by: C. Anderson
 Water level: _____ Date measured: _____

depth (ft)	SAMPLE			standard penetration test results	SOIL DESCRIPTION	graphic log	COMMENTS
	interval	number	recovery (inches)				
60					59' - 67' = sugar sand reddish yellow (SYR 6/6) (reddish yellow (SYR 6/6))		
67				SP	67.0 - 77.5' Lost 0.5 ft sample At 67.5 ft: sugar sand, fine well sorted, yellowish red (SYR 6/6) reddish yellow		
70				SP	soft, saturated; less than 1% of mm- to cm-size subrounded gravel / calcareous sandstone concretions.		
80				SP	At 72.5' - 73.0' approximately 6" layer of calcareous sandstone in calcareous fine sand (Nodules).		
90				SP	77.5' - 87.5' same as above reddish yellow (SYR 6/6) At 78.5' - 79.0' calcareous sandstone nodules in fine sand matrix (as above).		
90				SP	87.5' - 97.5' same as above reddish yellow (SYR 6/6) reddish yellow		
100				SP	94.3 - 94.7 approximately 5" of calcareous sandstone in fine sand matrix (as above)		
100				SP	97.5 - 107.5' same as above reddish yellow (SYR 6/6) At 104 - 104.5' = calc. nodules SS as above		
110				SP	At 105.5 - 106.2 = calc. nodules SS (as above) 107.5 - 117.5 = same as above reddish yellow (SYR 6/6) reddish yellow		
110				SP	At 112.1' - 112.7' = calc. nodules SS in non-calc. fine sand		
120				SP	At 115.2' - 115.5' = calc. nodules SS in non-calc. fine sand		
120				SP	117.5 - 117.5' = sugar sand reddish yellow (SYR 6/6) as above		
					117.5 - 127.5 = on page 3		

CMB Environmental & Geological Services, Inc. Boring ID: MW-9

Project: Eugen Resources Corp.
 Location: OCD Capex LRP-2457 Sheet: 3 of 4
 Client: West Lovington Strawn Unit #8
 Driller: Diamondback Energy Job number:
 Drilling method: Justen Maples Total depth: 197.5 ft
 Boring date: Sonic Core (LS-600 Roto Sonic) Boring diameter: 10" to 70 ft & 8" to 197.5'
 Water level: 9/9/21 - 9/13/21 Logged by: L. Anderson
 Date measured:

depth (ft)	SAMPLE			standard penetration test results	SOIL DESCRIPTION Color, soil type, relative density or consistency, mineralogy, USGS classification moisture content	graphic log	COMMENTS Monitoring well installation, geotechnical properties, analytical tests, instrumentation
	interval	number	recovery (inches)				
120				SP	117.5' - 127.5' sugar sand; reddish yellow (5YR 6/6); mostly fine sand, subrounded, well sorted, saturated. (No more calcareous nodules present.) 127.5' - 137.5' same as above		
130				SP	137.5' - 147.5' same as above		
140				SP	147.5' - 157.5' same as above		
150				SP	from approximately 152.5' still sugar sand but slight/gradual color change from reddish yellow to yellowish red (5YR 5/6); also trace amount of silt/clay in matrix and subrounded to sub angular grains; saturated. 157.5' - 167.5' as above		
160				SP	167.5' - 177.5' sugar sand yellowish red (5YR 5/6); as above; but a lot denser, wet, harder drilling, gradually getting denser.		
170				SP	177.5' - 182.5' as above but a lot denser, harder drilling, wet.		
180							

1 RP-2457

Sheet: 4 of 4

Job number:

Total depth: 197.5 ft less

Boring diameter: 10-in to 73' bgs + 8-in to 197.5' bgs

Logged by: L Anderson

Date measured:

Water level:

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WELL RECORD & LOG

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STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO

1 2013 JAN 10 1 A 10:30

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) MW-1				OSE FILE NUMBER(S) L-13218 POD 1			
	WELL OWNER NAME(S) Energen Resources Corporation				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 904 Moore Avenue				CITY Roswell		STATE NM	ZIP 88201-1144
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 58'	SECONDS 21.48" N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND			
	LONGITUDE 103	24"	09.32" W	* DATUM REQUIRED: WGS 84				
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE Energen #8-R West Lovington Strawn Unit Location 1980' FSL & 660' FWL of Section 34, T15S-R35E, Lea County								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER WD1222		NAME OF LICENSED DRILLER Lee Peterson			NAME OF WELL DRILLING COMPANY Peterson Drilling & Testing, Inc.		
	DRILLING STARTED 12/11/12	DRILLING ENDED 12/12/12	DEPTH OF COMPLETED WELL (FT) 69.6		BORE HOLE DEPTH (FT) 71	DEPTH WATER FIRST ENCOUNTERED (FT)		
	COMPLETED WELL IS: <input type="radio"/> ARTESIAN <input type="radio"/> DRY HOLE <input checked="" type="radio"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT)		
	DRILLING FLUID: <input checked="" type="radio"/> AIR <input type="radio"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="radio"/> ROTARY <input type="radio"/> HAMMER <input type="radio"/> CABLE TOOL <input type="radio"/> OTHER - SPECIFY:							
	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	0	49	6 1/2	PVC Casing	FJ	2	Sch 40	
	49	69	6 1/2	PVC Screening	FJ	2	Sch 40	0.010
3. ANNULAR MATERIAL	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	0	40	6 1/2	Grout		Tremie		
	40	45	6 1/2	Bentonite Chips		Tremie		
	45	69.6	6 1/2	8/16 Sand		Tremie		

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WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
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WELL RECORD & LOG

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1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) MW-2				OSE FILE NUMBER(S) L-13218 POD2			
	WELL OWNER NAME(S) Energen Resources Corporation				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 904 Moore Avenue				CITY Roswell		STATE NM	ZIP 88201-1144
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 58'	SECONDS 19.10"	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84		
LONGITUDE 103 24" 03.08" W DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE Energen #8-R West Lovington Strawn Unit Location 1980' FSL & 660' FWL of Section 34, T15S-R35E, Lea County								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER WD1222		NAME OF LICENSED DRILLER Lee Peterson			NAME OF WELL DRILLING COMPANY Peterson Drilling & Testing, Inc.		
	DRILLING STARTED 12/11/12	DRILLING ENDED 12/12/12	DEPTH OF COMPLETED WELL (FT) 69.6		BORE HOLE DEPTH (FT) 70	DEPTH WATER FIRST ENCOUNTERED (FT)		
	COMPLETED WELL IS: <input type="radio"/> ARTESIAN <input type="radio"/> DRY HOLE <input checked="" type="radio"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT)		
	DRILLING FLUID: <input checked="" type="radio"/> AIR <input type="radio"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="radio"/> ROTARY <input type="radio"/> HAMMER <input type="radio"/> CABLE TOOL <input type="radio"/> OTHER - SPECIFY:							
	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	0	49.6	6 1/2	PVC Casing	FJ	2	Sch 40	
	49.6	69.6	6 1/2	PVC Screening	FJ	2	Sch 40	0.010
3. ANNULAR MATERIAL	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL		AMOUNT (cubic feet)	METHOD OF PLACEMENT	
	0	43	6 1/2	Grout			Tremie	
	43	46	6 1/2	Bentonite Chips			Tremie	
	46	70	6 1/2	8/16 Sand			Tremie	

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WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER

POD NUMBER **2**

TRN NUMBER **517401**

LOCATION

PAGE 1 OF 2

3. HYDROGEOLOGIC LOG OF WELL

5. TEST; RIG SUPERVISION

6. SIGNATURE

FOR OSE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 06/08/2012)	
FILE NUMBER	POD NUMBER	TRN NUMBER	
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WELL RECORD & LOG

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STATE ENGINEER OFFICE
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2017 JAN 10 - A 10:30

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) MW-3				OSE FILE NUMBER(S) L-13218 Pod 3			
	WELL OWNER NAME(S) Energen Resources Corporation				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 904 Moore Ave				CITY Roswell		STATE NM	ZIP 88201-1144
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 58'	SECONDS 20.90	N	• ACCURACY REQUIRED: ONE TENTH OF A SECOND		
	LONGITUDE 103	24'	03.66"	W	• DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE Energen #8-R West Lovington Strawn Unit Location 1980' FSL & 660' FWL of Section 34, T15S-R35E, Lea County								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER WD1222		NAME OF LICENSED DRILLER Lee Peterson			NAME OF WELL DRILLING COMPANY Peterson Drilling & Testing, Inc.		
	DRILLING STARTED 12/11/12	DRILLING ENDED 12/12/12	DEPTH OF COMPLETED WELL (FT) 71.5		BORE HOLE DEPTH (FT) 73	DEPTH WATER FIRST ENCOUNTERED (FT)		
	COMPLETED WELL IS: <input type="radio"/> ARTESIAN <input type="radio"/> DRY HOLE <input checked="" type="radio"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT)		
	DRILLING FLUID: <input checked="" type="radio"/> AIR <input type="radio"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="radio"/> ROTARY <input type="radio"/> HAMMER <input type="radio"/> CABLE TOOL <input type="radio"/> OTHER - SPECIFY:							
	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	0	51	6 1/2	PVC Casing	FJ	2	Sch 40	
	51	71	6 1/2	PVC Screening	FJ	2	Sch 40	0.010
3. ANNULAR MATERIAL	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	0	43	6 1/2	Grout		Tremie		
	43	48	6 1/2	Bentonite Chips		Tremie		
	48	71.5	6 1/2	8/16 Sand		Tremie		

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WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER 3	TRN NUMBER 517451
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WELL RECORD & LOG

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ROSWELL, NEW MEXICO

2013 JAN 10 10:31

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER)				OSE FILE NUMBER(S)				
	MW-4				L-13218 POD5				
	WELL OWNER NAME(S)				PHONE (OPTIONAL)				
	Energen Resources Corporation								
WELL OWNER MAILING ADDRESS				CITY		STATE		ZIP	
904 Moore Ave				Roswell		NM		88201-1144	
WELL LOCATION (FROM GPS)	DEGREES		MINUTES	SECONDS	* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84				
	LATITUDE	32	58'	17.54" N					
	LONGITUDE	103	24'	04.64" W					
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE									
Energen #8-R West Lovington Strawn Unit Location 1980' FSL & 660' FWL of Section 34, T15S-R35E, Lea County									
2. DRILLING & CASING INFORMATION	LICENSE NUMBER		NAME OF LICENSED DRILLER			NAME OF WELL DRILLING COMPANY			
	WD1222		Lee Peterson			Peterson Drilling & Testing, Inc.			
	DRILLING STARTED		DRILLING ENDED		DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)		
	12/12/12		12/13/12		70.2	73			
	COMPLETED WELL IS: <input type="radio"/> ARTESIAN <input type="radio"/> DRY HOLE <input checked="" type="radio"/> SHALLOW (UNCONFINED)						STATIC WATER LEVEL IN COMPLETED WELL (FT)		
	DRILLING FLUID: <input checked="" type="radio"/> AIR <input type="radio"/> MUD ADDITIVES - SPECIFY:								
	DRILLING METHOD: <input checked="" type="radio"/> ROTARY <input type="radio"/> HAMMER <input type="radio"/> CABLE TOOL <input type="radio"/> OTHER - SPECIFY:								
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)	
	FROM	TO							
	0	49.7	6 1/2	PVC Casing	FJ	2	Sch 40		
49.7	69.7	6 1/2	PVC Screening	FJ	2	Sch 40	0.010		
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT			
	FROM	TO							
	0	40.5	6 1/2	Grout		Tremie			
	40.5	46	6 1/2	Bentonite Chips		Tremie			
	46	70.2	6 1/2	8/16 Sand		Tremie			

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WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER 5	TRN NUMBER 517451
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4. HYDROGEOLOGIC LOG OF WELL

5. TEST; RIG SUPERVISION

6. SIGNATURE

FOR OSE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 06/08/2012)	
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WELL RECORD & LOG

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ROSWELL, NEW MEXICO

2012 JAN 10 1A 10:31

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) MW-5				OSE FILE NUMBER(S) L-13218 POD 4			
	WELL OWNER NAME(S) Energen Resources Corporation				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 904 Moore Ave				CITY Roswell		STATE NM	
					ZIP 88201-1144			
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE	MINUTES 32	SECONDS 58'	16.74"	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND	
		LONGITUDE	103	24'	08.02"	W	* DATUM REQUIRED: WGS 84	
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE Energen #8-R West Lovington Strawn Unit Location 1980' FSL & 660' FWL of Section 34, T15S-R35E, Lea County								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER WD1222		NAME OF LICENSED DRILLER Lee Peterson			NAME OF WELL DRILLING COMPANY Peterson Drilling & Testing, Inc.		
	DRILLING STARTED 12/12/12	DRILLING ENDED 12/13/12	DEPTH OF COMPLETED WELL (FT) 68	BORE HOLE DEPTH (FT) 71	DEPTH WATER FIRST ENCOUNTERED (FT)			
	COMPLETED WELL IS: <input type="radio"/> ARTESIAN <input type="radio"/> DRY HOLE <input checked="" type="radio"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT)			
	DRILLING FLUID: <input checked="" type="radio"/> AIR <input type="radio"/> MUD				ADDITIVES - SPECIFY:			
	DRILLING METHOD: <input checked="" type="radio"/> ROTARY <input type="radio"/> HAMMER <input type="radio"/> CABLE TOOL <input type="radio"/> OTHER - SPECIFY:							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0	47.5	6 1/2	PVC Casing	FJ	2	Sch 40	
	47.5	67.5	6 1/2	PVC Screening	FJ	2	Sch 40	0.010
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
	0	39	6 1/2	Grout		Tremie		
	39	44	6 1/2	Bentonite Chips		Tremie		
	44	68	6 1/2	8/16 Sand		Tremie		

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WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER 4	TRN NUMBER 517451
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WELL RECORD & LOG

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1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) (POD6) WLSU 8R MW-6				OSE FILE NUMBER(S) L-13218			
	WELL OWNER NAME(S) ENERGEN RESOURCES CORPORATION				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 3300 NORTH A ST BLDG 4 STE 100				CITY MIDLAND		STATE TX	ZIP 79705
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 58	SECONDS 20 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND			
	LONGITUDE 103	24	05 W	* DATUM REQUIRED: WGS 84				
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE CORNER OF 17TH AND W GUM AVE & TURN INTO GATE FOLLOW CALICHE RD. UNIT L, SEC 34, TWP 15S, R 35E								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER WD-1711		NAME OF LICENSED DRILLER EDWARD BRYAN			NAME OF WELL DRILLING COMPANY STRAUB CORPORATION		
	DRILLING STARTED 9-24-15	DRILLING ENDED 9-24-15	DEPTH OF COMPLETED WELL (FT) 70'	BORE HOLE DEPTH (FT) 70'	DEPTH WATER FIRST ENCOUNTERED (FT) N/A			
	COMPLETED WELL IS: <input type="radio"/> ARTESIAN <input type="radio"/> DRY HOLE <input checked="" type="radio"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) N/A			
	DRILLING FLUID: <input checked="" type="radio"/> AIR <input type="radio"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="radio"/> ROTARY <input type="radio"/> HAMMER <input type="radio"/> CABLE TOOL <input type="radio"/> OTHER - SPECIFY:							
	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	70'	50'	6"	SCH 40 .010 SCREEN	FJ	2"	0.154	.010
	50'	+43"	6"	SCH 40 RISER	FJ	2"	0.154	RISER
3. ANNULAR MATERIAL	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	70'	48'	6"	11 BAGS OF 20/40 SAND		TOPLOAD		
	48'	2'	6"	12 BAG OF 3/8 HOLEPLUG		TOPLOAD		

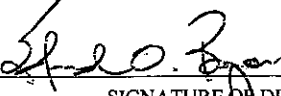
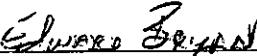
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WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER L-13218	POD NUMBER 6	TRN NUMBER 570502
LOCATION Mon	15S.35E.34.213	
		PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL					
DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
FROM	TO				
0	3'	3'	TAN VERY FINE SAND - CALICHE WITH CLAY	<input type="radio"/> Y <input checked="" type="radio"/> N	N/A
3'	12'	9'	LIGHT TAN VERY FINE SAND - CLAICHE CEMENT SANDSTONE	<input type="radio"/> Y <input checked="" type="radio"/> N	N/A
12'	19'	7'	TAN VERY FINE SAND - SOFT SANDSTONE	<input type="radio"/> Y <input checked="" type="radio"/> N	N/A
19'	30'	11'	TAN FINE SAND - SILICEOUS SANDSTONE	<input type="radio"/> Y <input checked="" type="radio"/> N	N/A
30'	61'	31'	TAN VERY FINE SAND - SOFT SANDSTONE	<input type="radio"/> Y <input checked="" type="radio"/> N	N/A
61'	70'	9'	TAN VERY FINE SAND	<input type="radio"/> Y <input checked="" type="radio"/> N	N/A
TD	70'			<input type="radio"/> Y <input checked="" type="radio"/> N	N/A
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
				<input type="radio"/> Y <input type="radio"/> N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: <input type="radio"/> PUMP				TOTAL ESTIMATED WELL YIELD (gpm):	
<input type="radio"/> AIR LIFT <input type="radio"/> BAILER <input type="radio"/> OTHER - SPECIFY:					

5. TEST; RIG SUPERVISION	
WELL TEST	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.
MISCELLANEOUS INFORMATION: 4X4X60 HIGH RISE 2X2 PAD LEA COUNTY NM	
PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:	

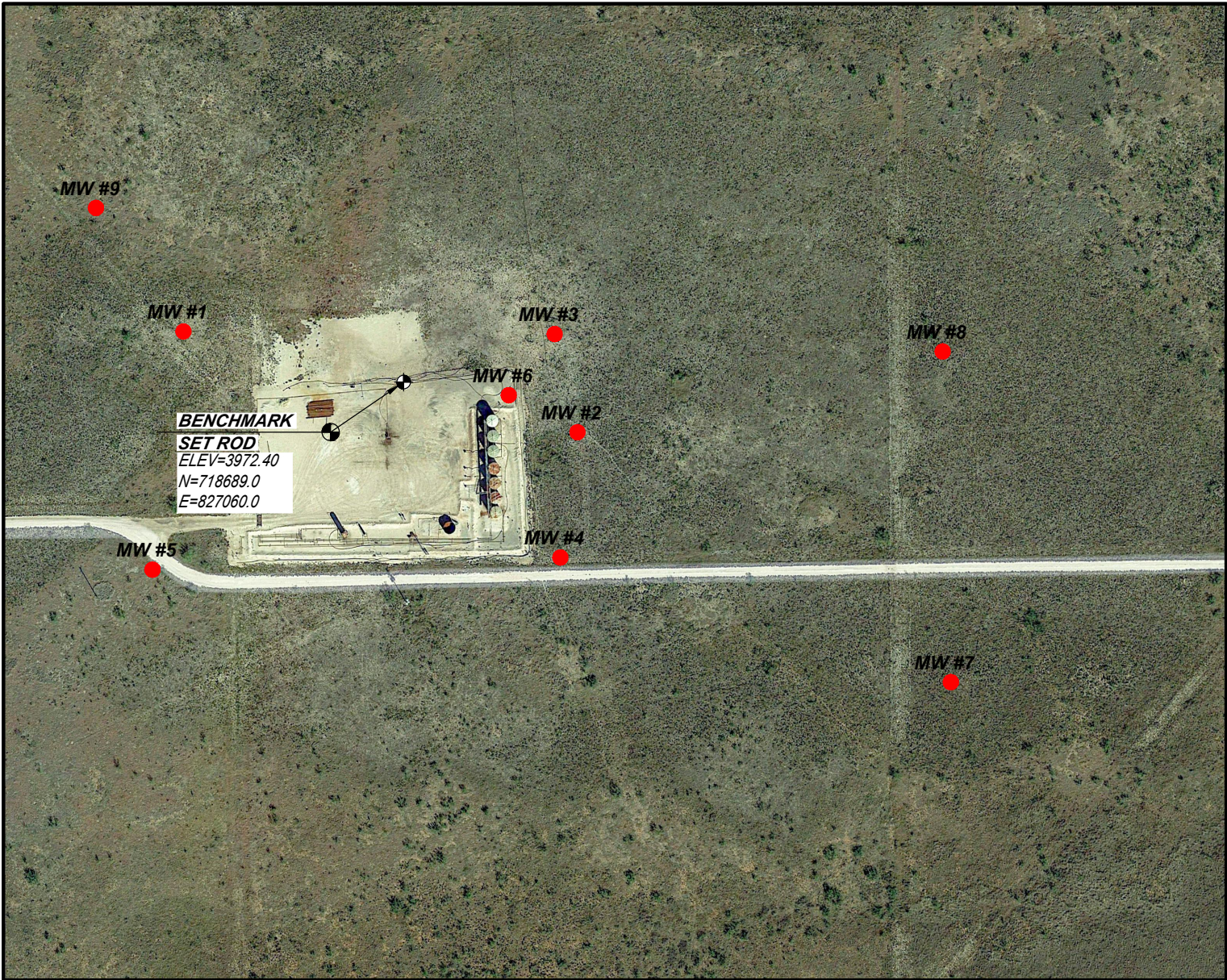
6. SIGNATURE
<div>THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:</div> <div><div> SIGNATURE OF DRILLER / PRINT SIGNEE NAME</div><div></div><div><div>9/30/15</div><div>DATE</div></div></div>

FOR OSE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 06/08/2012)	
FILE NUMBER	L-13218	POD NUMBER	6
		TRN NUMBER	570502
LOCATION	mon 155.35E.34.213		PAGE 2 OF 2

Appendix C

Well Survey Report

November 2022



COORDINATE TABLE
COORDINATES VALUES SHOWN ARE RELATIVE TO THE NORTH AMERICAN DATUM 1983, "NEW MEXICO EAST ZONE".
ELEVATIONS ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM 1988

WELL	COORDINATES	ELEVATIONS
MW #1	718754.5 N 826775.5 E	NATURAL GROUND - 3973.05' TOP OF CONCRETE - 3973.15' TOP OF PVC - 3975.52'
MW #2	718624.4 N 827284.4 E	NATURAL GROUND - 3972.55' TOP OF CONCRETE - 3972.52' TOP OF PVC - 3974.76'
MW #3	718751.1 N 827254.9 E	NATURAL GROUND - 3973.86' TOP OF CONCRETE - 3973.92' TOP OF PVC - 3976.67'
MW #4	718462.6 N 827262.2 E	NATURAL GROUND - 3971.80' TOP OF CONCRETE - 3971.91' TOP OF PVC - 3974.52'
MW #5	718446.9 N 826735.6 E	NATURAL GROUND - 3971.78' TOP OF CONCRETE - 3971.82' TOP OF PVC - 3974.43'
MW #6	718672.3 N 827195.6 E	NATURAL GROUND - 3972.74' TOP OF CONCRETE - 3973.13' TOP OF PVC - 3976.17'
MW #7	718301.7 N 827766.4 E	NATURAL GROUND - 3969.65' TOP OF CONCRETE -3969.83 ' TOP OF PVC DEEP -3969.41' TOP OF PVC MEDIUM -3969.43' TOP OF PVC SHALLOW -3969.45'
MW #8	718728.7 N 827755.9 E	NATURAL GROUND - 3969.75' TOP OF CONCRETE - 3970.03' TOP OF PVC DEEP - 3969.29' TOP OF PVC MEDIUM -3969.30' TOP OF PVC SHALLOW -3969.47'
MW #9	718914.0 N 826662.6 E	NATURAL GROUND - 3972.15' TOP OF CONCRETE - 3972.44' TOP OF PVC DEEP - 3971.82' TOP OF PVC MEDIUM -3971.85' TOP OF PVC SHALLOW -3971.80'

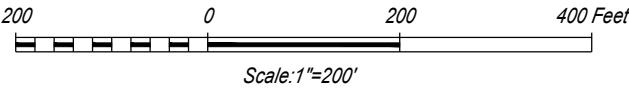
SURVEYOR'S CERTIFICATE:

I, RONALD J. EIDSON, NEW MEXICO PROFESSIONAL SURVEYOR No. 3239, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Ronald J. Eidson
DATE: 11/18/2022

LEGEND:

- - DENOTES MONITOR WELL
- ⊕ - DENOTES BENCHMARK 5/8" STL. ROD W/2" A.C.



DIAMONDBACK ENERGY

**MONITOR WELL LOCATIONS IN NW/4 SW/4 SECTION 34,
TOWNSHIP 15 SOUTH, RANGE 35 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO**

Survey Date:	11/16/2022	CAD Date:	11/17/2022	Drawn By:	ACK
W.O. No.:	22110410	Rev:	0	Rel. W.O.:	Sheet 1 of 1



PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

Appendix D

November 2021 and March 2022 Laboratory Reports



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

October 13, 2021

Wayne Price

Richard Olsons Hinkle Shanor Law Firm

P.O. Box 10

Roswell, NM 88202

TEL: (575) 622-6510

FAX

RE: Energy Resources Corp West Lovington Strawn Unit 8 Unit L
Sec 34 T 15S R 34E Lea Co. NM

OrderNo.: 2109D96

Dear Wayne Price:

Hall Environmental Analysis Laboratory received 28 sample(s) on 9/23/2021 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2109D96

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-7 (0.0'-7.5')

Project: Energy Resources Corp West Lovington

Collection Date: 9/19/2021 1:32:00 PM

Lab ID: 2109D96-001

Matrix: SOIL

Received Date: 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	60		mg/Kg	20	9/29/2021 12:08:08 PM	62898
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	9/28/2021 9:44:54 PM	62841
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/28/2021 9:44:54 PM	62841
Surr: DNOP	74.4	70-130		%Rec	1	9/28/2021 9:44:54 PM	62841
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/29/2021 12:23:32 AM	62835
Surr: BFB	108	70-130		%Rec	1	9/29/2021 12:23:32 AM	62835
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	9/29/2021 12:23:32 AM	62835
Toluene	ND	0.049		mg/Kg	1	9/29/2021 12:23:32 AM	62835
Ethylbenzene	ND	0.049		mg/Kg	1	9/29/2021 12:23:32 AM	62835
Xylenes, Total	ND	0.097		mg/Kg	1	9/29/2021 12:23:32 AM	62835
Surr: 4-Bromofluorobenzene	94.2	70-130		%Rec	1	9/29/2021 12:23:32 AM	62835

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

Analytical Report

Lab Order 2109D96

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-7 (7.5' - 12.5')

Project: Energy Resources Corp West Lovington

Collection Date: 9/19/2021 2:02:00 PM

Lab ID: 2109D96-002

Matrix: SOIL

Received Date: 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	60		mg/Kg	20	9/29/2021 12:20:32 PM	62898
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	9/28/2021 10:09:09 PM	62841
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/28/2021 10:09:09 PM	62841
Surr: DNOP	72.5	70-130		%Rec	1	9/28/2021 10:09:09 PM	62841
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/29/2021 12:47:12 AM	62835
Surr: BFB	109	70-130		%Rec	1	9/29/2021 12:47:12 AM	62835
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	9/29/2021 12:47:12 AM	62835
Toluene	ND	0.049		mg/Kg	1	9/29/2021 12:47:12 AM	62835
Ethylbenzene	ND	0.049		mg/Kg	1	9/29/2021 12:47:12 AM	62835
Xylenes, Total	ND	0.098		mg/Kg	1	9/29/2021 12:47:12 AM	62835
Surr: 4-Bromofluorobenzene	95.4	70-130		%Rec	1	9/29/2021 12:47:12 AM	62835

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

Analytical Report

Lab Order **2109D96**Date Reported: **10/13/2021****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Richard Olsone Hinkle Shanor Law Firm**Client Sample ID:** MW-7 (12.5' - 17.5')**Project:** Energy Resources Corp West Lovington**Collection Date:** 9/17/2021 2:30:00 PM**Lab ID:** 2109D96-003**Matrix:** SOIL**Received Date:** 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	60		mg/Kg	20	9/29/2021 12:32:57 PM	62898
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/28/2021 10:33:34 PM	62841
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/28/2021 10:33:34 PM	62841
Surr: DNOP	70.9	70-130		%Rec	1	9/28/2021 10:33:34 PM	62841
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/29/2021 1:10:44 AM	62835
Surr: BFB	105	70-130		%Rec	1	9/29/2021 1:10:44 AM	62835
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	9/29/2021 1:10:44 AM	62835
Toluene	ND	0.049		mg/Kg	1	9/29/2021 1:10:44 AM	62835
Ethylbenzene	ND	0.049		mg/Kg	1	9/29/2021 1:10:44 AM	62835
Xylenes, Total	ND	0.099		mg/Kg	1	9/29/2021 1:10:44 AM	62835
Surr: 4-Bromofluorobenzene	91.2	70-130		%Rec	1	9/29/2021 1:10:44 AM	62835

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

Analytical Report

Lab Order 2109D96

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-7 (17.5' - 20.0')

Project: Energy Resources Corp West Lovington

Collection Date: 9/19/2021 3:25:00 PM

Lab ID: 2109D96-004

Matrix: SOIL

Received Date: 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	60		mg/Kg	20	9/29/2021 12:45:22 PM	62898
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/28/2021 10:57:51 PM	62841
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/28/2021 10:57:51 PM	62841
Surr: DNOP	60.1	70-130	S	%Rec	1	9/28/2021 10:57:51 PM	62841
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/29/2021 1:34:18 AM	62835
Surr: BFB	106	70-130		%Rec	1	9/29/2021 1:34:18 AM	62835
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	9/29/2021 1:34:18 AM	62835
Toluene	ND	0.050		mg/Kg	1	9/29/2021 1:34:18 AM	62835
Ethylbenzene	ND	0.050		mg/Kg	1	9/29/2021 1:34:18 AM	62835
Xylenes, Total	ND	0.099		mg/Kg	1	9/29/2021 1:34:18 AM	62835
Surr: 4-Bromofluorobenzene	92.0	70-130		%Rec	1	9/29/2021 1:34:18 AM	62835

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

Analytical Report

Lab Order 2109D96

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-7 (20.0' - 25.0')

Project: Energy Resources Corp West Lovington

Collection Date: 9/19/2021 4:30:00 PM

Lab ID: 2109D96-005

Matrix: SOIL

Received Date: 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	60		mg/Kg	20	9/29/2021 1:22:37 PM	62898
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	9/28/2021 11:22:07 PM	62841
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/28/2021 11:22:07 PM	62841
Surr: DNOP	63.8	70-130	S	%Rec	1	9/28/2021 11:22:07 PM	62841
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/29/2021 1:57:46 AM	62835
Surr: BFB	107	70-130		%Rec	1	9/29/2021 1:57:46 AM	62835
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	9/29/2021 1:57:46 AM	62835
Toluene	ND	0.048		mg/Kg	1	9/29/2021 1:57:46 AM	62835
Ethylbenzene	ND	0.048		mg/Kg	1	9/29/2021 1:57:46 AM	62835
Xylenes, Total	ND	0.096		mg/Kg	1	9/29/2021 1:57:46 AM	62835
Surr: 4-Bromofluorobenzene	92.7	70-130		%Rec	1	9/29/2021 1:57:46 AM	62835

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

Analytical Report

Lab Order **2109D96**Date Reported: **10/13/2021****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Richard Olsone Hinkle Shanor Law Firm**Client Sample ID:** MW-7 (25.0' - 30.0')**Project:** Energy Resources Corp West Lovington**Collection Date:** 9/19/2021 4:40:00 PM**Lab ID:** 2109D96-006**Matrix:** SOIL**Received Date:** 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	60		mg/Kg	20	9/29/2021 1:35:02 PM	62898
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	9/28/2021 11:46:19 PM	62841
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/28/2021 11:46:19 PM	62841
Surr: DNOP	57.9	70-130	S	%Rec	1	9/28/2021 11:46:19 PM	62841
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/29/2021 2:21:20 AM	62835
Surr: BFB	109	70-130		%Rec	1	9/29/2021 2:21:20 AM	62835
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	9/29/2021 2:21:20 AM	62835
Toluene	ND	0.048		mg/Kg	1	9/29/2021 2:21:20 AM	62835
Ethylbenzene	ND	0.048		mg/Kg	1	9/29/2021 2:21:20 AM	62835
Xylenes, Total	ND	0.096		mg/Kg	1	9/29/2021 2:21:20 AM	62835
Surr: 4-Bromofluorobenzene	94.6	70-130		%Rec	1	9/29/2021 2:21:20 AM	62835

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

Analytical Report

Lab Order 2109D96

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsons Hinkle Shanor Law Firm

Client Sample ID: MW-7 (37.5' - 45.0')

Project: Energy Resources Corp West Lovington

Collection Date: 9/20/2021 7:42:00 AM

Lab ID: 2109D96-008

Matrix: SOIL

Received Date: 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	60		mg/Kg	20	9/29/2021 1:47:27 PM	62898

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

Analytical Report

Lab Order **2109D96**Date Reported: **10/13/2021****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Richard Olsons Hinkle Shanor Law Firm**Client Sample ID:** MW-7 (45.0' - 50.0')**Project:** Energy Resources Corp West Lovington**Collection Date:** 9/20/2021 9:59:00 AM**Lab ID:** 2109D96-009**Matrix:** SOIL**Received Date:** 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	60		mg/Kg	20	9/29/2021 1:59:52 PM	62898

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

Page 8 of 34

Analytical Report

Lab Order 2109D96

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-7 (50.0' - 52.5')

Project: Energy Resources Corp West Lovington

Collection Date: 9/20/2021 8:02:00 AM

Lab ID: 2109D96-010

Matrix: SOIL

Received Date: 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	60		mg/Kg	20	9/29/2021 2:12:17 PM	62898
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/29/2021 12:10:41 AM	62841
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/29/2021 12:10:41 AM	62841
Surr: DNOP	73.6	70-130		%Rec	1	9/29/2021 12:10:41 AM	62841
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/29/2021 4:18:54 AM	62835
Surr: BFB	105	70-130		%Rec	1	9/29/2021 4:18:54 AM	62835
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	9/29/2021 4:18:54 AM	62835
Toluene	ND	0.049		mg/Kg	1	9/29/2021 4:18:54 AM	62835
Ethylbenzene	ND	0.049		mg/Kg	1	9/29/2021 4:18:54 AM	62835
Xylenes, Total	ND	0.098		mg/Kg	1	9/29/2021 4:18:54 AM	62835
Surr: 4-Bromofluorobenzene	90.3	70-130		%Rec	1	9/29/2021 4:18:54 AM	62835

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

Analytical Report

Lab Order 2109D96

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-7 (52.5' - 55.0')

Project: Energy Resources Corp West Lovington

Collection Date: 9/20/2021 9:05:00 AM

Lab ID: 2109D96-011

Matrix: SOIL

Received Date: 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	60		mg/Kg	20	9/29/2021 2:24:41 PM	62898
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	9/29/2021 12:34:51 AM	62841
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	9/29/2021 12:34:51 AM	62841
Surr: DNOP	73.6	70-130		%Rec	1	9/29/2021 12:34:51 AM	62841
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/29/2021 4:42:26 AM	62835
Surr: BFB	107	70-130		%Rec	1	9/29/2021 4:42:26 AM	62835
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	9/29/2021 4:42:26 AM	62835
Toluene	ND	0.050		mg/Kg	1	9/29/2021 4:42:26 AM	62835
Ethylbenzene	ND	0.050		mg/Kg	1	9/29/2021 4:42:26 AM	62835
Xylenes, Total	ND	0.10		mg/Kg	1	9/29/2021 4:42:26 AM	62835
Surr: 4-Bromofluorobenzene	93.2	70-130		%Rec	1	9/29/2021 4:42:26 AM	62835

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

Analytical Report

Lab Order 2109D96

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsons Hinkle Shanor Law Firm

Client Sample ID: MW-7 (55.0' - 65.0')

Project: Energy Resources Corp West Lovington

Collection Date: 9/20/2021 9:52:00 AM

Lab ID: 2109D96-012

Matrix: SOIL

Received Date: 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	60		mg/Kg	20	9/29/2021 2:37:05 PM	62898

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2109D96**
Date Reported: **10/13/2021**

CLIENT: Richard Olsons Hinkle Shanor Law Firm
Project: Energy Resources Corp West Lovington
Lab ID: 2109D96-013

Matrix: SOIL

Client Sample ID: MW-7 (65.0' - 75.0')
Collection Date: 9/20/2021 10:50:00 AM
Received Date: 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	60		mg/Kg	20	9/29/2021 2:49:30 PM	62898

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2109D96**
Date Reported: **10/13/2021**

CLIENT: Richard Olsons Hinkle Shanor Law Firm
Project: Energy Resources Corp West Lovington
Lab ID: 2109D96-014

Matrix: SOIL

Client Sample ID: MW-7 (75.0' - 85.0')
Collection Date: 9/20/2021 11:13:00 AM
Received Date: 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	60		mg/Kg	20	9/29/2021 3:01:55 PM	62898

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

Analytical Report

Lab Order **2109D96**Date Reported: **10/13/2021****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Richard Olsons Hinkle Shanor Law Firm**Client Sample ID:** MW-7 (85.0' - 87.5')**Project:** Energy Resources Corp West Lovington**Collection Date:** 9/20/2021 11:55:00 AM**Lab ID:** 2109D96-015**Matrix:** SOIL**Received Date:** 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	60		mg/Kg	20	9/29/2021 3:14:20 PM	62898

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2109D96
Date Reported: 10/13/2021

CLIENT: Richard Olsons Hinkle Shanor Law Firm
Project: Energy Resources Corp West Lovington
Lab ID: 2109D96-016 Matrix: SOIL
Client Sample ID: MW-7 (87.5' - 97.5')
Collection Date: 9/20/2021 2:18:00 PM
Received Date: 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	60		mg/Kg	20	9/29/2021 3:51:33 PM	62898

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

Analytical Report

Lab Order **2109D96**Date Reported: **10/13/2021****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Richard Olsone Hinkle Shanor Law Firm**Client Sample ID:** MW-7 (97.5' - 107.5')**Project:** Energy Resources Corp West Lovington**Collection Date:** 9/20/2021 2:50:00 PM**Lab ID:** 2109D96-017**Matrix:** SOIL**Received Date:** 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	60		mg/Kg	20	9/29/2021 4:28:47 PM	62898
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND	8.3		mg/Kg	1	9/29/2021 12:59:08 AM	62841
Motor Oil Range Organics (MRO)	ND	41		mg/Kg	1	9/29/2021 12:59:08 AM	62841
Surr: DNOP	78.3	70-130		%Rec	1	9/29/2021 12:59:08 AM	62841
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/29/2021 5:05:58 AM	62835
Surr: BFB	108	70-130		%Rec	1	9/29/2021 5:05:58 AM	62835
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	9/29/2021 5:05:58 AM	62835
Toluene	ND	0.049		mg/Kg	1	9/29/2021 5:05:58 AM	62835
Ethylbenzene	ND	0.049		mg/Kg	1	9/29/2021 5:05:58 AM	62835
Xylenes, Total	ND	0.098		mg/Kg	1	9/29/2021 5:05:58 AM	62835
Surr: 4-Bromofluorobenzene	94.4	70-130		%Rec	1	9/29/2021 5:05:58 AM	62835

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2109D96**
Date Reported: **10/13/2021**

CLIENT: Richard Olsons Hinkle Shanor Law Firm
Project: Energy Resources Corp West Lovington
Lab ID: 2109D96-018

Matrix: SOIL

Client Sample ID: MW-7 (107.5' - 117.5')
Collection Date: 9/20/2021 3:45:00 PM
Received Date: 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	60		mg/Kg	20	9/29/2021 5:30:51 PM	62900

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

CLIENT: Richard Olsons Hinkle Shanor Law Firm

Client Sample ID: MW-7 (117.5' - 127.5')

Project: Energy Resources Corp West Lovington

Collection Date: 9/20/2021 4:36:00 PM

Lab ID: 2109D96-019

Matrix: SOIL

Received Date: 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	59		mg/Kg	20	9/29/2021 5:43:16 PM	62900

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

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Analytical Report

Lab Order 2109D96

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsons Hinkle Shanor Law Firm Client Sample ID: MW-7 (127.5' - 137.5')
Project: Energy Resources Corp West Lovington Collection Date: 9/20/2021 5:15:00 PM
Lab ID: 2109D96-020 Matrix: SOIL Received Date: 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	60		mg/Kg	20	9/29/2021 6:20:30 PM	62900

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsons Hinkle Shanor Law Firm
Project: Energy Resources Corp West Lovington
Lab ID: 2109D96-021

Matrix: SOIL

Client Sample ID: MW-7 (137.5' - 147.5')
Collection Date: 9/21/2021 8:38:00 AM
Received Date: 9/23/2021 9:10:00 AM

Analytical Report
Lab Order **2109D96**
Date Reported: **10/13/2021**

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	60		mg/Kg	20	9/29/2021 6:32:55 PM	62900

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

Analytical Report

Lab Order 2109D96

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-7 (148.5' - 157.5')

Project: Energy Resources Corp West Lovington

Collection Date: 9/21/2021 1:55:00 PM

Lab ID: 2109D96-022

Matrix: SOIL

Received Date: 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	60		mg/Kg	20	9/29/2021 6:45:20 PM	62900
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND	8.1		mg/Kg	1	9/29/2021 1:23:22 AM	62841
Motor Oil Range Organics (MRO)	ND	40		mg/Kg	1	9/29/2021 1:23:22 AM	62841
Surr: DNOP	80.4	70-130		%Rec	1	9/29/2021 1:23:22 AM	62841
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/29/2021 9:09:01 AM	62835
Surr: BFB	105	70-130		%Rec	1	9/29/2021 9:09:01 AM	62835
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	9/29/2021 9:09:01 AM	62835
Toluene	ND	0.049		mg/Kg	1	9/29/2021 9:09:01 AM	62835
Ethylbenzene	ND	0.049		mg/Kg	1	9/29/2021 9:09:01 AM	62835
Xylenes, Total	ND	0.097		mg/Kg	1	9/29/2021 9:09:01 AM	62835
Surr: 4-Bromofluorobenzene	91.2	70-130		%Rec	1	9/29/2021 9:09:01 AM	62835

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

Analytical Report

Lab Order 2109D96

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-7 (147.5' - 148.5')

Project: Energy Resources Corp West Lovington

Collection Date: 9/21/2021 1:57:00 PM

Lab ID: 2109D96-023

Matrix: SOIL

Received Date: 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	59		mg/Kg	20	9/29/2021 6:57:45 PM	62900
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	9/29/2021 2:36:19 AM	62842
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/29/2021 2:36:19 AM	62842
Surr: DNOP	79.1	70-130		%Rec	1	9/29/2021 2:36:19 AM	62842
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/28/2021 9:51:00 PM	62836
Surr: BFB	96.6	70-130		%Rec	1	9/28/2021 9:51:00 PM	62836
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	9/28/2021 9:51:00 PM	62836
Toluene	ND	0.049		mg/Kg	1	9/28/2021 9:51:00 PM	62836
Ethylbenzene	ND	0.049		mg/Kg	1	9/28/2021 9:51:00 PM	62836
Xylenes, Total	ND	0.098		mg/Kg	1	9/28/2021 9:51:00 PM	62836
Surr: 4-Bromofluorobenzene	79.6	70-130		%Rec	1	9/28/2021 9:51:00 PM	62836

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

Analytical Report

Lab Order **2109D96**Date Reported: **10/13/2021****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Richard Olsons Hinkle Shanor Law Firm**Client Sample ID:** MW-7 (157.5' - 167.5')**Project:** Energy Resources Corp West Lovington**Collection Date:** 9/22/2021 8:00:00 AM**Lab ID:** 2109D96-024**Matrix:** SOIL**Received Date:** 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	61		mg/Kg	20	9/29/2021 7:10:10 PM	62900

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2109D96
Date Reported: 10/13/2021

CLIENT: Richard Olsons Hinkle Shanor Law Firm

Client Sample ID: MW-7 (167.5' - 177.5')

Project: Energy Resources Corp West Lovington

Collection Date: 9/22/2021 8:40:00 AM

Lab ID: 2109D96-025

Matrix: SOIL

Received Date: 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	60		mg/Kg	20	9/29/2021 7:22:34 PM	62900

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

Analytical Report

Lab Order 2109D96

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsons Hinkle Shanor Law Firm
Project: Energy Resources Corp West Lovington
Lab ID: 2109D96-026

Matrix: SOIL
Client Sample ID: MW-7 (177.5' - 187.5')
Collection Date: 9/22/2021 9:30:00 AM
Received Date: 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	60		mg/Kg	20	9/29/2021 7:34:58 PM	62900

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

Analytical Report

Lab Order 2109D96

Date Reported: 10/13/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-7 (187.5' - 197.5')

Project: Energy Resources Corp West Lovington

Collection Date: 9/22/2021 10:20:00 AM

Lab ID: 2109D96-027

Matrix: SOIL

Received Date: 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND	60		mg/Kg	20	9/29/2021 7:47:23 PM	62900
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	9/29/2021 3:49:04 AM	62842
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/29/2021 3:49:04 AM	62842
Surr: DNOP	87.6	70-130		%Rec	1	9/29/2021 3:49:04 AM	62842
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/28/2021 10:50:00 PM	62836
Surr: BFB	90.5	70-130		%Rec	1	9/28/2021 10:50:00 PM	62836
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	9/28/2021 10:50:00 PM	62836
Toluene	ND	0.048		mg/Kg	1	9/28/2021 10:50:00 PM	62836
Ethylbenzene	ND	0.048		mg/Kg	1	9/28/2021 10:50:00 PM	62836
Xylenes, Total	ND	0.096		mg/Kg	1	9/28/2021 10:50:00 PM	62836
Surr: 4-Bromofluorobenzene	78.2	70-130		%Rec	1	9/28/2021 10:50:00 PM	62836

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

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Analytical Report

Lab Order **2109D96**Date Reported: **10/13/2021****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Richard Olsons Hinkle Shanor Law Firm**Client Sample ID:** Field Blank**Project:** Energy Resources Corp West Lovington**Collection Date:** 9/22/2021 2:30:00 PM**Lab ID:** 2109D96-028**Matrix:** AQUEOUS**Received Date:** 9/23/2021 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/25/2021 9:04:00 PM	BW8160
Toluene	ND	1.0		µg/L	1	9/25/2021 9:04:00 PM	BW8160
Ethylbenzene	ND	1.0		µg/L	1	9/25/2021 9:04:00 PM	BW8160
Xylenes, Total	ND	2.0		µg/L	1	9/25/2021 9:04:00 PM	BW8160
Surr: 4-Bromofluorobenzene	85.2	70-130		%Rec	1	9/25/2021 9:04:00 PM	BW8160

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	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		

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2109D96

13-Oct-21

Client: Richard Olsons Hinkle Shanor Law Firm
Project: Energy Resources Corp West Lovington Strawn

Sample ID: MB-62898	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 62898	RunNo: 81677								
Prep Date: 9/29/2021	Analysis Date: 9/29/2021	SeqNo: 2886749	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-62898	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 62898	RunNo: 81677								
Prep Date: 9/29/2021	Analysis Date: 9/29/2021	SeqNo: 2886750	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.5	90	110			

Sample ID: MB-62900	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 62900	RunNo: 81677								
Prep Date: 9/29/2021	Analysis Date: 9/29/2021	SeqNo: 2886779	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-62900	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 62900	RunNo: 81677								
Prep Date: 9/29/2021	Analysis Date: 9/29/2021	SeqNo: 2886780	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.4	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

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2109D96

13-Oct-21

Client: Richard Olsons Hinkle Shanor Law Firm
Project: Energy Resources Corp West Lovington Strawn

Sample ID: MB-62842	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 62842	RunNo: 81656								
Prep Date: 9/27/2021	Analysis Date: 9/29/2021	SeqNo: 2886339	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	7.6		10.00		76.4	70	130			

Sample ID: 2109D96-023AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: MW-7 (147.5' - 148.5')	Batch ID: 62842	RunNo: 81656								
Prep Date: 9/27/2021	Analysis Date: 9/29/2021	SeqNo: 2888222	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	9.3	46.43	0	101	39.3	155			
Surr: DNOP	3.3		4.643		71.9	70	130			

Sample ID: 2109D96-023AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: MW-7 (147.5' - 148.5')	Batch ID: 62842	RunNo: 81656								
Prep Date: 9/27/2021	Analysis Date: 9/29/2021	SeqNo: 2888223	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	9.9	49.41	0	100	39.3	155	4.92	23.4	
Surr: DNOP	3.5		4.941		71.8	70	130	0	0	

Sample ID: LCS-62841	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 62841	RunNo: 81656								
Prep Date: 9/27/2021	Analysis Date: 9/28/2021	SeqNo: 2888240	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	98.3	68.9	135			
Surr: DNOP	4.2		5.000		84.6	70	130			

Sample ID: MB-62841	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 62841	RunNo: 81656								
Prep Date: 9/27/2021	Analysis Date: 9/28/2021	SeqNo: 2888241	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.0		10.00		89.8	70	130			

Qualifiers:

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

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

Page 29 of 34

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2109D96

13-Oct-21

Client: Richard Olsons Hinkle Shanor Law Firm
Project: Energy Resources Corp West Lovington Strawn

Sample ID: mb-62835	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 62835	RunNo: 81634								
Prep Date: 9/26/2021	Analysis Date: 9/29/2021	SeqNo: 2885093 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		110	70	130			

Sample ID: lcs-62835	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 62835	RunNo: 81634								
Prep Date: 9/26/2021	Analysis Date: 9/29/2021	SeqNo: 2885094 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	111	78.6	131			
Surr: BFB	1200		1000		120	70	130			

Sample ID: lcs-62836	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 62836	RunNo: 81641								
Prep Date: 9/26/2021	Analysis Date: 9/28/2021	SeqNo: 2885614 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	107	78.6	131			
Surr: BFB	1100		1000		106	70	130			

Sample ID: mb-62836	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 62836	RunNo: 81641								
Prep Date: 9/26/2021	Analysis Date: 9/28/2021	SeqNo: 2885615 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	880		1000		87.6	70	130			

Sample ID: 2109d96-023ams	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: MW-7 (147.5' - 148.5')	Batch ID: 62836	RunNo: 81641								
Prep Date: 9/26/2021	Analysis Date: 9/28/2021	SeqNo: 2885617 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	4.9	24.73	0	110	61.3	114			
Surr: BFB	1000		989.1		104	70	130			

Sample ID: 2109d96-023amsd	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: MW-7 (147.5' - 148.5')	Batch ID: 62836	RunNo: 81641								
Prep Date: 9/26/2021	Analysis Date: 9/28/2021	SeqNo: 2885618 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2109D96
13-Oct-21

Client: Richard Olsons Hinkle Shanor Law Firm

Project: Energy Resources Corp West Lovington Strawn

Sample ID: 2109d96-023amsd		SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range						
Client ID: MW-7 (147.5' - 148.5')		Batch ID: 62836		RunNo: 81641						
Prep Date: 9/26/2021		Analysis Date: 9/28/2021		SeqNo: 2885618		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	4.9	24.63	0	112	61.3	114	1.80	20	
Surr: BFB	1100		985.2		108	70	130	0	0	

Qualifiers:

- *

Value exceeds Maximum Contaminant Level.
- D

Sample Diluted Due to Matrix
- H

Holding times for preparation or analysis exceeded
- ND

Not Detected at the Reporting Limit
- PQL

Practical Quantitative Limit
- S

% Recovery outside of range due to dilution or matrix
- B

Analyte detected in the associated Method Blank
- E

Value above quantitation range
- J

Analyte detected below quantitation limits
- P

Sample pH Not In Range
- RL

Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2109D96

13-Oct-21

Client: Richard Olsons Hinkle Shanor Law Firm**Project:** Energy Resources Corp West Lovington Strawn

Sample ID: mb-62835	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 62835	RunNo: 81634								
Prep Date: 9/26/2021	Analysis Date: 9/29/2021	SeqNo: 2885143	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.96		1.000		96.0	70	130			

Sample ID: LCS-62835	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 62835	RunNo: 81634								
Prep Date: 9/26/2021	Analysis Date: 9/29/2021	SeqNo: 2885144	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	98.0	80	120			
Toluene	0.99	0.050	1.000	0	98.9	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.4	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.1	80	120			
Surr: 4-Bromofluorobenzene	0.92		1.000		91.9	70	130			

Sample ID: lcs-62836	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 62836	RunNo: 81641								
Prep Date: 9/26/2021	Analysis Date: 9/28/2021	SeqNo: 2885656	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	94.3	80	120			
Toluene	0.93	0.050	1.000	0	92.6	80	120			
Ethylbenzene	0.93	0.050	1.000	0	93.3	80	120			
Xylenes, Total	2.8	0.10	3.000	0	93.7	80	120			
Surr: 4-Bromofluorobenzene	0.81		1.000		81.2	70	130			

Sample ID: mb-62836	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 62836	RunNo: 81641								
Prep Date: 9/26/2021	Analysis Date: 9/28/2021	SeqNo: 2885657	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.76		1.000		76.0	70	130			

Qualifiers:

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

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2109D96

13-Oct-21

Client: Richard Olsons Hinkle Shanor Law Firm
Project: Energy Resources Corp West Lovington Strawn

Sample ID: 2109d96-027ams		SampType: MS			TestCode: EPA Method 8021B: Volatiles					
Client ID: MW-7 (187.5' - 197.5'		Batch ID: 62836			RunNo: 81641					
Prep Date: 9/26/2021		Analysis Date: 9/28/2021			SeqNo: 2885660		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	0.9804	0	90.2	80	120			
Toluene	0.89	0.049	0.9804	0	91.2	80	120			
Ethylbenzene	0.90	0.049	0.9804	0	92.2	80	120			
Xylenes, Total	2.7	0.098	2.941	0	92.5	80	120			
Surr: 4-Bromofluorobenzene	0.76		0.9804		77.6	70	130			

Sample ID: 2109d96-027amsd		SampType: MSD			TestCode: EPA Method 8021B: Volatiles					
Client ID: MW-7 (187.5' - 197.5')		Batch ID: 62836			RunNo: 81641					
Prep Date: 9/26/2021		Analysis Date: 9/28/2021			SeqNo: 2885661		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.025	0.9891	0	88.3	80	120	1.22	20	
Toluene	0.86	0.049	0.9891	0	87.2	80	120	3.66	20	
Ethylbenzene	0.87	0.049	0.9891	0	88.1	80	120	3.60	20	
Xylenes, Total	2.6	0.099	2.967	0	88.3	80	120	3.68	20	
Surr: 4-Bromofluorobenzene	0.80		0.9891		80.6	70	130	0	0	

Qualifiers:

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

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2109D96

13-Oct-21

Client: Richard Olsons Hinkle Shanor Law Firm
Project: Energy Resources Corp West Lovington Strawn

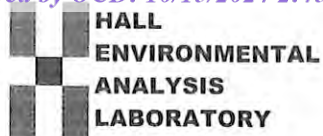
Sample ID: 100ng BTEX lcs	SampType: LCS			TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSW	Batch ID: BW81606			RunNo: 81606							
Prep Date:	Analysis Date: 9/25/2021			SeqNo: 2883874		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	19	1.0	20.00	0	94.0	80	120				
Toluene	19	1.0	20.00	0	95.1	80	120				
Ethylbenzene	20	1.0	20.00	0	98.3	80	120				
Xylenes, Total	59	2.0	60.00	0	99.2	80	120				
Surr: 4-Bromofluorobenzene	18		20.00		89.2	70	130				

Sample ID: mb	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles							
Client ID: PBW	Batch ID: BW81606			RunNo: 81606							
Prep Date:	Analysis Date: 9/25/2021			SeqNo: 2883875		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									
Xylenes, Total	ND	2.0									
Surr: 4-Bromofluorobenzene	18		20.00		89.4	70	130				

Qualifiers:

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

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit



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

Sample Log-In Check List

Client Name: Richard Olsone Hinkle
Shanor Law Firm

Work Order Number: 2109D96

RcptNo: 1

Received By: Tracy Casarrubias 9/23/2021 9:10:00 AM

Completed By: Cheyenne Cason 9/24/2021 9:03:37 AM

Reviewed By: TML

9/24/21

Chain of Custody

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

Log In

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

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by: JN 9/24/21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.3	Good				

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

☒ Standard ☐ Rush

Project Name: Energy Resources Corp
West Livingston Strawn Unit #8
Unit L, Sec. 34 T. 15S R. 34E. Lea Co.
NM

Project #: *Delineation of Groundwater*
OCD Case #: *IRP-2457*

Project Manager:

Wayne Price

Sampler: L. Anderson PhD / C. M. Barnhill PF

On Ice: ☒ Yes ☐ No

Sample Temperature: $5.2 \pm 0.1 = 5.3$

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Container	Preservative	
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98	98	
99	99	
100	100	

[illegible]

Remarks: ~~X~~ Please retain samples in case
of additional sampling requirements.
Please send results to CM3@cmbeuro.com!!
Any questions? Please call CM3 @
575. 626.1615

is possibility. Any sub-contracted data will be clearly notated on the analytical report.

Project Manager:	Wayne Price
Sampler:	Anderson #40 / CMBarrhill, PO
On Ice:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Temperature:	5.2 to 1 = 53

[illegible]

Remarks: ~~X~~ Please retain Soil Samples in case of additional sampling requirement.
Please send Results to: cmbarbora@gmail.com
Any questions? Please Call cmbarbora 575.660.1611

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

Released to Imaging: 2/21/2025 11:17:21 AM



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

September 29, 2021

Wayne Price

Richard Olsons Hinkle Shanor Law Firm

P.O. Box 10

Roswell, NM 88202

TEL: (575) 622-6510

FAX:

RE: Energy Resources Corp West Lovington Strown Unit 8
Unit L Sec 34 T 15S R 34E

OrderNo.: 2109B07

Dear Wayne Price:

Hall Environmental Analysis Laboratory received 28 sample(s) on 9/21/2021 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2109B07

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-8 (0'-2.5')

Project: Energy Resources Corp West Lovington

Collection Date: 9/15/2021 5:00:00 PM

Lab ID: 2109B07-001

Matrix: SOIL

Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		9.0		mg/Kg	1	9/23/2021
Motor Oil Range Organics (MRO)	ND		45		mg/Kg	1	9/23/2021
Surr: DNOP	76.8		70-130		%Rec	1	9/23/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		4.9		mg/Kg	1	9/23/2021
Surr: BFB	87.1		70-130		%Rec	1	9/23/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.024		mg/Kg	1	9/23/2021
Toluene	ND		0.049		mg/Kg	1	9/23/2021
Ethylbenzene	ND		0.049		mg/Kg	1	9/23/2021
Xylenes, Total	ND		0.098		mg/Kg	1	9/23/2021
Surr: 4-Bromofluorobenzene	75.6		70-130		%Rec	1	9/23/2021
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/24/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109B07

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-8 (2.5' - 7.5')

Project: Energy Resources Corp West Lovington

Collection Date: 9/15/2021 5:10:00 PM

Lab ID: 2109B07-002

Matrix: SOIL

Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		9.8		mg/Kg	1	9/23/2021
Motor Oil Range Organics (MRO)	ND		49		mg/Kg	1	9/23/2021
Surr: DNOP	82.9		70-130		%Rec	1	9/23/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		4.7		mg/Kg	1	9/23/2021
Surr: BFB	93.5		70-130		%Rec	1	9/23/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.024		mg/Kg	1	9/23/2021
Toluene	ND		0.047		mg/Kg	1	9/23/2021
Ethylbenzene	ND		0.047		mg/Kg	1	9/23/2021
Xylenes, Total	ND		0.094		mg/Kg	1	9/23/2021
Surr: 4-Bromofluorobenzene	79.4		70-130		%Rec	1	9/23/2021
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		61		mg/Kg	20	9/24/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109B07

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-8 (7.5' - 15.0')

Project: Energy Resources Corp West Lovington

Collection Date: 9/15/2021 5:17:00 PM

Lab ID: 2109B07-003

Matrix: SOIL

Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		9.8		mg/Kg	1	9/23/2021
Motor Oil Range Organics (MRO)	ND		49		mg/Kg	1	9/23/2021
Surr: DNOP	87.4		70-130		%Rec	1	9/23/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		4.8		mg/Kg	1	9/23/2021
Surr: BFB	90.8		70-130		%Rec	1	9/23/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.024		mg/Kg	1	9/23/2021
Toluene	ND		0.048		mg/Kg	1	9/23/2021
Ethylbenzene	ND		0.048		mg/Kg	1	9/23/2021
Xylenes, Total	ND		0.095		mg/Kg	1	9/23/2021
Surr: 4-Bromofluorobenzene	78.4		70-130		%Rec	1	9/23/2021
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/24/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL
B = Analyte detected in the associated Method Blank
P = Sample pH Not in Range
S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109B07

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-8 (15.0' - 17.5')

Project: Energy Resources Corp West Lovington

Collection Date: 9/15/2021 5:35:00 PM

Lab ID: 2109B07-004

Matrix: SOIL

Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		9.5		mg/Kg	1	9/23/2021
Motor Oil Range Organics (MRO)	ND		48		mg/Kg	1	9/23/2021
Surr: DNOP	72.7		70-130		%Rec	1	9/23/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		5.0		mg/Kg	1	9/24/2021
Surr: BFB	89.4		70-130		%Rec	1	9/24/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.025		mg/Kg	1	9/24/2021
Toluene	ND		0.050		mg/Kg	1	9/24/2021
Ethylbenzene	ND		0.050		mg/Kg	1	9/24/2021
Xylenes, Total	ND		0.10		mg/Kg	1	9/24/2021
Surr: 4-Bromofluorobenzene	76.0		70-130		%Rec	1	9/24/2021
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/24/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109B07

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-8 (17.5' - 23.5')

Project: Energy Resources Corp West Lovington

Collection Date: 9/16/2021 8:16:00 AM

Lab ID: 2109B07-005

Matrix: SOIL

Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		9.6		mg/Kg	1	9/23/2021
Motor Oil Range Organics (MRO)	ND		48		mg/Kg	1	9/23/2021
Surr: DNOP	78.9		70-130		%Rec	1	9/23/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		4.9		mg/Kg	1	9/24/2021
Surr: BFB	91.0		70-130		%Rec	1	9/24/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.024		mg/Kg	1	9/24/2021
Toluene	ND		0.049		mg/Kg	1	9/24/2021
Ethylbenzene	ND		0.049		mg/Kg	1	9/24/2021
Xylenes, Total	ND		0.097		mg/Kg	1	9/24/2021
Surr: 4-Bromofluorobenzene	77.2		70-130		%Rec	1	9/24/2021
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/24/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109B07

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-8 (23.5' - 27.5')

Project: Energy Resources Corp West Lovington

Collection Date: 9/16/2021 8:30:00 AM

Lab ID: 2109B07-006

Matrix: SOIL

Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		9.8		mg/Kg	1	9/23/2021
Motor Oil Range Organics (MRO)	ND		49		mg/Kg	1	9/23/2021
Surr: DNOP	84.4		70-130		%Rec	1	9/23/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		4.6		mg/Kg	1	9/24/2021
Surr: BFB	89.7		70-130		%Rec	1	9/24/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.023		mg/Kg	1	9/24/2021
Toluene	ND		0.046		mg/Kg	1	9/24/2021
Ethylbenzene	ND		0.046		mg/Kg	1	9/24/2021
Xylenes, Total	ND		0.091		mg/Kg	1	9/24/2021
Surr: 4-Bromofluorobenzene	78.7		70-130		%Rec	1	9/24/2021
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/24/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109B07

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-8 (27.5' - 35.0')

Project: Energy Resources Corp West Lovington

Collection Date: 9/16/2021 8:37:00 AM

Lab ID: 2109B07-007

Matrix: SOIL

Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		9.6		mg/Kg	1	9/23/2021
Motor Oil Range Organics (MRO)	ND		48		mg/Kg	1	9/23/2021
Surr: DNOP	79.4		70-130		%Rec	1	9/23/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		4.7		mg/Kg	1	9/24/2021
Surr: BFB	93.8		70-130		%Rec	1	9/24/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.024		mg/Kg	1	9/24/2021
Toluene	ND		0.047		mg/Kg	1	9/24/2021
Ethylbenzene	ND		0.047		mg/Kg	1	9/24/2021
Xylenes, Total	ND		0.094		mg/Kg	1	9/24/2021
Surr: 4-Bromofluorobenzene	79.1		70-130		%Rec	1	9/24/2021
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/24/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109B07

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-8 (35.0' - 40.0')

Project: Energy Resources Corp West Lovington

Collection Date: 9/16/2021 8:45:00 AM

Lab ID: 2109B07-008

Matrix: SOIL

Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		9.5		mg/Kg	1	9/23/2021
Motor Oil Range Organics (MRO)	ND		48		mg/Kg	1	9/23/2021
Surr: DNOP	80.6		70-130		%Rec	1	9/23/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		4.6		mg/Kg	1	9/24/2021
Surr: BFB	89.0		70-130		%Rec	1	9/24/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.023		mg/Kg	1	9/24/2021
Toluene	ND		0.046		mg/Kg	1	9/24/2021
Ethylbenzene	ND		0.046		mg/Kg	1	9/24/2021
Xylenes, Total	ND		0.091		mg/Kg	1	9/24/2021
Surr: 4-Bromofluorobenzene	77.1		70-130		%Rec	1	9/24/2021
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/24/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2109B07
Date Reported: 9/29/2021

CLIENT: Richard Olsons Hinkle Shanor Law Firm Client Sample ID: MW-8 (40.0' - 47.5')
Project: Energy Resources Corp West Lovington Collection Date: 9/16/2021 9:50:00 AM
Lab ID: 2109B07-009 Matrix: SOIL Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/24/2021

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

Qualifiers:	* = Value exceeds Maximum Contaminant Level(MCL)	ND = Not Detected at the RL	
	MCL = EPA Maximum Contamination Level	B = Analyte detected in the associated Method Blank	
	RL = Reporting Limit: Laboratory Detection Level	P = Sample pH Not in Range	Page 9 of 28
	H = Holding times for preparation or analysis exceeded	S = % Recovery outside of range due to dilution or matrix	

Analytical Report

Lab Order 2109B07

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-8 (47.5' - 51.0')

Project: Energy Resources Corp West Lovington

Collection Date: 9/16/2021 10:13:00 AM

Lab ID: 2109B07-010

Matrix: SOIL

Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		9.7		mg/Kg	1	9/23/2021
Motor Oil Range Organics (MRO)	ND		49		mg/Kg	1	9/23/2021
Surr: DNOP	87.7		70-130		%Rec	1	9/23/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		5.0		mg/Kg	1	9/24/2021
Surr: BFB	86.3		70-130		%Rec	1	9/24/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.025		mg/Kg	1	9/24/2021
Toluene	ND		0.050		mg/Kg	1	9/24/2021
Ethylbenzene	ND		0.050		mg/Kg	1	9/24/2021
Xylenes, Total	ND		0.099		mg/Kg	1	9/24/2021
Surr: 4-Bromofluorobenzene	74.8		70-130		%Rec	1	9/24/2021
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/24/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109B07

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-8 (51.0' - 52.0')

Project: Energy Resources Corp West Lovington

Collection Date: 9/16/2021 10:15:00 AM

Lab ID: 2109B07-011

Matrix: SOIL

Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		9.7		mg/Kg	1	9/23/2021
Motor Oil Range Organics (MRO)	ND		48		mg/Kg	1	9/23/2021
Surr: DNOP	85.3		70-130		%Rec	1	9/23/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		4.7		mg/Kg	1	9/24/2021
Surr: BFB	88.6		70-130		%Rec	1	9/24/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.024		mg/Kg	1	9/24/2021
Toluene	ND		0.047		mg/Kg	1	9/24/2021
Ethylbenzene	ND		0.047		mg/Kg	1	9/24/2021
Xylenes, Total	ND		0.095		mg/Kg	1	9/24/2021
Surr: 4-Bromofluorobenzene	77.6		70-130		%Rec	1	9/24/2021
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/24/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109B07

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-8 (52.0' - 57.5')

Project: Energy Resources Corp West Lovington

Collection Date: 9/16/2021 10:17:00 AM

Lab ID: 2109B07-012

Matrix: SOIL

Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		7.7		mg/Kg	1	9/23/2021
Motor Oil Range Organics (MRO)	ND		39		mg/Kg	1	9/23/2021
Surr: DNOP	86.8		70-130		%Rec	1	9/23/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		4.8		mg/Kg	1	9/24/2021
Surr: BFB	88.6		70-130		%Rec	1	9/24/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.024		mg/Kg	1	9/24/2021
Toluene	ND		0.048		mg/Kg	1	9/24/2021
Ethylbenzene	ND		0.048		mg/Kg	1	9/24/2021
Xylenes, Total	ND		0.096		mg/Kg	1	9/24/2021
Surr: 4-Bromofluorobenzene	77.0		70-130		%Rec	1	9/24/2021
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		59		mg/Kg	20	9/24/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2109B07
Date Reported: 9/29/2021

CLIENT: Richard Olsons Hinkle Shanor Law Firm Client Sample ID: MW-8 (57.5' - 67.5')
Project: Energy Resources Corp West Lovington Collection Date: 9/16/2021 2:14:00 PM
Lab ID: 2109B07-013 Matrix: SOIL Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/24/2021

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

Qualifiers:	* = Value exceeds Maximum Contaminant Level(MCL)	ND = Not Detected at the RL
	MCL = EPA Maximum Contamination Level	B = Analyte detected in the associated Method Blank
	RL = Reporting Limit: Laboratory Detection Level	P = Sample pH Not in Range
	H = Holding times for preparation or analysis exceeded	S = % Recovery outside of range due to dilution or matrix

Analytical Report

Lab Order 2109B07

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsons Hinkle Shanor Law Firm

Client Sample ID: MW-8 (67.5' - 77.5')

Project: Energy Resources Corp West Lovington

Collection Date: 9/16/2021 2:35:00 PM

Lab ID: 2109B07-014

Matrix: SOIL

Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/24/2021

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

Qualifiers:

* = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109B07

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsons Hinkle Shanor Law Firm

Client Sample ID: MW-8 (80.0' - 87.5')

Project: Energy Resources Corp West Lovington

Collection Date: 9/16/2021 2:56:00 PM

Lab ID: 2109B07-015

Matrix: SOIL

Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/24/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109B07

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsons Hinkle Shanor Law Firm

Client Sample ID: MW-8 (87.5' - 97.5')

Project: Energy Resources Corp West Lovington

Collection Date: 9/16/2021 3:53:00 PM

Lab ID: 2109B07-016

Matrix: SOIL

Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/24/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109B07

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-8 (97.5' - 107.5')

Project: Energy Resources Corp West Lovington

Collection Date: 9/16/2021 4:22:00 PM

Lab ID: 2109B07-017

Matrix: SOIL

Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		9.4		mg/Kg	1	9/23/2021
Motor Oil Range Organics (MRO)	ND		47		mg/Kg	1	9/23/2021
Surr: DNOP	88.3		70-130		%Rec	1	9/23/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		4.7		mg/Kg	1	9/24/2021
Surr: BFB	89.1		70-130		%Rec	1	9/24/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.023		mg/Kg	1	9/24/2021
Toluene	ND		0.047		mg/Kg	1	9/24/2021
Ethylbenzene	ND		0.047		mg/Kg	1	9/24/2021
Xylenes, Total	ND		0.094		mg/Kg	1	9/24/2021
Surr: 4-Bromofluorobenzene	77.9		70-130		%Rec	1	9/24/2021
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		61		mg/Kg	20	9/24/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109B07

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsons Hinkle Shanor Law Firm

Client Sample ID: MW-8 (107.5' - 117.5')

Project: Energy Resources Corp West Lovington

Collection Date: 9/16/2021 5:03:00 PM

Lab ID: 2109B07-018

Matrix: SOIL

Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/24/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2109B07
Date Reported: 9/29/2021

CLIENT: Richard Olsons Hinkle Shanor Law Firm Client Sample ID: MW-8 (117.5' - 127.5')
Project: Energy Resources Corp West Lovington Collection Date: 9/17/2021 7:58:00 AM
Lab ID: 2109B07-019 Matrix: SOIL Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/24/2021

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

Qualifiers:	* = Value exceeds Maximum Contaminant Level(MCL)	ND = Not Detected at the RL
	MCL = EPA Maximum Contamination Level	B = Analyte detected in the associated Method Blank
	RL = Reporting Limit: Laboratory Detection Level	P = Sample pH Not in Range
	H = Holding times for preparation or analysis exceeded	S = % Recovery outside of range due to dilution or matrix

Analytical Report

Lab Order 2109B07

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsons Hinkle Shanor Law Firm

Client Sample ID: MW-8 (127.5' - 137.5')

Project: Energy Resources Corp West Lovington

Collection Date: 9/17/2021 8:30:00 AM

Lab ID: 2109B07-020

Matrix: SOIL

Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/24/2021

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

Qualifiers:

* = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109B07

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsons Hinkle Shanor Law Firm

Client Sample ID: MW-8 (137.5' - 145.0')

Project: Energy Resources Corp West Lovington

Collection Date: 9/17/2021 9:13:00 AM

Lab ID: 2109B07-021

Matrix: SOIL

Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/24/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109B07

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-8 (145.0' - 155.0')

Project: Energy Resources Corp West Lovington

Collection Date: 9/17/2021 9:54:00 AM

Lab ID: 2109B07-022

Matrix: SOIL

Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		8.5		mg/Kg	1	9/23/2021
Motor Oil Range Organics (MRO)	ND		43		mg/Kg	1	9/23/2021
Surr: DNOP	88.9		70-130		%Rec	1	9/23/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		4.7		mg/Kg	1	9/24/2021
Surr: BFB	92.1		70-130		%Rec	1	9/24/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.024		mg/Kg	1	9/24/2021
Toluene	ND		0.047		mg/Kg	1	9/24/2021
Ethylbenzene	ND		0.047		mg/Kg	1	9/24/2021
Xylenes, Total	ND		0.095		mg/Kg	1	9/24/2021
Surr: 4-Bromofluorobenzene	80.0		70-130		%Rec	1	9/24/2021
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/24/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109B07

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsons Hinkle Shanor Law Firm

Client Sample ID: MW-8 (155.0' - 157.5')

Project: Energy Resources Corp West Lovington

Collection Date: 9/17/2021 10:34:00 AM

Lab ID: 2109B07-023

Matrix: SOIL

Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/24/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109B07

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsons Hinkle Shanor Law Firm

Client Sample ID: MW-8 (157.5' - 167.5')

Project: Energy Resources Corp West Lovington

Collection Date: 9/17/2021 11:59:00 AM

Lab ID: 2109B07-024

Matrix: SOIL

Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/24/2021

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

Qualifiers:

* = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2109B07
Date Reported: 9/29/2021

CLIENT: Richard Olsons Hinkle Shanor Law Firm Client Sample ID: MW-8 (167.5' - 177.5')
Project: Energy Resources Corp West Lovington Collection Date: 9/17/2021 12:27:00 PM
Lab ID: 2109B07-025 Matrix: SOIL Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/24/2021

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

Qualifiers:	* = Value exceeds Maximum Contaminant Level(MCL)	ND = Not Detected at the RL	
	MCL = EPA Maximum Contamination Level	B = Analyte detected in the associated Method Blank	
	RL = Reporting Limit: Laboratory Detection Level	P = Sample pH Not in Range	Page 25 of 28
	H = Holding times for preparation or analysis exceeded	S = % Recovery outside of range due to dilution or matrix	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2109B07
Date Reported: 9/29/2021

CLIENT: Richard Olsons Hinkle Shanor Law Firm Client Sample ID: MW-8 (177.5' - 187.5')
Project: Energy Resources Corp West Lovington Collection Date: 9/17/2021 1:25:00 PM
Lab ID: 2109B07-026 Matrix: SOIL Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/25/2021

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

Qualifiers:	* = Value exceeds Maximum Contaminant Level(MCL)	ND = Not Detected at the RL
	MCL = EPA Maximum Contamination Level	B = Analyte detected in the associated Method Blank
	RL = Reporting Limit: Laboratory Detection Level	P = Sample pH Not in Range
	H = Holding times for preparation or analysis exceeded	S = % Recovery outside of range due to dilution or matrix

Analytical Report

Lab Order 2109B07

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-8 (187.5' - 197.5')

Project: Energy Resources Corp West Lovington

Collection Date: 9/17/2021 2:55:00 PM

Lab ID: 2109B07-027

Matrix: SOIL

Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		10		mg/Kg	1	9/24/2021
Motor Oil Range Organics (MRO)	ND		50		mg/Kg	1	9/24/2021
Surr: DNOP	96.2		70-130		%Rec	1	9/24/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND		4.9		mg/Kg	1	9/23/2021
Surr: BFB	102		70-130		%Rec	1	9/23/2021
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND		0.024		mg/Kg	1	9/23/2021
Toluene	ND		0.049		mg/Kg	1	9/23/2021
Ethylbenzene	ND		0.049		mg/Kg	1	9/23/2021
Xylenes, Total	ND		0.097		mg/Kg	1	9/23/2021
Surr: 4-Bromofluorobenzene	90.0		70-130		%Rec	1	9/23/2021
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/25/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

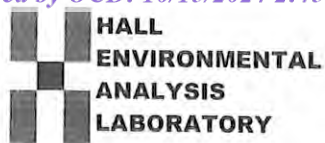
Analytical Report
Lab Order 2109B07
Date Reported: 9/29/2021

CLIENT: Richard Olsons Hinkle Shanor Law Firm Client Sample ID: MW-8 Field Blank
Project: Energy Resources Corp West Lovington Collection Date: 9/20/2021 1:20:00 PM
Lab ID: 2109B07-028 Matrix: AQUEOUS Received Date: 9/21/2021 9:23:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND		1.0		µg/L	1	9/25/2021
Toluene	ND		1.0		µg/L	1	9/25/2021
Ethylbenzene	ND		1.0		µg/L	1	9/25/2021
Xylenes, Total	ND		2.0		µg/L	1	9/25/2021
Surr: 4-Bromofluorobenzene	82.3		70-130		%Rec	1	9/25/2021

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

Qualifiers:	* = Value exceeds Maximum Contaminant Level(MCL)	ND = Not Detected at the RL
	MCL = EPA Maximum Contamination Level	B = Analyte detected in the associated Method Blank
	RL = Reporting Limit: Laboratory Detection Level	P = Sample pH Not in Range
	H = Holding times for preparation or analysis exceeded	S = % Recovery outside of range due to dilution or matrix



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

Sample Log-In Check List

Client Name: **Richard Olsone Hinkle
Shanor Law Firm**

Work Order Number: **2109B07**

RcptNo: 1

Received By: **Kasandra Payan** 9/21/2021 9:23:00 AM

Completed By: **Isaiah Ortiz** 9/21/2021 9:45:12 AM

Reviewed By: **W89 9/21/21**

Handwritten initials: K/P, I/O

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? UPS

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4$ " for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐
of preserved bottles checked for pH: 2 (≤ 2 or >12 unless noted)
Adjusted? Yes
Checked by: TME 9.21.21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

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

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.9	Good	Not Present			

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

www.hallenvironmental.com

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Project Manager:

Mailing Address:

Mailing Address: PO Box 10
Roswell, NM 88202-0010

Phone #: 575. 622. 6510

email or Fax#: rolsonc@brightf Law Firm, Co

QA/QC Package: *Wayne Price, C Q. com*

☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other☐ EDD (Type)

Sampler:

On Ice: ☒ Yes ☐ No

of Coolers:

Cooler Temp (including CF): $5.8 + 0.1 = 5.9$ ($^{\circ}\text{C}$)

Container Type and #	Container Name	Container ID	Container Image	Container Status	Container IP	Container Port	Container Description
Container Type: Docker Container #1	Container 1	Container ID: 1	Container Image: Docker	Container Status: Running	Container IP: 10.0.0.1	Container Port: 80	Container Description: Docker container 1
Container Type: Docker Container #2	Container 2	Container ID: 2	Container Image: Docker	Container Status: Running	Container IP: 10.0.0.2	Container Port: 80	Container Description: Docker container 2
Container Type: Docker Container #3	Container 3	Container ID: 3	Container Image: Docker	Container Status: Running	Container IP: 10.0.0.3	Container Port: 80	Container Description: Docker container 3
Container Type: Docker Container #4	Container 4	Container ID: 4	Container Image: Docker	Container Status: Running	Container IP: 10.0.0.4	Container Port: 80	Container Description: Docker container 4
Container Type: Docker Container #5	Container 5	Container ID: 5	Container Image: Docker	Container Status: Running	Container IP: 10.0.0.5	Container Port: 80	Container Description: Docker container 5
Container Type: Docker Container #6	Container 6	Container ID: 6	Container Image: Docker	Container Status: Running	Container IP: 10.0.0.6	Container Port: 80	Container Description: Docker container 6
Container Type: Docker Container #7	Container 7	Container ID: 7	Container Image: Docker	Container Status: Running	Container IP: 10.0.0.7	Container Port: 80	Container Description: Docker container 7
Container Type: Docker Container #8	Container 8	Container ID: 8	Container Image: Docker	Container Status: Running	Container IP: 10.0.0.8	Container Port: 80	Container Description: Docker container 8
Container Type: Docker Container #9	Container 9	Container ID: 9	Container Image: Docker	Container Status: Running	Container IP: 10.0.0.9	Container Port: 80	Container Description: Docker container 9
Container Type: Docker Container #10	Container 10	Container ID: 10	Container Image: Docker	Container Status: Running	Container IP: 10.0.0.10	Container Port: 80	Container Description: Docker container 10

Preservative
Type

HEAL No.

Date	Time	Matrix	Sample Name
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		Sail	8-17-19
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9/10/20	1030	1	10-18/17 d. 77 c ¹
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date	10/10/1	page	2/80	27-
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01	1	1-02			02-01	02-01
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11/10/21	11/10/21	11/10/21	11/10/21	11/10/21
11/10/21	11/10/21	11/10/21	11/10/21	11/10/21

11-12	1952			11-12	1952
11-12	1952			11-12	1952

11/10/21	1103		1103	1103
11/10/21	1103		1103	1103

11/14/20	07:53		11/14/20	08:11:43	-12:43
11/14/20	07:53		11/14/20	08:11:43	-12:43

11/7/21	00-22	11/10/21	00-22
11/11/21	00-22	11/12/21	00-22

11/14/4	2115			111W-8 C1512=11-10

111 F21	0 131			111W-0 C143,0 = 135,0

11/14	10.11			11.11 = 80.133,0 - 13.1.11
11/15				

4144	1151	V	1140-80-75-1615
Date:	Time:	Relinquished by:	

Received by:

Via:

Date	Time
------	------

Remarks:

2021	13:30
------	-------

Relinquished by: 

14

128

21/21 9:2

Remarks: Please Send Results to CMB
cambenviro@gmail.com
any Questions? Please Call
CMB @ 575.626.1615

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Turn-Around Time:

☒ Standard ☐ Rush

Project Name: Energy Resources Corp
West Lorington Strawn Unit #8
Unit L Sec. 34 T. 15S. R. 34E. W

Project #: Delimitation of Groundwater
 OLD Case # 1 RP-2457

Project Manager:

Sampler: L. Anderson, PhD

On Ice: ☒ Yes ☐ No

Sample Temperature: $5.8 \pm 0.1 = 5.9$

Client: Hinkle / Shanon LLP

ATTN: Richard Olson, Esq.

Mailing Address: PO Box 10

Roswell, NM 88202-0010

Phone #: 575. 622. 6510

email or Fax#: rolsonc@inklelawfirm.com P

QA/QC Package: *Wagner Price & Co.*

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other☐ EDD (Type)

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
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11/17/21	1227	Soil	MW-2C167.5'-177.5'	14026 JAL	NONE	DTG
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9/17/21	1325	Soil	mcg-8 (177.5'-187.5')	14026- 14027	None	076
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9/17/21	1455	soil	mwp-8 (1875'-1975')	14026 F	none	077
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9/22/21	13:20	45	MW-8 Field Blank	34.000	He	0.78
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Date:	Time:	Relinquished by:	Received by:	Date	Time
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20/21	13:30	1/1/2021	VKS	VPS	9:21/21	9:23
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Date:	Time:	Relinquished by:	Received by:	Date	Time
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Remarks: Please Send Results to CMBC
cmbeviro@gmail.com
Any Questions? Please call CMBC
@ 575-626-1615



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

September 29, 2021

Wayne Price

Richard Olsons Hinkle Shanor Law Firm

P.O. Box 10

Roswell, NM 88202

TEL: (575) 622-6510

FAX:

RE: Energen Resource Corp West Lovington Strown Unit 8
Unit L Sec 34T15SR35E Lea Co NM

OrderNo.: 2109970

Dear Wayne Price:

Hall Environmental Analysis Laboratory received 24 sample(s) on 9/16/2021 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2109970

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-9 (2.0'-10.0')

Project: Energen Resource Corp West Lovington

Collection Date: 9/9/2021 10:45:00 AM

Lab ID: 2109970-001

Matrix: SOIL

Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		9.5		mg/Kg	1	9/21/2021
Motor Oil Range Organics (MRO)	ND		47		mg/Kg	1	9/21/2021
Surr: DNOP	105		70-130		%Rec	1	9/21/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		4.9		mg/Kg	1	9/21/2021
Surr: BFB	95.5		70-130		%Rec	1	9/21/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.024		mg/Kg	1	9/21/2021
Toluene	ND		0.049		mg/Kg	1	9/21/2021
Ethylbenzene	ND		0.049		mg/Kg	1	9/21/2021
Xylenes, Total	ND		0.098		mg/Kg	1	9/21/2021
Surr: 4-Bromofluorobenzene	80.0		70-130		%Rec	1	9/21/2021
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	ND		60		mg/Kg	20	9/22/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL
B = Analyte detected in the associated Method Blank
P = Sample pH Not in Range
S = % Recovery outside of range due to dilution or matrix

Page 1 of 24

Analytical Report

Lab Order 2109970

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-9 (10.0' - 20.0')

Project: Energen Resource Corp West Lovington

Collection Date: 9/9/2021 11:14:00 AM

Lab ID: 2109970-002

Matrix: SOIL

Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		9.7		mg/Kg	1	9/21/2021
Motor Oil Range Organics (MRO)	ND		49		mg/Kg	1	9/21/2021
Surr: DNOP	84.1		70-130		%Rec	1	9/21/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		4.8		mg/Kg	1	9/21/2021
Surr: BFB	93.5		70-130		%Rec	1	9/21/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.024		mg/Kg	1	9/21/2021
Toluene	ND		0.048		mg/Kg	1	9/21/2021
Ethylbenzene	ND		0.048		mg/Kg	1	9/21/2021
Xylenes, Total	ND		0.097		mg/Kg	1	9/21/2021
Surr: 4-Bromofluorobenzene	78.8		70-130		%Rec	1	9/21/2021
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	ND		60		mg/Kg	20	9/22/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL
B = Analyte detected in the associated Method Blank
P = Sample pH Not in Range
S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109970

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-9 (20.0' - 30.0')

Project: Energen Resource Corp West Lovington

Collection Date: 9/9/2021 11:26:00 AM

Lab ID: 2109970-003

Matrix: SOIL

Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		10		mg/Kg	1	9/21/2021
Motor Oil Range Organics (MRO)	ND		50		mg/Kg	1	9/21/2021
Surr: DNOP	89.0		70-130		%Rec	1	9/21/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		5.0		mg/Kg	1	9/21/2021
Surr: BFB	92.7		70-130		%Rec	1	9/21/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.025		mg/Kg	1	9/21/2021
Toluene	ND		0.050		mg/Kg	1	9/21/2021
Ethylbenzene	ND		0.050		mg/Kg	1	9/21/2021
Xylenes, Total	ND		0.099		mg/Kg	1	9/21/2021
Surr: 4-Bromofluorobenzene	78.6		70-130		%Rec	1	9/21/2021
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND		59		mg/Kg	20	9/22/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109970

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-9 (30.0' - 39.0')

Project: Energen Resource Corp West Lovington

Collection Date: 9/9/2021 11:47:00 AM

Lab ID: 2109970-004

Matrix: SOIL

Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		8.7		mg/Kg	1	9/23/2021
Motor Oil Range Organics (MRO)	ND		44		mg/Kg	1	9/23/2021
Surr: DNOP	78.0		70-130		%Rec	1	9/23/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		4.9		mg/Kg	1	9/21/2021
Surr: BFB	94.0		70-130		%Rec	1	9/21/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.024		mg/Kg	1	9/21/2021
Toluene	ND		0.049		mg/Kg	1	9/21/2021
Ethylbenzene	ND		0.049		mg/Kg	1	9/21/2021
Xylenes, Total	ND		0.098		mg/Kg	1	9/21/2021
Surr: 4-Bromofluorobenzene	80.5		70-130		%Rec	1	9/21/2021
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND		60		mg/Kg	20	9/22/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2109970
Date Reported: 9/29/2021

CLIENT: Richard Olsons Hinkle Shanor Law Firm Client Sample ID: MW-9 (39.0' - 50.0')
Project: Energen Resource Corp West Lovington Collection Date: 9/9/2021 1:35:00 PM
Lab ID: 2109970-005 Matrix: SOIL Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND		61		mg/Kg	20	9/22/2021

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

Qualifiers:	* = Value exceeds Maximum Contaminant Level(MCL)	ND = Not Detected at the RL
	MCL = EPA Maximum Contamination Level	B = Analyte detected in the associated Method Blank
	RL = Reporting Limit: Laboratory Detection Level	P = Sample pH Not in Range
	H = Holding times for preparation or analysis exceeded	S = % Recovery outside of range due to dilution or matrix

Analytical Report

Lab Order 2109970

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-9 (50.0' - 54.5')

Project: Energen Resource Corp West Lovington

Collection Date: 9/9/2021 1:58:00 PM

Lab ID: 2109970-006

Matrix: SOIL

Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		10		mg/Kg	1	9/21/2021
Motor Oil Range Organics (MRO)	ND		50		mg/Kg	1	9/21/2021
Surr: DNOP	93.2		70-130		%Rec	1	9/21/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		4.9		mg/Kg	1	9/21/2021
Surr: BFB	91.8		70-130		%Rec	1	9/21/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.024		mg/Kg	1	9/21/2021
Toluene	ND		0.049		mg/Kg	1	9/21/2021
Ethylbenzene	ND		0.049		mg/Kg	1	9/21/2021
Xylenes, Total	ND		0.098		mg/Kg	1	9/21/2021
Surr: 4-Bromofluorobenzene	78.6		70-130		%Rec	1	9/21/2021
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND		60		mg/Kg	20	9/22/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL
B = Analyte detected in the associated Method Blank
P = Sample pH Not in Range
S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109970

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-9 (54.5' - 55.0')

Project: Energen Resource Corp West Lovington

Collection Date: 9/9/2021 2:00:00 PM

Lab ID: 2109970-007

Matrix: SOIL

Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		10		mg/Kg	1	9/21/2021
Motor Oil Range Organics (MRO)	ND		51		mg/Kg	1	9/21/2021
Surr: DNOP	91.5		70-130		%Rec	1	9/21/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		4.8		mg/Kg	1	9/21/2021
Surr: BFB	92.8		70-130		%Rec	1	9/21/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.024		mg/Kg	1	9/21/2021
Toluene	ND		0.048		mg/Kg	1	9/21/2021
Ethylbenzene	ND		0.048		mg/Kg	1	9/21/2021
Xylenes, Total	ND		0.097		mg/Kg	1	9/21/2021
Surr: 4-Bromofluorobenzene	79.2		70-130		%Rec	1	9/21/2021
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND		60		mg/Kg	20	9/22/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL
B = Analyte detected in the associated Method Blank
P = Sample pH Not in Range
S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109970

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-9 (55.0' - 59.0')

Project: Energen Resource Corp West Lovington

Collection Date: 9/9/2021 2:03:00 PM

Lab ID: 2109970-008

Matrix: SOIL

Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		9.1		mg/Kg	1	9/21/2021
Motor Oil Range Organics (MRO)	ND		46		mg/Kg	1	9/21/2021
Surr: DNOP	97.3		70-130		%Rec	1	9/21/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		4.9		mg/Kg	1	9/21/2021
Surr: BFB	91.5		70-130		%Rec	1	9/21/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.025		mg/Kg	1	9/21/2021
Toluene	ND		0.049		mg/Kg	1	9/21/2021
Ethylbenzene	ND		0.049		mg/Kg	1	9/21/2021
Xylenes, Total	ND		0.098		mg/Kg	1	9/21/2021
Surr: 4-Bromofluorobenzene	78.0		70-130		%Rec	1	9/21/2021
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND		60		mg/Kg	20	9/22/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109970

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-9 (59.0' - 67.0')

Project: Energen Resource Corp West Lovington

Collection Date: 9/9/2021 2:12:00 PM

Lab ID: 2109970-009

Matrix: SOIL

Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		9.9		mg/Kg	1	9/21/2021
Motor Oil Range Organics (MRO)	ND		50		mg/Kg	1	9/21/2021
Surr: DNOP	95.3		70-130		%Rec	1	9/21/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		4.9		mg/Kg	1	9/21/2021
Surr: BFB	95.2		70-130		%Rec	1	9/21/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.024		mg/Kg	1	9/21/2021
Toluene	ND		0.049		mg/Kg	1	9/21/2021
Ethylbenzene	ND		0.049		mg/Kg	1	9/21/2021
Xylenes, Total	ND		0.098		mg/Kg	1	9/21/2021
Surr: 4-Bromofluorobenzene	77.8		70-130		%Rec	1	9/21/2021
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND		60		mg/Kg	20	9/22/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109970

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsons Hinkle Shanor Law Firm

Client Sample ID: MW-9 (67.5' - 77.5')

Project: Energen Resource Corp West Lovington

Collection Date: 9/10/2021 2:34:00 PM

Lab ID: 2109970-010

Matrix: SOIL

Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND		60		mg/Kg	20	9/22/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2109970
Date Reported: 9/29/2021

CLIENT: Richard Olsons Hinkle Shanor Law Firm Client Sample ID: MW-9 (77.5' - 87.5')
Project: Energen Resource Corp West Lovington Collection Date: 9/10/2021 2:48:00 PM
Lab ID: 2109970-011 Matrix: SOIL Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND		60		mg/Kg	20	9/22/2021

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

Qualifiers:	* = Value exceeds Maximum Contaminant Level(MCL)	ND = Not Detected at the RL
	MCL = EPA Maximum Contamination Level	B = Analyte detected in the associated Method Blank
	RL = Reporting Limit: Laboratory Detection Level	P = Sample pH Not in Range
	H = Holding times for preparation or analysis exceeded	S = % Recovery outside of range due to dilution or matrix

Analytical Report

Lab Order 2109970

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsons Hinkle Shanor Law Firm

Client Sample ID: MW-9 (87.5' - 97.5')

Project: Energen Resource Corp West Lovington

Collection Date: 9/10/2021 4:00:00 PM

Lab ID: 2109970-012

Matrix: SOIL

Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND		60		mg/Kg	20	9/22/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109970

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-9 (97.5' - 107.5')

Project: Energen Resource Corp West Lovington

Collection Date: 9/10/2021 4:32:00 PM

Lab ID: 2109970-013

Matrix: SOIL

Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		9.1		mg/Kg	1	9/21/2021
Motor Oil Range Organics (MRO)	ND		45		mg/Kg	1	9/21/2021
Surr: DNOP	96.3		70-130		%Rec	1	9/21/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		5.0		mg/Kg	1	9/21/2021
Surr: BFB	90.7		70-130		%Rec	1	9/21/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.025		mg/Kg	1	9/21/2021
Toluene	ND		0.050		mg/Kg	1	9/21/2021
Ethylbenzene	ND		0.050		mg/Kg	1	9/21/2021
Xylenes, Total	ND		0.099		mg/Kg	1	9/21/2021
Surr: 4-Bromofluorobenzene	77.6		70-130		%Rec	1	9/21/2021
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND		60		mg/Kg	20	9/22/2021

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

Qualifiers:

* = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109970

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsons Hinkle Shanor Law Firm

Client Sample ID: MW-9 (107.5 - 117.5)

Project: Energen Resource Corp West Lovington

Collection Date: 9/10/2021 4:46:00 PM

Lab ID: 2109970-014

Matrix: SOIL

Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND		60		mg/Kg	20	9/22/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109970

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsons Hinkle Shanor Law Firm

Client Sample ID: MW-9 (117.5 - 127.5')

Project: Energen Resource Corp West Lovington

Collection Date: 9/10/2021 5:34:00 PM

Lab ID: 2109970-015

Matrix: SOIL

Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND		60		mg/Kg	20	9/22/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL
B = Analyte detected in the associated Method Blank
P = Sample pH Not in Range
S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109970

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsons Hinkle Shanor Law Firm

Client Sample ID: MW-9 (127.5' - 137.5')

Project: Energen Resource Corp West Lovington

Collection Date: 9/11/2021 10:15:00 AM

Lab ID: 2109970-016

Matrix: SOIL

Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND		60		mg/Kg	20	9/22/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109970

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsons Hinkle Shanor Law Firm

Client Sample ID: MW-9 (137.5' - 147.5')

Project: Energen Resource Corp West Lovington

Collection Date: 9/11/2021 10:38:00 AM

Lab ID: 2109970-017

Matrix: SOIL

Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND		60		mg/Kg	20	9/22/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109970

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-9 (147.5' - 157.5)

Project: Energen Resource Corp West Lovington

Collection Date: 9/12/2021 9:56:00 AM

Lab ID: 2109970-018

Matrix: SOIL

Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		8.8		mg/Kg	1	9/21/2021
Motor Oil Range Organics (MRO)	ND		44		mg/Kg	1	9/21/2021
Surr: DNOP	97.0		70-130		%Rec	1	9/21/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		4.9		mg/Kg	1	9/21/2021
Surr: BFB	90.6		70-130		%Rec	1	9/21/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.024		mg/Kg	1	9/21/2021
Toluene	ND		0.049		mg/Kg	1	9/21/2021
Ethylbenzene	ND		0.049		mg/Kg	1	9/21/2021
Xylenes, Total	ND		0.098		mg/Kg	1	9/21/2021
Surr: 4-Bromofluorobenzene	77.6		70-130		%Rec	1	9/21/2021
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND		60		mg/Kg	20	9/22/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109970

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsons Hinkle Shanor Law Firm

Client Sample ID: MW-9 (157.5' - 167.5')

Project: Energen Resource Corp West Lovington

Collection Date: 9/12/2021 2:20:00 PM

Lab ID: 2109970-019

Matrix: SOIL

Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND		61		mg/Kg	20	9/22/2021

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

Qualifiers:

* = Value exceeds Maximum Contaminant Level(MCL)

MCL = EPA Maximum Contamination Level

RL = Reporting Limit: Laboratory Detection Level

H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109970

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsons Hinkle Shanor Law Firm

Client Sample ID: MW-9 (167.5' - 177.5')

Project: Energen Resource Corp West Lovington

Collection Date: 9/13/2021 2:10:00 PM

Lab ID: 2109970-020

Matrix: SOIL

Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND		60		mg/Kg	20	9/22/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109970

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsons Hinkle Shanor Law Firm

Client Sample ID: MW-9 (177.5' - 187.5')

Project: Energen Resource Corp West Lovington

Collection Date: 9/13/2021 4:17:00 PM

Lab ID: 2109970-021

Matrix: SOIL

Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: CAS
Chloride	ND		60		mg/Kg	20	9/22/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Analytical Report

Lab Order 2109970

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsons Hinkle Shanor Law Firm

Client Sample ID: MW-9 (187.5' - 190.0')

Project: Energen Resource Corp West Lovington

Collection Date: 9/13/2021 5:02:00 PM

Lab ID: 2109970-022

Matrix: SOIL

Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/23/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2109970
Date Reported: 9/29/2021

CLIENT: Richard Olsons Hinkle Shanor Law Firm Client Sample ID: MW-9 (190.0' - 190.4')
Project: Energen Resource Corp West Lovington Collection Date: 9/13/2021 5:05:00 PM
Lab ID: 2109970-023 Matrix: SOIL Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/23/2021

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

Qualifiers:	* = Value exceeds Maximum Contaminant Level(MCL)	ND = Not Detected at the RL
	MCL = EPA Maximum Contamination Level	B = Analyte detected in the associated Method Blank
	RL = Reporting Limit: Laboratory Detection Level	P = Sample pH Not in Range
	H = Holding times for preparation or analysis exceeded	S = % Recovery outside of range due to dilution or matrix

Analytical Report

Lab Order 2109970

Date Reported: 9/29/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Richard Olsone Hinkle Shanor Law Firm

Client Sample ID: MW-9 (190.4' - 197.5')

Project: Energen Resource Corp West Lovington

Collection Date: 9/13/2021 5:08:00 PM

Lab ID: 2109970-024

Matrix: SOIL

Received Date: 9/16/2021 9:30:00 AM

Analyses	Result	MCL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: SB
Diesel Range Organics (DRO)	ND		8.8		mg/Kg	1	9/24/2021
Motor Oil Range Organics (MRO)	ND		44		mg/Kg	1	9/24/2021
Surr: DNOP	102		70-130		%Rec	1	9/24/2021
EPA METHOD 8015D: GASOLINE RANGE							Analyst: mb
Gasoline Range Organics (GRO)	ND		4.9		mg/Kg	1	9/22/2021
Surr: BFB	91.8		70-130		%Rec	1	9/22/2021
EPA METHOD 8021B: VOLATILES							Analyst: mb
Benzene	ND		0.025		mg/Kg	1	9/22/2021
Toluene	ND		0.049		mg/Kg	1	9/22/2021
Ethylbenzene	ND		0.049		mg/Kg	1	9/22/2021
Xylenes, Total	ND		0.099		mg/Kg	1	9/22/2021
Surr: 4-Bromofluorobenzene	79.8		70-130		%Rec	1	9/22/2021
EPA METHOD 300.0: ANIONS							Analyst: VP
Chloride	ND		60		mg/Kg	20	9/23/2021

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

Qualifiers: * = Value exceeds Maximum Contaminant Level(MCL)
MCL = EPA Maximum Contamination Level
RL = Reporting Limit: Laboratory Detection Level
H = Holding times for preparation or analysis exceeded

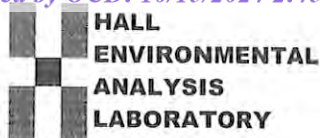
ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

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

Sample Log-In Check List

Client Name: Richard Olsone Hinkle
Shanor Law Firm

Work Order Number: 2109970

RcptNo: 1

Received By: Juan Rojas

9/16/2021 9:30:00 AM

Completed By: Isaiah Ortiz

9/17/2021 3:52:38 PM

Reviewed By:

JU 9.20.21

[Signature]

IOX

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? UPS

Log In

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

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by: JR 9/20/21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.4	Good	Not Present			

Chain-of-Custody Record

Turn-Around Time:

Client: Richard Olson, Hinkle/Shaner LLP

☒ Standard ☐ Rush

PO Box 10

Project Name: *Emergent Resources Corp.*
West Lovington Strawn Unit #8
Unit L Sec. 34 T.15S. R.35E
1000 N. NM

Mailing Address:

Project #: Delineation of Ground Water
OCD Case # IRP-2457

Phone #: 575. 622. 6510

email or Fax#: rolsen@hinklelawfirm.co

Project Manager:

QA/QC Package: *Wayne Price @ G. com*
A Cobb @ diamond back energy.com

Wayne Price

☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

Sampler: *Am Larch 11 Pk 1/L*

☐ NELAC ☐ Other

On Ice: ☒ Yes ☐ No

☐ EDD (Type)

of Coolers:

Cooler Temp (including CF): $3.4 - 0 = 3.4$ ($^{\circ}\text{C}$)

Date	Time	Matrix	Sample Name
------	------	--------	-------------

Container Type and #	Preservative Type
-------------------------	----------------------

HEAL No.

9/10/21	16:32	Soil	MW-9 (97.5' - 107.5')	14026 JAL	None	013
9/10/21	16:46	Soil	MW-9 (107.5' - 117.5')	14026 JAL	None	014
9/10/21	17:34	Soil	MW-9 (117.5' - 127.5')	14026 JAL	None	015
9/11/21	09:56	Soil	MW-9 (127.5' - 137.5')	14026 JAL	None	016
9/11/21	10:38	Soil	MW-9 (137.5' - 147.5')	14026 JAL	None	017
9/12/21	09:56	Soil	MW-9 (147.5' - 157.5')	14026 JAL	None	018
9/12/21	1420	Soil	MW-9 (157.5' - 167.5')	14026 JAL	None	019
9/13/21	1410	Soil	MW-9 (167.5' - 177.5')	14026 JAL	None	020
9/13/21	1617	Soil	MW-9 (177.5' - 187.5')	14026 JAL	None	021
9/13/21	17:02	Soil	MW-9 (187.5' - 190.0')	14026 JAL	None	022
9/13/21	17:05	Soil	MW-9 (190.0' - 190.4')	14026 JAL	None	023
9/13/21	17:08	Soil	MW-9 (190.4' - 197.5')	14026 JAL	None	024

Date: 1/5/21	Time: 0820	Relinquished by: F. H. Blum
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Received by: 3x4m
VOAL


Date	Time
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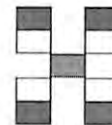
Remarks: Send Results to: Cmbaenviro@gmail.com
Any Questions Please
Call Cmba
575-626-1615

Date:	Time:	Relinquished by:
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Received by: Via: Date Time

Date	Time
------	------

9/15/24	0830		 OPS 9/16/24 9:30
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HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

[illegible]

Report to:
Natalie Gladden



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Newell Law Firm

Project Name: W Lovington Strawn U. #8

Work Order: E203110

Job Number: 20046-0001

Received: 3/18/2022

Revision: 2

Report Reviewed By:

Walter Hinchman
Laboratory Director
3/24/22

5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com



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Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.
Envirotech Inc. holds the NM SDWA certification for data reported. (Lab #NM00979)

Date Reported: 3/24/22

Natalie Gladden
10 W Adams Ave Ste E
Lovington, NM 88260



Project Name: W Lovington Strawn U. #8
Workorder: E203110
Date Received: 3/18/2022 8:15:00AM

Natalie Gladden,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 3/18/2022 8:15:00AM, under the Project Name: W Lovington Strawn U. #8.

The analytical test results summarized in this report with the Project Name: W Lovington Strawn U. #8 apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

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Chain of Custody etc.

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Sample Summary

Newell Law Firm	Project Name:	W Lovington Strawn U. #8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	03/24/22 18:26

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
MW - 9S	E203110-01A	Aqueous	03/15/22	03/18/22	Poly 500mL
	E203110-01B	Aqueous	03/15/22	03/18/22	VOA Vial, 40mL; HCl
	E203110-01C	Aqueous	03/15/22	03/18/22	VOA Vial, 40mL; HCl
	E203110-01D	Aqueous	03/15/22	03/18/22	VOA Vial, 40mL; HCl
MW - 9M	E203110-02A	Aqueous	03/15/22	03/18/22	Poly 500mL
	E203110-02B	Aqueous	03/15/22	03/18/22	VOA Vial, 40mL; HCl
	E203110-02C	Aqueous	03/15/22	03/18/22	VOA Vial, 40mL; HCl
MW - 9D	E203110-03A	Aqueous	03/15/22	03/18/22	Poly 500mL
	E203110-03B	Aqueous	03/15/22	03/18/22	VOA Vial, 40mL; HCl
	E203110-03C	Aqueous	03/15/22	03/18/22	VOA Vial, 40mL; HCl
MW - 1	E203110-04A	Aqueous	03/15/22	03/18/22	Poly 250mL
	E203110-04B	Aqueous	03/15/22	03/18/22	VOA Vial, 40mL; HCl
	E203110-04C	Aqueous	03/15/22	03/18/22	VOA Vial, 40mL; HCl
MW - 5	E203110-05A	Aqueous	03/15/22	03/18/22	Poly 250mL
	E203110-05B	Aqueous	03/15/22	03/18/22	VOA Vial, 40mL; HCl
	E203110-05C	Aqueous	03/15/22	03/18/22	VOA Vial, 40mL; HCl
MW - 6	E203110-06A	Aqueous	03/15/22	03/18/22	Poly 250mL
	E203110-06B	Aqueous	03/15/22	03/18/22	VOA Vial, 40mL; HCl
	E203110-06C	Aqueous	03/15/22	03/18/22	VOA Vial, 40mL; HCl
MW - 3	E203110-07A	Aqueous	03/15/22	03/18/22	Poly 250mL
	E203110-07B	Aqueous	03/15/22	03/18/22	VOA Vial, 40mL; HCl
	E203110-07C	Aqueous	03/15/22	03/18/22	VOA Vial, 40mL; HCl

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 9S

E203110-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
Acetone	ND	80.0	2	03/19/22	03/19/22	
Benzene	ND	2.00	2	03/19/22	03/19/22	
Bromobenzene	ND	2.00	2	03/19/22	03/19/22	
Bromochloromethane	ND	2.00	2	03/19/22	03/19/22	
Bromodichloromethane	ND	2.00	2	03/19/22	03/19/22	
Bromoform	ND	2.00	2	03/19/22	03/19/22	
Bromomethane	ND	4.00	2	03/19/22	03/19/22	
n-Butyl Benzene	ND	2.00	2	03/19/22	03/19/22	
sec-Butylbenzene	ND	2.00	2	03/19/22	03/19/22	
tert-Butylbenzene	ND	2.00	2	03/19/22	03/19/22	
Carbon Tetrachloride	ND	2.00	2	03/19/22	03/19/22	
Chlorobenzene	ND	2.00	2	03/19/22	03/19/22	
Chloroethane	ND	4.00	2	03/19/22	03/19/22	
Chloroform	ND	10.0	2	03/19/22	03/19/22	
Chloromethane	ND	4.00	2	03/19/22	03/19/22	
2-Chlorotoluene	ND	2.00	2	03/19/22	03/19/22	
4-Chlorotoluene	ND	2.00	2	03/19/22	03/19/22	
Dibromochloromethane	ND	2.00	2	03/19/22	03/19/22	
1,2-Dibromo-3-chloropropane (DBCP)	ND	10.0	2	03/19/22	03/19/22	
1,2-Dibromoethane (EDB)	ND	4.00	2	03/19/22	03/19/22	
Dibromomethane	ND	2.00	2	03/19/22	03/19/22	
1,2-Dichlorobenzene	ND	2.00	2	03/19/22	03/19/22	
1,3-Dichlorobenzene	ND	2.00	2	03/19/22	03/19/22	
1,4-Dichlorobenzene	ND	2.00	2	03/19/22	03/19/22	
Dichlorodifluoromethane (Freon-12)	ND	4.00	2	03/19/22	03/19/22	
1,1-Dichloroethane	ND	2.00	2	03/19/22	03/19/22	
1,2-Dichloroethane	ND	2.00	2	03/19/22	03/19/22	
1,1-Dichloroethene	ND	2.00	2	03/19/22	03/19/22	
cis-1,2-Dichloroethene	ND	2.00	2	03/19/22	03/19/22	
trans-1,2-Dichloroethene	ND	2.00	2	03/19/22	03/19/22	
1,2-Dichloropropane	ND	2.00	2	03/19/22	03/19/22	
1,3-Dichloropropane	ND	2.00	2	03/19/22	03/19/22	
2,2-Dichloropropane	ND	2.00	2	03/19/22	03/19/22	
1,1-Dichloropropene	ND	2.00	2	03/19/22	03/19/22	
cis-1,3-Dichloropropene	ND	2.00	2	03/19/22	03/19/22	
trans-1,3-Dichloropropene	ND	2.00	2	03/19/22	03/19/22	
Diisopropyl Ether (DIPE)	ND	2.00	2	03/19/22	03/19/22	
Ethylbenzene	ND	2.00	2	03/19/22	03/19/22	
Ethyl tert-Butyl Ether (ETBE)	ND	2.00	2	03/19/22	03/19/22	
Hexachlorobutadiene	ND	10.0	2	03/19/22	03/19/22	
2-Hexanone	ND	40.0	2	03/19/22	03/19/22	
Isopropylbenzene	ND	2.00	2	03/19/22	03/19/22	
4-Isopropyltoluene	ND	2.00	2	03/19/22	03/19/22	
2-Butanone (MEK)	ND	40.0	2	03/19/22	03/19/22	
Methylene Chloride	ND	4.00	2	03/19/22	03/19/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 9S

E203110-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
1-Methylnaphthalene	ND	20.0	2	03/19/22	03/19/22	
2-Methylnaphthalene	ND	20.0	2	03/19/22	03/19/22	
4-Methyl-2-pentanone (MIBK)	ND	40.0	2	03/19/22	03/19/22	
Methyl tert-Butyl Ether (MTBE)	ND	2.00	2	03/19/22	03/19/22	
Naphthalene	ND	10.0	2	03/19/22	03/19/22	
n-Propyl Benzene	ND	2.00	2	03/19/22	03/19/22	
Styrene	ND	2.00	2	03/19/22	03/19/22	
tert-Amyl Methyl ether (TAME)	ND	2.00	2	03/19/22	03/19/22	
1,1,1,2-Tetrachloroethane	ND	2.00	2	03/19/22	03/19/22	
1,1,2,2-Tetrachloroethane	ND	2.00	2	03/19/22	03/19/22	
Tetrachloroethene	ND	2.00	2	03/19/22	03/19/22	
1,2,3-Trichlorobenzene	ND	10.0	2	03/19/22	03/19/22	
1,2,4-Trichlorobenzene	ND	10.0	2	03/19/22	03/19/22	
1,1,1-Trichloroethane	ND	2.00	2	03/19/22	03/19/22	
1,1,2-Trichloroethane	ND	2.00	2	03/19/22	03/19/22	
Trichloroethene	ND	2.00	2	03/19/22	03/19/22	
Trichlorofluoromethane (Freon-11)	ND	4.00	2	03/19/22	03/19/22	
1,2,3-Trichloropropane	ND	4.00	2	03/19/22	03/19/22	
1,2,4-Trimethylbenzene	ND	10.0	2	03/19/22	03/19/22	
1,3,5-Trimethylbenzene	ND	2.00	2	03/19/22	03/19/22	
Toluene	ND	2.00	2	03/19/22	03/19/22	
Vinyl chloride	ND	4.00	2	03/19/22	03/19/22	
o-Xylene	ND	2.00	2	03/19/22	03/19/22	
p,m-Xylene	ND	4.00	2	03/19/22	03/19/22	
Total Xylenes	ND	2.00	2	03/19/22	03/19/22	
Surrogate: Bromofluorobenzene	95.1 %	70-130		03/19/22	03/19/22	
Surrogate: 1,2-Dichloroethane-d4	99.7 %	70-130		03/19/22	03/19/22	
Surrogate: Toluene-d8	96.7 %	70-130		03/19/22	03/19/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 9S

E203110-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C						
	mg/L	mg/L		Analyst: RAS		Batch: 2212068
Total Dissolved Solids	228	40.0	1	03/17/22	03/22/22	
Wet Chemistry by 9040C/4500H+B						
	pH Units	pH Units		Analyst: KL		Batch: 2213006
pH @25°C	7.85		1	03/21/22 08:37	03/21/22 10:26	H5
Wet Chemistry by SM2320B						
	mg/L	mg/L		Analyst: RAS		Batch: 2213016
Total Alkalinity (as CaCO3 at pH 4.5)	277	10.0	1	03/21/22	03/21/22	
Wet Chemistry by 9050A/2510B						
	uS/cm	uS/cm		Analyst: RAS		Batch: 2213009
Specific Conductance (@ 25 C)	657	10.0	1	03/21/22	03/21/22	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/L	mg/L		Analyst: IY		Batch: 2212089
Gasoline Range Organics (C6-C10)	ND	0.200	2	03/19/22	03/19/22	
Surrogate: Bromofluorobenzene	95.1 %	70-130		03/19/22	03/19/22	
Surrogate: 1,2-Dichloroethane-d4	99.7 %	70-130		03/19/22	03/19/22	
Surrogate: Toluene-d8	96.7 %	70-130		03/19/22	03/19/22	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/L	mg/L		Analyst: JL		Batch: 2213017
Diesel Range Organics (C10-C28)	ND	1.00	1	03/21/22	03/21/22	
Oil Range Organics (C28-C36)	ND	2.00	1	03/21/22	03/21/22	
Surrogate: n-Nonane	95.2 %	50-200		03/21/22	03/21/22	
Total Metals by EPA 6010C						
	mg/L	mg/L		Analyst: RKS		Batch: 2212087
Arsenic	ND	0.0200	1	03/19/22	03/20/22	
Barium	ND	0.250	1	03/19/22	03/20/22	
Cadmium	ND	0.0100	1	03/19/22	03/20/22	
Chromium	ND	0.0200	1	03/19/22	03/20/22	
Lead	ND	0.0100	1	03/19/22	03/20/22	
Selenium	ND	0.0500	1	03/19/22	03/20/22	
Silver	ND	0.0100	1	03/19/22	03/20/22	

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 9S

E203110-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Dissolved Metals by EPA 6010C		mg/L	mg/L	Analyst: RKS		Batch: 2212080
Calcium	62.2	1.00	1	03/18/22	03/19/22	
Iron	ND	2.00	1	03/18/22	03/19/22	
Magnesium	10.4	1.00	1	03/18/22	03/19/22	
Potassium	2.46	1.00	1	03/18/22	03/19/22	
Sodium	47.7	2.00	1	03/18/22	03/19/22	
Sodium Absorption Ratio (CALC)	1.47		1	03/24/22	03/24/22	
Anions by EPA 300.0/9056A		mg/L	mg/L	Analyst: RAS		Batch: 2212086
Fluoride	1.12	0.250	1	03/19/22	03/19/22	
Chloride	29.4	2.00	1	03/19/22	03/19/22	
Nitrite-N	ND	0.250	1	03/19/22 07:59	03/19/22 11:45	H1
Nitrate-N	0.631	0.250	1	03/19/22 07:59	03/19/22 11:45	H1
o-Phosphate-P	ND	0.250	1	03/19/22 07:59	03/19/22 11:45	H1
Sulfate	69.0	2.00	1	03/19/22	03/19/22	
Total Mercury by EPA 7470A		ug/L	ug/L	Analyst: RKS		Batch: 2212088
Mercury	ND	0.200	1	03/19/22	03/20/22	

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 9M

E203110-02

Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
Acetone	ND	80.0	2	03/19/22	03/19/22	
Benzene	ND	2.00	2	03/19/22	03/19/22	
Bromobenzene	ND	2.00	2	03/19/22	03/19/22	
Bromochloromethane	ND	2.00	2	03/19/22	03/19/22	
Bromodichloromethane	ND	2.00	2	03/19/22	03/19/22	
Bromoform	ND	2.00	2	03/19/22	03/19/22	
Bromomethane	ND	4.00	2	03/19/22	03/19/22	
n-Butyl Benzene	ND	2.00	2	03/19/22	03/19/22	
sec-Butylbenzene	ND	2.00	2	03/19/22	03/19/22	
tert-Butylbenzene	ND	2.00	2	03/19/22	03/19/22	
Carbon Tetrachloride	ND	2.00	2	03/19/22	03/19/22	
Chlorobenzene	ND	2.00	2	03/19/22	03/19/22	
Chloroethane	ND	4.00	2	03/19/22	03/19/22	
Chloroform	ND	10.0	2	03/19/22	03/19/22	
Chloromethane	ND	4.00	2	03/19/22	03/19/22	
2-Chlorotoluene	ND	2.00	2	03/19/22	03/19/22	
4-Chlorotoluene	ND	2.00	2	03/19/22	03/19/22	
Dibromochloromethane	ND	2.00	2	03/19/22	03/19/22	
1,2-Dibromo-3-chloropropane (DBCP)	ND	10.0	2	03/19/22	03/19/22	
1,2-Dibromoethane (EDB)	ND	4.00	2	03/19/22	03/19/22	
Dibromomethane	ND	2.00	2	03/19/22	03/19/22	
1,2-Dichlorobenzene	ND	2.00	2	03/19/22	03/19/22	
1,3-Dichlorobenzene	ND	2.00	2	03/19/22	03/19/22	
1,4-Dichlorobenzene	ND	2.00	2	03/19/22	03/19/22	
Dichlorodifluoromethane (Freon-12)	ND	4.00	2	03/19/22	03/19/22	
1,1-Dichloroethane	ND	2.00	2	03/19/22	03/19/22	
1,2-Dichloroethane	ND	2.00	2	03/19/22	03/19/22	
1,1-Dichloroethene	ND	2.00	2	03/19/22	03/19/22	
cis-1,2-Dichloroethene	ND	2.00	2	03/19/22	03/19/22	
trans-1,2-Dichloroethene	ND	2.00	2	03/19/22	03/19/22	
1,2-Dichloropropane	ND	2.00	2	03/19/22	03/19/22	
1,3-Dichloropropane	ND	2.00	2	03/19/22	03/19/22	
2,2-Dichloropropane	ND	2.00	2	03/19/22	03/19/22	
1,1-Dichloropropene	ND	2.00	2	03/19/22	03/19/22	
cis-1,3-Dichloropropene	ND	2.00	2	03/19/22	03/19/22	
trans-1,3-Dichloropropene	ND	2.00	2	03/19/22	03/19/22	
Diisopropyl Ether (DIPE)	ND	2.00	2	03/19/22	03/19/22	
Ethylbenzene	ND	2.00	2	03/19/22	03/19/22	
Ethyl tert-Butyl Ether (ETBE)	ND	2.00	2	03/19/22	03/19/22	
Hexachlorobutadiene	ND	10.0	2	03/19/22	03/19/22	
2-Hexanone	ND	40.0	2	03/19/22	03/19/22	
Isopropylbenzene	ND	2.00	2	03/19/22	03/19/22	
4-Isopropyltoluene	ND	2.00	2	03/19/22	03/19/22	
2-Butanone (MEK)	ND	40.0	2	03/19/22	03/19/22	
Methylene Chloride	ND	4.00	2	03/19/22	03/19/22	
1-Methylnaphthalene	ND	20.0	2	03/19/22	03/19/22	
2-Methylnaphthalene	ND	20.0	2	03/19/22	03/19/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 9M

E203110-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
4-Methyl-2-pentanone (MIBK)	ND	40.0	2	03/19/22	03/19/22	
Methyl tert-Butyl Ether (MTBE)	ND	2.00	2	03/19/22	03/19/22	
Naphthalene	ND	10.0	2	03/19/22	03/19/22	
n-Propyl Benzene	ND	2.00	2	03/19/22	03/19/22	
Styrene	ND	2.00	2	03/19/22	03/19/22	
tert-Amyl Methyl ether (TAME)	ND	2.00	2	03/19/22	03/19/22	
1,1,1,2-Tetrachloroethane	ND	2.00	2	03/19/22	03/19/22	
1,1,2,2-Tetrachloroethane	ND	2.00	2	03/19/22	03/19/22	
Tetrachloroethene	ND	2.00	2	03/19/22	03/19/22	
1,2,3-Trichlorobenzene	ND	10.0	2	03/19/22	03/19/22	
1,2,4-Trichlorobenzene	ND	10.0	2	03/19/22	03/19/22	
1,1,1-Trichloroethane	ND	2.00	2	03/19/22	03/19/22	
1,1,2-Trichloroethane	ND	2.00	2	03/19/22	03/19/22	
Trichloroethene	ND	2.00	2	03/19/22	03/19/22	
Trichlorofluoromethane (Freon-11)	ND	4.00	2	03/19/22	03/19/22	
1,2,3-Trichloropropane	ND	4.00	2	03/19/22	03/19/22	
1,2,4-Trimethylbenzene	ND	10.0	2	03/19/22	03/19/22	
1,3,5-Trimethylbenzene	ND	2.00	2	03/19/22	03/19/22	
Toluene	ND	2.00	2	03/19/22	03/19/22	
Vinyl chloride	ND	4.00	2	03/19/22	03/19/22	
o-Xylene	ND	2.00	2	03/19/22	03/19/22	
p,m-Xylene	ND	4.00	2	03/19/22	03/19/22	
Total Xylenes	ND	2.00	2	03/19/22	03/19/22	
Surrogate: Bromofluorobenzene	95.7 %	70-130		03/19/22	03/19/22	
Surrogate: 1,2-Dichloroethane-d4	101 %	70-130		03/19/22	03/19/22	
Surrogate: Toluene-d8	98.4 %	70-130		03/19/22	03/19/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 9M

E203110-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C	mg/L	mg/L		Analyst: RAS		Batch: 2212068
Total Dissolved Solids	294	14.3	1	03/17/22	03/22/22	
Wet Chemistry by 9040C/4500H+B	pH Units	pH Units		Analyst: KL		Batch: 2213006
pH @25°C	8.02		1	03/21/22 08:37	03/21/22 10:26	H5
Wet Chemistry by SM2320B	mg/L	mg/L		Analyst: RAS		Batch: 2213016
Total Alkalinity (as CaCO3 at pH 4.5)	162	10.0	1	03/21/22	03/21/22	
Wet Chemistry by 9050A/2510B	uS/cm	uS/cm		Analyst: RAS		Batch: 2213009
Specific Conductance (@ 25 C)	736	10.0	1	03/21/22	03/21/22	
Nonhalogenated Organics by EPA 8015D - GRO	mg/L	mg/L		Analyst: IY		Batch: 2212089
Gasoline Range Organics (C6-C10)	ND	0.200	2	03/19/22	03/19/22	
Surrogate: Bromofluorobenzene		95.7 %	70-130	03/19/22	03/19/22	
Surrogate: 1,2-Dichloroethane-d4		101 %	70-130	03/19/22	03/19/22	
Surrogate: Toluene-d8		98.4 %	70-130	03/19/22	03/19/22	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/L	mg/L		Analyst: JL		Batch: 2213017
Diesel Range Organics (C10-C28)	2.56	1.00	1	03/21/22	03/21/22	
Oil Range Organics (C28-C36)	ND	2.00	1	03/21/22	03/21/22	
Surrogate: n-Nonane		105 %	50-200	03/21/22	03/21/22	
Total Metals by EPA 6010C	mg/L	mg/L		Analyst: RKS		Batch: 2212087
Arsenic	ND	0.0200	1	03/19/22	03/20/22	
Barium	ND	0.250	1	03/19/22	03/20/22	C4, C6
Cadmium	ND	0.0100	1	03/19/22	03/20/22	
Chromium	ND	0.0200	1	03/19/22	03/20/22	C4, C6
Lead	ND	0.0100	1	03/19/22	03/20/22	C4, C6
Selenium	ND	0.0500	1	03/19/22	03/20/22	
Silver	ND	0.0100	1	03/19/22	03/20/22	

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 9M

E203110-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Dissolved Metals by EPA 6010C		mg/L	mg/L	Analyst: RKS		Batch: 2212080
Calcium	49.9	1.00	1	03/18/22	03/19/22	
Iron	ND	2.00	1	03/18/22	03/19/22	
Magnesium	14.2	1.00	1	03/18/22	03/19/22	
Potassium	3.51	1.00	1	03/18/22	03/19/22	
Sodium	71.3	2.00	1	03/18/22	03/19/22	
Sodium Absorption Ratio (CALC)	2.29		1	03/24/22	03/24/22	
Anions by EPA 300.0/9056A		mg/L	mg/L	Analyst: RAS		Batch: 2212086
Fluoride	1.09	0.250	1	03/19/22	03/19/22	
Chloride	51.5	2.00	1	03/19/22	03/19/22	
Nitrite-N	ND	0.250	1	03/19/22 07:59	03/19/22 12:06	H1
Nitrate-N	0.466	0.250	1	03/19/22 07:59	03/19/22 12:06	H1
o-Phosphate-P	ND	0.250	1	03/19/22 07:59	03/19/22 12:06	H1
Sulfate	120	2.00	1	03/19/22	03/19/22	
Total Mercury by EPA 7470A		ug/L	ug/L	Analyst: RKS		Batch: 2212088
Mercury	ND	0.200	1	03/19/22	03/20/22	

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 9D

E203110-03

Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
Acetone	ND	80.0	2	03/19/22	03/19/22	
Benzene	ND	2.00	2	03/19/22	03/19/22	
Bromobenzene	ND	2.00	2	03/19/22	03/19/22	
Bromochloromethane	ND	2.00	2	03/19/22	03/19/22	
Bromodichloromethane	ND	2.00	2	03/19/22	03/19/22	
Bromoform	ND	2.00	2	03/19/22	03/19/22	
Bromomethane	ND	4.00	2	03/19/22	03/19/22	
n-Butyl Benzene	ND	2.00	2	03/19/22	03/19/22	
sec-Butylbenzene	ND	2.00	2	03/19/22	03/19/22	
tert-Butylbenzene	ND	2.00	2	03/19/22	03/19/22	
Carbon Tetrachloride	ND	2.00	2	03/19/22	03/19/22	
Chlorobenzene	ND	2.00	2	03/19/22	03/19/22	
Chloroethane	ND	4.00	2	03/19/22	03/19/22	
Chloroform	ND	10.0	2	03/19/22	03/19/22	
Chloromethane	ND	4.00	2	03/19/22	03/19/22	
2-Chlorotoluene	ND	2.00	2	03/19/22	03/19/22	
4-Chlorotoluene	ND	2.00	2	03/19/22	03/19/22	
Dibromochloromethane	ND	2.00	2	03/19/22	03/19/22	
1,2-Dibromo-3-chloropropane (DBCP)	ND	10.0	2	03/19/22	03/19/22	
1,2-Dibromoethane (EDB)	ND	4.00	2	03/19/22	03/19/22	
Dibromomethane	ND	2.00	2	03/19/22	03/19/22	
1,2-Dichlorobenzene	ND	2.00	2	03/19/22	03/19/22	
1,3-Dichlorobenzene	ND	2.00	2	03/19/22	03/19/22	
1,4-Dichlorobenzene	ND	2.00	2	03/19/22	03/19/22	
Dichlorodifluoromethane (Freon-12)	ND	4.00	2	03/19/22	03/19/22	
1,1-Dichloroethane	ND	2.00	2	03/19/22	03/19/22	
1,2-Dichloroethane	ND	2.00	2	03/19/22	03/19/22	
1,1-Dichloroethene	ND	2.00	2	03/19/22	03/19/22	
cis-1,2-Dichloroethene	ND	2.00	2	03/19/22	03/19/22	
trans-1,2-Dichloroethene	ND	2.00	2	03/19/22	03/19/22	
1,2-Dichloropropane	ND	2.00	2	03/19/22	03/19/22	
1,3-Dichloropropane	ND	2.00	2	03/19/22	03/19/22	
2,2-Dichloropropane	ND	2.00	2	03/19/22	03/19/22	
1,1-Dichloropropene	ND	2.00	2	03/19/22	03/19/22	
cis-1,3-Dichloropropene	ND	2.00	2	03/19/22	03/19/22	
trans-1,3-Dichloropropene	ND	2.00	2	03/19/22	03/19/22	
Diisopropyl Ether (DIPE)	ND	2.00	2	03/19/22	03/19/22	
Ethylbenzene	ND	2.00	2	03/19/22	03/19/22	
Ethyl tert-Butyl Ether (ETBE)	ND	2.00	2	03/19/22	03/19/22	
Hexachlorobutadiene	ND	10.0	2	03/19/22	03/19/22	
2-Hexanone	ND	40.0	2	03/19/22	03/19/22	
Isopropylbenzene	ND	2.00	2	03/19/22	03/19/22	
4-Isopropyltoluene	ND	2.00	2	03/19/22	03/19/22	
2-Butanone (MEK)	ND	40.0	2	03/19/22	03/19/22	
Methylene Chloride	ND	4.00	2	03/19/22	03/19/22	
1-Methylnaphthalene	ND	20.0	2	03/19/22	03/19/22	
2-Methylnaphthalene	ND	20.0	2	03/19/22	03/19/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 9D

E203110-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY		Batch: 2212089
4-Methyl-2-pentanone (MIBK)	ND	40.0	2	03/19/22	03/19/22	
Methyl tert-Butyl Ether (MTBE)	ND	2.00	2	03/19/22	03/19/22	
Naphthalene	ND	10.0	2	03/19/22	03/19/22	
n-Propyl Benzene	ND	2.00	2	03/19/22	03/19/22	
Styrene	ND	2.00	2	03/19/22	03/19/22	
tert-Amyl Methyl ether (TAME)	ND	2.00	2	03/19/22	03/19/22	
1,1,1,2-Tetrachloroethane	ND	2.00	2	03/19/22	03/19/22	
1,1,2,2-Tetrachloroethane	ND	2.00	2	03/19/22	03/19/22	
Tetrachloroethene	ND	2.00	2	03/19/22	03/19/22	
1,2,3-Trichlorobenzene	ND	10.0	2	03/19/22	03/19/22	
1,2,4-Trichlorobenzene	ND	10.0	2	03/19/22	03/19/22	
1,1,1-Trichloroethane	ND	2.00	2	03/19/22	03/19/22	
1,1,2-Trichloroethane	ND	2.00	2	03/19/22	03/19/22	
Trichloroethene	ND	2.00	2	03/19/22	03/19/22	
Trichlorofluoromethane (Freon-11)	ND	4.00	2	03/19/22	03/19/22	
1,2,3-Trichloropropane	ND	4.00	2	03/19/22	03/19/22	
1,2,4-Trimethylbenzene	ND	10.0	2	03/19/22	03/19/22	
1,3,5-Trimethylbenzene	ND	2.00	2	03/19/22	03/19/22	
Toluene	ND	2.00	2	03/19/22	03/19/22	
Vinyl chloride	ND	4.00	2	03/19/22	03/19/22	
o-Xylene	ND	2.00	2	03/19/22	03/19/22	
p,m-Xylene	ND	4.00	2	03/19/22	03/19/22	
Total Xylenes	ND	2.00	2	03/19/22	03/19/22	
Surrogate: Bromofluorobenzene	95.0 %	70-130		03/19/22	03/19/22	
Surrogate: 1,2-Dichloroethane-d4	102 %	70-130		03/19/22	03/19/22	
Surrogate: Toluene-d8	96.9 %	70-130		03/19/22	03/19/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 9D

E203110-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C						
	mg/L	mg/L		Analyst: RAS		Batch: 2212068
Total Dissolved Solids	289	10.0	1	03/17/22	03/22/22	
Wet Chemistry by 9040C/4500H+B						
	pH Units	pH Units		Analyst: KL		Batch: 2213006
pH @25°C	7.77		1	03/21/22 08:37	03/21/22 10:26	H5
Wet Chemistry by 9050A/2510B						
	uS/cm	uS/cm		Analyst: RAS		Batch: 2213009
Specific Conductance (@ 25 C)	616	10.0	1	03/21/22	03/21/22	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/L	mg/L		Analyst: IY		Batch: 2212089
Gasoline Range Organics (C6-C10)	ND	0.200	2	03/19/22	03/19/22	
Surrogate: Bromofluorobenzene	95.0 %	70-130		03/19/22	03/19/22	
Surrogate: 1,2-Dichloroethane-d4	102 %	70-130		03/19/22	03/19/22	
Surrogate: Toluene-d8	96.9 %	70-130		03/19/22	03/19/22	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/L	mg/L		Analyst: JL		Batch: 2213017
Diesel Range Organics (C10-C28)	ND	1.00	1	03/21/22	03/21/22	
Oil Range Organics (C28-C36)	ND	2.00	1	03/21/22	03/21/22	
Surrogate: n-Nonane	103 %	50-200		03/21/22	03/21/22	
Total Metals by EPA 6010C						
	mg/L	mg/L		Analyst: RKS		Batch: 2212087
Arsenic	ND	0.0200	1	03/19/22	03/20/22	
Barium	ND	0.250	1	03/19/22	03/20/22	C4, C6
Cadmium	ND	0.0100	1	03/19/22	03/20/22	
Chromium	ND	0.0200	1	03/19/22	03/20/22	C4, C6
Lead	ND	0.0100	1	03/19/22	03/20/22	C4, C6
Selenium	ND	0.0500	1	03/19/22	03/20/22	
Silver	ND	0.0100	1	03/19/22	03/20/22	

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 9D

E203110-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Dissolved Metals by EPA 6010C		mg/L	mg/L	Analyst: RKS		Batch: 2212080
Calcium	48.4	1.00	1	03/18/22	03/19/22	
Iron	ND	2.00	1	03/18/22	03/19/22	
Magnesium	14.0	1.00	1	03/18/22	03/19/22	
Potassium	3.23	1.00	1	03/18/22	03/19/22	
Sodium	48.4	2.00	1	03/18/22	03/19/22	
Sodium Absorption Ratio (CALC)	1.58		1	03/24/22	03/24/22	
Anions by EPA 300.0/9056A		mg/L	mg/L	Analyst: RAS		Batch: 2212086
Fluoride	0.830	0.250	1	03/19/22	03/19/22	
Chloride	44.4	2.00	1	03/19/22	03/19/22	
Nitrite-N	ND	0.250	1	03/19/22 07:59	03/19/22 12:28	H1
Nitrate-N	0.417	0.250	1	03/19/22 07:59	03/19/22 12:28	H1
o-Phosphate-P	ND	0.250	1	03/19/22 07:59	03/19/22 12:28	H1
Sulfate	93.4	2.00	1	03/19/22	03/19/22	
Total Mercury by EPA 7470A		ug/L	ug/L	Analyst: RKS		Batch: 2212088
Mercury	ND	0.200	1	03/19/22	03/20/22	

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 1

E203110-04

Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
Acetone	ND	80.0	2	03/19/22	03/19/22	
Benzene	ND	2.00	2	03/19/22	03/19/22	
Bromobenzene	ND	2.00	2	03/19/22	03/19/22	
Bromochloromethane	ND	2.00	2	03/19/22	03/19/22	
Bromodichloromethane	ND	2.00	2	03/19/22	03/19/22	
Bromoform	ND	2.00	2	03/19/22	03/19/22	
Bromomethane	ND	4.00	2	03/19/22	03/19/22	
n-Butyl Benzene	ND	2.00	2	03/19/22	03/19/22	
sec-Butylbenzene	ND	2.00	2	03/19/22	03/19/22	
tert-Butylbenzene	ND	2.00	2	03/19/22	03/19/22	
Carbon Tetrachloride	ND	2.00	2	03/19/22	03/19/22	
Chlorobenzene	ND	2.00	2	03/19/22	03/19/22	
Chloroethane	ND	4.00	2	03/19/22	03/19/22	
Chloroform	ND	10.0	2	03/19/22	03/19/22	
Chloromethane	ND	4.00	2	03/19/22	03/19/22	
2-Chlorotoluene	ND	2.00	2	03/19/22	03/19/22	
4-Chlorotoluene	ND	2.00	2	03/19/22	03/19/22	
Dibromochloromethane	ND	2.00	2	03/19/22	03/19/22	
1,2-Dibromo-3-chloropropane (DBCP)	ND	10.0	2	03/19/22	03/19/22	
1,2-Dibromoethane (EDB)	ND	4.00	2	03/19/22	03/19/22	
Dibromomethane	ND	2.00	2	03/19/22	03/19/22	
1,2-Dichlorobenzene	ND	2.00	2	03/19/22	03/19/22	
1,3-Dichlorobenzene	ND	2.00	2	03/19/22	03/19/22	
1,4-Dichlorobenzene	ND	2.00	2	03/19/22	03/19/22	
Dichlorodifluoromethane (Freon-12)	ND	4.00	2	03/19/22	03/19/22	
1,1-Dichloroethane	ND	2.00	2	03/19/22	03/19/22	
1,2-Dichloroethane	ND	2.00	2	03/19/22	03/19/22	
1,1-Dichloroethene	ND	2.00	2	03/19/22	03/19/22	
cis-1,2-Dichloroethene	ND	2.00	2	03/19/22	03/19/22	
trans-1,2-Dichloroethene	ND	2.00	2	03/19/22	03/19/22	
1,2-Dichloropropane	ND	2.00	2	03/19/22	03/19/22	
1,3-Dichloropropane	ND	2.00	2	03/19/22	03/19/22	
2,2-Dichloropropane	ND	2.00	2	03/19/22	03/19/22	
1,1-Dichloropropene	ND	2.00	2	03/19/22	03/19/22	
cis-1,3-Dichloropropene	ND	2.00	2	03/19/22	03/19/22	
trans-1,3-Dichloropropene	ND	2.00	2	03/19/22	03/19/22	
Diisopropyl Ether (DIPE)	ND	2.00	2	03/19/22	03/19/22	
Ethylbenzene	ND	2.00	2	03/19/22	03/19/22	
Ethyl tert-Butyl Ether (ETBE)	ND	2.00	2	03/19/22	03/19/22	
Hexachlorobutadiene	ND	10.0	2	03/19/22	03/19/22	
2-Hexanone	ND	40.0	2	03/19/22	03/19/22	
Isopropylbenzene	ND	2.00	2	03/19/22	03/19/22	
4-Isopropyltoluene	ND	2.00	2	03/19/22	03/19/22	
2-Butanone (MEK)	ND	40.0	2	03/19/22	03/19/22	
Methylene Chloride	ND	4.00	2	03/19/22	03/19/22	
1-Methylnaphthalene	ND	20.0	2	03/19/22	03/19/22	
2-Methylnaphthalene	ND	20.0	2	03/19/22	03/19/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 1

E203110-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
4-Methyl-2-pentanone (MIBK)	ND	40.0	2	03/19/22	03/19/22	
Methyl tert-Butyl Ether (MTBE)	ND	2.00	2	03/19/22	03/19/22	
Naphthalene	ND	10.0	2	03/19/22	03/19/22	
n-Propyl Benzene	ND	2.00	2	03/19/22	03/19/22	
Styrene	ND	2.00	2	03/19/22	03/19/22	
tert-Amyl Methyl ether (TAME)	ND	2.00	2	03/19/22	03/19/22	
1,1,1,2-Tetrachloroethane	ND	2.00	2	03/19/22	03/19/22	
1,1,2,2-Tetrachloroethane	ND	2.00	2	03/19/22	03/19/22	
Tetrachloroethene	ND	2.00	2	03/19/22	03/19/22	
1,2,3-Trichlorobenzene	ND	10.0	2	03/19/22	03/19/22	
1,2,4-Trichlorobenzene	ND	10.0	2	03/19/22	03/19/22	
1,1,1-Trichloroethane	ND	2.00	2	03/19/22	03/19/22	
1,1,2-Trichloroethane	ND	2.00	2	03/19/22	03/19/22	
Trichloroethene	ND	2.00	2	03/19/22	03/19/22	
Trichlorofluoromethane (Freon-11)	ND	4.00	2	03/19/22	03/19/22	
1,2,3-Trichloropropane	ND	4.00	2	03/19/22	03/19/22	
1,2,4-Trimethylbenzene	ND	10.0	2	03/19/22	03/19/22	
1,3,5-Trimethylbenzene	ND	2.00	2	03/19/22	03/19/22	
Toluene	ND	2.00	2	03/19/22	03/19/22	
Vinyl chloride	ND	4.00	2	03/19/22	03/19/22	
o-Xylene	ND	2.00	2	03/19/22	03/19/22	
p,m-Xylene	ND	4.00	2	03/19/22	03/19/22	
Total Xylenes	ND	2.00	2	03/19/22	03/19/22	
Surrogate: Bromofluorobenzene	95.1 %	70-130		03/19/22	03/19/22	
Surrogate: 1,2-Dichloroethane-d4	102 %	70-130		03/19/22	03/19/22	
Surrogate: Toluene-d8	98.4 %	70-130		03/19/22	03/19/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 1

E203110-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C						
	mg/L	mg/L		Analyst: RAS		Batch: 2212068
Total Dissolved Solids	352	25.0	1	03/17/22	03/22/22	
Wet Chemistry by 9040C/4500H+B						
	pH Units	pH Units		Analyst: KL		Batch: 2213006
pH @25°C	7.81		1	03/21/22 08:37	03/21/22 10:26	H5
Wet Chemistry by 9050A/2510B						
	uS/cm	uS/cm		Analyst: RAS		Batch: 2213009
Specific Conductance (@ 25 C)	614	10.0	1	03/21/22	03/21/22	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/L	mg/L		Analyst: IY		Batch: 2212089
Gasoline Range Organics (C6-C10)	ND	0.200	2	03/19/22	03/19/22	
Surrogate: Bromofluorobenzene	95.1 %	70-130		03/19/22	03/19/22	
Surrogate: 1,2-Dichloroethane-d4	102 %	70-130		03/19/22	03/19/22	
Surrogate: Toluene-d8	98.4 %	70-130		03/19/22	03/19/22	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/L	mg/L		Analyst: JL		Batch: 2213017
Diesel Range Organics (C10-C28)	ND	1.00	1	03/21/22	03/21/22	
Oil Range Organics (C28-C36)	ND	2.00	1	03/21/22	03/21/22	
Surrogate: n-Nonane	85.9 %	50-200		03/21/22	03/21/22	
Total Metals by EPA 6010C						
	mg/L	mg/L		Analyst: RKS		Batch: 2212087
Arsenic	ND	0.0200	1	03/19/22	03/20/22	
Barium	ND	0.250	1	03/19/22	03/20/22	C4, C6
Cadmium	ND	0.0100	1	03/19/22	03/20/22	
Chromium	ND	0.0200	1	03/19/22	03/20/22	C4, C6
Lead	ND	0.0100	1	03/19/22	03/20/22	C4, C6
Selenium	ND	0.0500	1	03/19/22	03/20/22	
Silver	ND	0.0100	1	03/19/22	03/20/22	

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 1

E203110-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Dissolved Metals by EPA 6010C		mg/L	mg/L	Analyst: RKS		Batch: 2212080
Calcium	68.4	1.00	1	03/18/22	03/19/22	
Iron	ND	2.00	1	03/18/22	03/19/22	
Magnesium	9.79	1.00	1	03/18/22	03/19/22	
Potassium	1.23	1.00	1	03/18/22	03/19/22	
Sodium	38.4	2.00	1	03/18/22	03/19/22	
Sodium Absorption Ratio (CALC)	1.15		1	03/24/22	03/24/22	
Anions by EPA 300.0/9056A		mg/L	mg/L	Analyst: RAS		Batch: 2212086
Fluoride	1.10	0.250	1	03/19/22	03/19/22	
Chloride	29.4	2.00	1	03/19/22	03/19/22	
Nitrite-N	ND	0.250	1	03/19/22 07:59	03/19/22 12:49	H1
Nitrate-N	1.61	0.250	1	03/19/22 07:59	03/19/22 12:49	H1
o-Phosphate-P	ND	0.250	1	03/19/22 07:59	03/19/22 12:49	H1
Sulfate	83.2	2.00	1	03/19/22	03/19/22	
Total Mercury by EPA 7470A		ug/L	ug/L	Analyst: RKS		Batch: 2212088
Mercury	ND	0.200	1	03/19/22	03/20/22	

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 5

E203110-05

Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
Acetone	ND	80.0	2	03/19/22	03/19/22	
Benzene	ND	2.00	2	03/19/22	03/19/22	
Bromobenzene	ND	2.00	2	03/19/22	03/19/22	
Bromochloromethane	ND	2.00	2	03/19/22	03/19/22	
Bromodichloromethane	ND	2.00	2	03/19/22	03/19/22	
Bromoform	ND	2.00	2	03/19/22	03/19/22	
Bromomethane	ND	4.00	2	03/19/22	03/19/22	
n-Butyl Benzene	ND	2.00	2	03/19/22	03/19/22	
sec-Butylbenzene	ND	2.00	2	03/19/22	03/19/22	
tert-Butylbenzene	ND	2.00	2	03/19/22	03/19/22	
Carbon Tetrachloride	ND	2.00	2	03/19/22	03/19/22	
Chlorobenzene	ND	2.00	2	03/19/22	03/19/22	
Chloroethane	ND	4.00	2	03/19/22	03/19/22	
Chloroform	ND	10.0	2	03/19/22	03/19/22	
Chloromethane	ND	4.00	2	03/19/22	03/19/22	
2-Chlorotoluene	ND	2.00	2	03/19/22	03/19/22	
4-Chlorotoluene	ND	2.00	2	03/19/22	03/19/22	
Dibromochloromethane	ND	2.00	2	03/19/22	03/19/22	
1,2-Dibromo-3-chloropropane (DBCP)	ND	10.0	2	03/19/22	03/19/22	
1,2-Dibromoethane (EDB)	ND	4.00	2	03/19/22	03/19/22	
Dibromomethane	ND	2.00	2	03/19/22	03/19/22	
1,2-Dichlorobenzene	ND	2.00	2	03/19/22	03/19/22	
1,3-Dichlorobenzene	ND	2.00	2	03/19/22	03/19/22	
1,4-Dichlorobenzene	ND	2.00	2	03/19/22	03/19/22	
Dichlorodifluoromethane (Freon-12)	ND	4.00	2	03/19/22	03/19/22	
1,1-Dichloroethane	ND	2.00	2	03/19/22	03/19/22	
1,2-Dichloroethane	ND	2.00	2	03/19/22	03/19/22	
1,1-Dichloroethene	ND	2.00	2	03/19/22	03/19/22	
cis-1,2-Dichloroethene	ND	2.00	2	03/19/22	03/19/22	
trans-1,2-Dichloroethene	ND	2.00	2	03/19/22	03/19/22	
1,2-Dichloropropane	ND	2.00	2	03/19/22	03/19/22	
1,3-Dichloropropane	ND	2.00	2	03/19/22	03/19/22	
2,2-Dichloropropane	ND	2.00	2	03/19/22	03/19/22	
1,1-Dichloropropene	ND	2.00	2	03/19/22	03/19/22	
cis-1,3-Dichloropropene	ND	2.00	2	03/19/22	03/19/22	
trans-1,3-Dichloropropene	ND	2.00	2	03/19/22	03/19/22	
Diisopropyl Ether (DIPE)	ND	2.00	2	03/19/22	03/19/22	
Ethylbenzene	ND	2.00	2	03/19/22	03/19/22	
Ethyl tert-Butyl Ether (ETBE)	ND	2.00	2	03/19/22	03/19/22	
Hexachlorobutadiene	ND	10.0	2	03/19/22	03/19/22	
2-Hexanone	ND	40.0	2	03/19/22	03/19/22	
Isopropylbenzene	ND	2.00	2	03/19/22	03/19/22	
4-Isopropyltoluene	ND	2.00	2	03/19/22	03/19/22	
2-Butanone (MEK)	ND	40.0	2	03/19/22	03/19/22	
Methylene Chloride	ND	4.00	2	03/19/22	03/19/22	
1-Methylnaphthalene	ND	20.0	2	03/19/22	03/19/22	
2-Methylnaphthalene	ND	20.0	2	03/19/22	03/19/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 5

E203110-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY		Batch: 2212089
4-Methyl-2-pentanone (MIBK)	ND	40.0	2	03/19/22	03/19/22	
Methyl tert-Butyl Ether (MTBE)	ND	2.00	2	03/19/22	03/19/22	
Naphthalene	ND	10.0	2	03/19/22	03/19/22	
n-Propyl Benzene	ND	2.00	2	03/19/22	03/19/22	
Styrene	ND	2.00	2	03/19/22	03/19/22	
tert-Amyl Methyl ether (TAME)	ND	2.00	2	03/19/22	03/19/22	
1,1,1,2-Tetrachloroethane	ND	2.00	2	03/19/22	03/19/22	
1,1,2,2-Tetrachloroethane	ND	2.00	2	03/19/22	03/19/22	
Tetrachloroethene	ND	2.00	2	03/19/22	03/19/22	
1,2,3-Trichlorobenzene	ND	10.0	2	03/19/22	03/19/22	
1,2,4-Trichlorobenzene	ND	10.0	2	03/19/22	03/19/22	
1,1,1-Trichloroethane	ND	2.00	2	03/19/22	03/19/22	
1,1,2-Trichloroethane	ND	2.00	2	03/19/22	03/19/22	
Trichloroethene	ND	2.00	2	03/19/22	03/19/22	
Trichlorofluoromethane (Freon-11)	ND	4.00	2	03/19/22	03/19/22	
1,2,3-Trichloropropane	ND	4.00	2	03/19/22	03/19/22	
1,2,4-Trimethylbenzene	ND	10.0	2	03/19/22	03/19/22	
1,3,5-Trimethylbenzene	ND	2.00	2	03/19/22	03/19/22	
Toluene	ND	2.00	2	03/19/22	03/19/22	
Vinyl chloride	ND	4.00	2	03/19/22	03/19/22	
o-Xylene	ND	2.00	2	03/19/22	03/19/22	
p,m-Xylene	ND	4.00	2	03/19/22	03/19/22	
Total Xylenes	ND	2.00	2	03/19/22	03/19/22	
Surrogate: Bromofluorobenzene	94.3 %	70-130		03/19/22	03/19/22	
Surrogate: 1,2-Dichloroethane-d4	98.9 %	70-130		03/19/22	03/19/22	
Surrogate: Toluene-d8	97.8 %	70-130		03/19/22	03/19/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 5

E203110-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C						
	mg/L	mg/L		Analyst: RAS		Batch: 2212068
Total Dissolved Solids	178	20.0	1	03/17/22	03/22/22	
Wet Chemistry by 9040C/4500H+B						
	pH Units	pH Units		Analyst: KL		Batch: 2213006
pH @25°C	7.73		1	03/21/22 08:37	03/21/22 10:26	H5
Wet Chemistry by 9050A/2510B						
	uS/cm	uS/cm		Analyst: RAS		Batch: 2213009
Specific Conductance (@ 25 C)	628	10.0	1	03/21/22	03/21/22	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/L	mg/L		Analyst: IY		Batch: 2212089
Gasoline Range Organics (C6-C10)	ND	0.200	2	03/19/22	03/19/22	
Surrogate: Bromofluorobenzene	94.3 %	70-130		03/19/22	03/19/22	
Surrogate: 1,2-Dichloroethane-d4	98.9 %	70-130		03/19/22	03/19/22	
Surrogate: Toluene-d8	97.8 %	70-130		03/19/22	03/19/22	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/L	mg/L		Analyst: JL		Batch: 2213017
Diesel Range Organics (C10-C28)	ND	1.00	1	03/21/22	03/21/22	
Oil Range Organics (C28-C36)	ND	2.00	1	03/21/22	03/21/22	
Surrogate: n-Nonane	104 %	50-200		03/21/22	03/21/22	
Total Metals by EPA 6010C						
	mg/L	mg/L		Analyst: RKS		Batch: 2212087
Arsenic	ND	0.0200	1	03/19/22	03/20/22	
Barium	ND	0.250	1	03/19/22	03/20/22	C4, C6
Cadmium	ND	0.0100	1	03/19/22	03/20/22	
Chromium	ND	0.0200	1	03/19/22	03/20/22	C4, C6
Lead	ND	0.0100	1	03/19/22	03/20/22	C4, C6
Selenium	ND	0.0500	1	03/19/22	03/20/22	
Silver	ND	0.0100	1	03/19/22	03/20/22	

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 5

E203110-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Dissolved Metals by EPA 6010C						
	mg/L	mg/L		Analyst: RKS		Batch: 2212080
Calcium	72.1	1.00	1	03/18/22	03/23/22	
Iron	ND	2.00	1	03/18/22	03/23/22	
Magnesium	9.56	1.00	1	03/18/22	03/23/22	
Potassium	1.69	1.00	1	03/18/22	03/23/22	C1, C6
Sodium	45.6	2.00	1	03/18/22	03/23/22	
Sodium Absorption Ratio (CALC)	1.34		1	03/24/22	03/24/22	
Anions by EPA 300.0/9056A						
	mg/L	mg/L		Analyst: RAS		Batch: 2212086
Fluoride	1.24	0.250	1	03/19/22	03/19/22	
Chloride	29.0	2.00	1	03/19/22	03/19/22	
Nitrite-N	ND	0.250	1	03/19/22 07:59	03/19/22 13:11	H1
Nitrate-N	2.03	0.250	1	03/19/22 07:59	03/19/22 13:11	H1
o-Phosphate-P	ND	0.250	1	03/19/22 07:59	03/19/22 13:11	H1
Sulfate	81.1	2.00	1	03/19/22	03/19/22	
Total Mercury by EPA 7470A						
	ug/L	ug/L		Analyst: RKS		Batch: 2212088
Mercury	ND	0.200	1	03/19/22	03/20/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 6

E203110-06

Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
Acetone	ND	80.0	2	03/19/22	03/19/22	
Benzene	ND	2.00	2	03/19/22	03/19/22	
Bromobenzene	ND	2.00	2	03/19/22	03/19/22	
Bromochloromethane	ND	2.00	2	03/19/22	03/19/22	
Bromodichloromethane	ND	2.00	2	03/19/22	03/19/22	
Bromoform	ND	2.00	2	03/19/22	03/19/22	
Bromomethane	ND	4.00	2	03/19/22	03/19/22	
n-Butyl Benzene	ND	2.00	2	03/19/22	03/19/22	
sec-Butylbenzene	ND	2.00	2	03/19/22	03/19/22	
tert-Butylbenzene	ND	2.00	2	03/19/22	03/19/22	
Carbon Tetrachloride	ND	2.00	2	03/19/22	03/19/22	
Chlorobenzene	ND	2.00	2	03/19/22	03/19/22	
Chloroethane	ND	4.00	2	03/19/22	03/19/22	
Chloroform	ND	10.0	2	03/19/22	03/19/22	
Chloromethane	ND	4.00	2	03/19/22	03/19/22	
2-Chlorotoluene	ND	2.00	2	03/19/22	03/19/22	
4-Chlorotoluene	ND	2.00	2	03/19/22	03/19/22	
Dibromochloromethane	ND	2.00	2	03/19/22	03/19/22	
1,2-Dibromo-3-chloropropane (DBCP)	ND	10.0	2	03/19/22	03/19/22	
1,2-Dibromoethane (EDB)	ND	4.00	2	03/19/22	03/19/22	
Dibromomethane	ND	2.00	2	03/19/22	03/19/22	
1,2-Dichlorobenzene	ND	2.00	2	03/19/22	03/19/22	
1,3-Dichlorobenzene	ND	2.00	2	03/19/22	03/19/22	
1,4-Dichlorobenzene	ND	2.00	2	03/19/22	03/19/22	
Dichlorodifluoromethane (Freon-12)	ND	4.00	2	03/19/22	03/19/22	
1,1-Dichloroethane	ND	2.00	2	03/19/22	03/19/22	
1,2-Dichloroethane	ND	2.00	2	03/19/22	03/19/22	
1,1-Dichloroethene	ND	2.00	2	03/19/22	03/19/22	
cis-1,2-Dichloroethene	ND	2.00	2	03/19/22	03/19/22	
trans-1,2-Dichloroethene	ND	2.00	2	03/19/22	03/19/22	
1,2-Dichloropropane	ND	2.00	2	03/19/22	03/19/22	
1,3-Dichloropropane	ND	2.00	2	03/19/22	03/19/22	
2,2-Dichloropropane	ND	2.00	2	03/19/22	03/19/22	
1,1-Dichloropropene	ND	2.00	2	03/19/22	03/19/22	
cis-1,3-Dichloropropene	ND	2.00	2	03/19/22	03/19/22	
trans-1,3-Dichloropropene	ND	2.00	2	03/19/22	03/19/22	
Diisopropyl Ether (DIPE)	ND	2.00	2	03/19/22	03/19/22	
Ethylbenzene	ND	2.00	2	03/19/22	03/19/22	
Ethyl tert-Butyl Ether (ETBE)	ND	2.00	2	03/19/22	03/19/22	
Hexachlorobutadiene	ND	10.0	2	03/19/22	03/19/22	
2-Hexanone	ND	40.0	2	03/19/22	03/19/22	
Isopropylbenzene	ND	2.00	2	03/19/22	03/19/22	
4-Isopropyltoluene	ND	2.00	2	03/19/22	03/19/22	
2-Butanone (MEK)	ND	40.0	2	03/19/22	03/19/22	
Methylene Chloride	ND	4.00	2	03/19/22	03/19/22	
1-Methylnaphthalene	ND	20.0	2	03/19/22	03/19/22	
2-Methylnaphthalene	ND	20.0	2	03/19/22	03/19/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 6

E203110-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY		Batch: 2212089
4-Methyl-2-pentanone (MIBK)	ND	40.0	2	03/19/22	03/19/22	
Methyl tert-Butyl Ether (MTBE)	ND	2.00	2	03/19/22	03/19/22	
Naphthalene	ND	10.0	2	03/19/22	03/19/22	
n-Propyl Benzene	ND	2.00	2	03/19/22	03/19/22	
Styrene	ND	2.00	2	03/19/22	03/19/22	
tert-Amyl Methyl ether (TAME)	ND	2.00	2	03/19/22	03/19/22	
1,1,1,2-Tetrachloroethane	ND	2.00	2	03/19/22	03/19/22	
1,1,2,2-Tetrachloroethane	ND	2.00	2	03/19/22	03/19/22	
Tetrachloroethene	ND	2.00	2	03/19/22	03/19/22	
1,2,3-Trichlorobenzene	ND	10.0	2	03/19/22	03/19/22	
1,2,4-Trichlorobenzene	ND	10.0	2	03/19/22	03/19/22	
1,1,1-Trichloroethane	ND	2.00	2	03/19/22	03/19/22	
1,1,2-Trichloroethane	ND	2.00	2	03/19/22	03/19/22	
Trichloroethene	ND	2.00	2	03/19/22	03/19/22	
Trichlorofluoromethane (Freon-11)	ND	4.00	2	03/19/22	03/19/22	
1,2,3-Trichloropropane	ND	4.00	2	03/19/22	03/19/22	
1,2,4-Trimethylbenzene	ND	10.0	2	03/19/22	03/19/22	
1,3,5-Trimethylbenzene	ND	2.00	2	03/19/22	03/19/22	
Toluene	ND	2.00	2	03/19/22	03/19/22	
Vinyl chloride	ND	4.00	2	03/19/22	03/19/22	
o-Xylene	ND	2.00	2	03/19/22	03/19/22	
p,m-Xylene	ND	4.00	2	03/19/22	03/19/22	
Total Xylenes	ND	2.00	2	03/19/22	03/19/22	
Surrogate: Bromofluorobenzene	94.7 %	70-130		03/19/22	03/19/22	
Surrogate: 1,2-Dichloroethane-d4	107 %	70-130		03/19/22	03/19/22	
Surrogate: Toluene-d8	97.1 %	70-130		03/19/22	03/19/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 6

E203110-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C						
	mg/L	mg/L		Analyst: RAS		Batch: 2212068
Total Dissolved Solids	2360	25.0	1	03/17/22	03/22/22	
Wet Chemistry by 9040C/4500H+B						
	pH Units	pH Units		Analyst: KL		Batch: 2213006
pH @25°C	7.78		1	03/21/22 08:37	03/21/22 10:26	H5
Wet Chemistry by 9050A/2510B						
	uS/cm	uS/cm		Analyst: RAS		Batch: 2213009
Specific Conductance (@ 25 C)	4190	10.0	1	03/21/22	03/21/22	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/L	mg/L		Analyst: IY		Batch: 2212089
Gasoline Range Organics (C6-C10)	ND	0.200	2	03/19/22	03/19/22	
Surrogate: Bromofluorobenzene		94.7 %	70-130	03/19/22	03/19/22	
Surrogate: 1,2-Dichloroethane-d4		107 %	70-130	03/19/22	03/19/22	
Surrogate: Toluene-d8		97.1 %	70-130	03/19/22	03/19/22	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/L	mg/L		Analyst: JL		Batch: 2213017
Diesel Range Organics (C10-C28)	ND	1.00	1	03/21/22	03/21/22	
Oil Range Organics (C28-C36)	ND	2.00	1	03/21/22	03/21/22	
Surrogate: n-Nonane		108 %	50-200	03/21/22	03/21/22	
Total Metals by EPA 6010C						
	mg/L	mg/L		Analyst: RKS		Batch: 2212087
Arsenic	0.0369	0.0200	1	03/19/22	03/20/22	
Barium	ND	0.250	1	03/19/22	03/20/22	C4, C6
Cadmium	ND	0.0100	1	03/19/22	03/20/22	
Chromium	ND	0.0200	1	03/19/22	03/20/22	C4, C6
Lead	ND	0.0100	1	03/19/22	03/20/22	C4, C6
Selenium	ND	0.0500	1	03/19/22	03/20/22	
Silver	ND	0.0100	1	03/19/22	03/20/22	

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 6

E203110-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Dissolved Metals by EPA 6010C						
	mg/L	mg/L		Analyst: RKS		Batch: 2212080
Calcium	78.5	1.00	1	03/18/22	03/23/22	
Iron	ND	2.00	1	03/18/22	03/23/22	
Magnesium	5.34	1.00	1	03/18/22	03/23/22	
Potassium	4.83	1.00	1	03/18/22	03/23/22	C1, C6
Sodium	856	20.0	10	03/18/22	03/23/22	C4, C6
Sodium Absorption Ratio (CALC)	25.2		1	03/24/22	03/24/22	
Anions by EPA 300.0/9056A						
	mg/L	mg/L		Analyst: RAS		Batch: 2212086
Fluoride	ND	5.00	20	03/19/22	03/19/22	
Chloride	1140	40.0	20	03/19/22	03/19/22	
Nitrite-N	ND	5.00	20	03/19/22 07:59	03/19/22 13:32	H1
Nitrate-N	ND	5.00	20	03/19/22 07:59	03/19/22 13:32	H1
o-Phosphate-P	ND	5.00	20	03/19/22 07:59	03/19/22 13:32	H1
Sulfate	230	40.0	20	03/19/22	03/19/22	
Total Mercury by EPA 7470A						
	ug/L	ug/L		Analyst: RKS		Batch: 2212088
Mercury	ND	0.200	1	03/19/22	03/20/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 3

E203110-07

Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
Acetone	ND	80.0	2	03/19/22	03/19/22	
Benzene	ND	2.00	2	03/19/22	03/19/22	
Bromobenzene	ND	2.00	2	03/19/22	03/19/22	
Bromochloromethane	ND	2.00	2	03/19/22	03/19/22	
Bromodichloromethane	ND	2.00	2	03/19/22	03/19/22	
Bromoform	ND	2.00	2	03/19/22	03/19/22	
Bromomethane	ND	4.00	2	03/19/22	03/19/22	
n-Butyl Benzene	ND	2.00	2	03/19/22	03/19/22	
sec-Butylbenzene	ND	2.00	2	03/19/22	03/19/22	
tert-Butylbenzene	ND	2.00	2	03/19/22	03/19/22	
Carbon Tetrachloride	ND	2.00	2	03/19/22	03/19/22	
Chlorobenzene	ND	2.00	2	03/19/22	03/19/22	
Chloroethane	ND	4.00	2	03/19/22	03/19/22	
Chloroform	ND	10.0	2	03/19/22	03/19/22	
Chloromethane	ND	4.00	2	03/19/22	03/19/22	
2-Chlorotoluene	ND	2.00	2	03/19/22	03/19/22	
4-Chlorotoluene	ND	2.00	2	03/19/22	03/19/22	
Dibromochloromethane	ND	2.00	2	03/19/22	03/19/22	
1,2-Dibromo-3-chloropropane (DBCP)	ND	10.0	2	03/19/22	03/19/22	
1,2-Dibromoethane (EDB)	ND	4.00	2	03/19/22	03/19/22	
Dibromomethane	ND	2.00	2	03/19/22	03/19/22	
1,2-Dichlorobenzene	ND	2.00	2	03/19/22	03/19/22	
1,3-Dichlorobenzene	ND	2.00	2	03/19/22	03/19/22	
1,4-Dichlorobenzene	ND	2.00	2	03/19/22	03/19/22	
Dichlorodifluoromethane (Freon-12)	ND	4.00	2	03/19/22	03/19/22	
1,1-Dichloroethane	ND	2.00	2	03/19/22	03/19/22	
1,2-Dichloroethane	ND	2.00	2	03/19/22	03/19/22	
1,1-Dichloroethene	ND	2.00	2	03/19/22	03/19/22	
cis-1,2-Dichloroethene	ND	2.00	2	03/19/22	03/19/22	
trans-1,2-Dichloroethene	ND	2.00	2	03/19/22	03/19/22	
1,2-Dichloropropane	ND	2.00	2	03/19/22	03/19/22	
1,3-Dichloropropane	ND	2.00	2	03/19/22	03/19/22	
2,2-Dichloropropane	ND	2.00	2	03/19/22	03/19/22	
1,1-Dichloropropene	ND	2.00	2	03/19/22	03/19/22	
cis-1,3-Dichloropropene	ND	2.00	2	03/19/22	03/19/22	
trans-1,3-Dichloropropene	ND	2.00	2	03/19/22	03/19/22	
Diisopropyl Ether (DIPE)	ND	2.00	2	03/19/22	03/19/22	
Ethylbenzene	ND	2.00	2	03/19/22	03/19/22	
Ethyl tert-Butyl Ether (ETBE)	ND	2.00	2	03/19/22	03/19/22	
Hexachlorobutadiene	ND	10.0	2	03/19/22	03/19/22	
2-Hexanone	ND	40.0	2	03/19/22	03/19/22	
Isopropylbenzene	ND	2.00	2	03/19/22	03/19/22	
4-Isopropyltoluene	ND	2.00	2	03/19/22	03/19/22	
2-Butanone (MEK)	ND	40.0	2	03/19/22	03/19/22	
Methylene Chloride	ND	4.00	2	03/19/22	03/19/22	
1-Methylnaphthalene	ND	20.0	2	03/19/22	03/19/22	
2-Methylnaphthalene	ND	20.0	2	03/19/22	03/19/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 3

E203110-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
4-Methyl-2-pentanone (MIBK)	ND	40.0	2	03/19/22	03/19/22	
Methyl tert-Butyl Ether (MTBE)	ND	2.00	2	03/19/22	03/19/22	
Naphthalene	ND	10.0	2	03/19/22	03/19/22	
n-Propyl Benzene	ND	2.00	2	03/19/22	03/19/22	
Styrene	ND	2.00	2	03/19/22	03/19/22	
tert-Amyl Methyl ether (TAME)	ND	2.00	2	03/19/22	03/19/22	
1,1,1,2-Tetrachloroethane	ND	2.00	2	03/19/22	03/19/22	
1,1,2,2-Tetrachloroethane	ND	2.00	2	03/19/22	03/19/22	
Tetrachloroethene	ND	2.00	2	03/19/22	03/19/22	
1,2,3-Trichlorobenzene	ND	10.0	2	03/19/22	03/19/22	
1,2,4-Trichlorobenzene	ND	10.0	2	03/19/22	03/19/22	
1,1,1-Trichloroethane	ND	2.00	2	03/19/22	03/19/22	
1,1,2-Trichloroethane	ND	2.00	2	03/19/22	03/19/22	
Trichloroethene	ND	2.00	2	03/19/22	03/19/22	
Trichlorofluoromethane (Freon-11)	ND	4.00	2	03/19/22	03/19/22	
1,2,3-Trichloropropane	ND	4.00	2	03/19/22	03/19/22	
1,2,4-Trimethylbenzene	ND	10.0	2	03/19/22	03/19/22	
1,3,5-Trimethylbenzene	ND	2.00	2	03/19/22	03/19/22	
Toluene	ND	2.00	2	03/19/22	03/19/22	
Vinyl chloride	ND	4.00	2	03/19/22	03/19/22	
o-Xylene	ND	2.00	2	03/19/22	03/19/22	
p,m-Xylene	ND	4.00	2	03/19/22	03/19/22	
Total Xylenes	ND	2.00	2	03/19/22	03/19/22	
Surrogate: Bromofluorobenzene	94.0 %	70-130		03/19/22	03/19/22	
Surrogate: 1,2-Dichloroethane-d4	105 %	70-130		03/19/22	03/19/22	
Surrogate: Toluene-d8	96.7 %	70-130		03/19/22	03/19/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 3

E203110-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C						
	mg/L	mg/L		Analyst: RAS		Batch: 2212068
Total Dissolved Solids	455	25.0	1	03/17/22	03/22/22	
Wet Chemistry by 9040C/4500H+B						
	pH Units	pH Units		Analyst: KL		Batch: 2213006
pH @25°C	7.82		1	03/21/22 08:37	03/21/22 10:26	H5
Wet Chemistry by 9050A/2510B						
	uS/cm	uS/cm		Analyst: RAS		Batch: 2213009
Specific Conductance (@ 25 C)	625	10.0	1	03/21/22	03/21/22	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/L	mg/L		Analyst: IY		Batch: 2212089
Gasoline Range Organics (C6-C10)	ND	0.200	2	03/19/22	03/19/22	
Surrogate: Bromofluorobenzene	94.0 %	70-130		03/19/22	03/19/22	
Surrogate: 1,2-Dichloroethane-d4	105 %	70-130		03/19/22	03/19/22	
Surrogate: Toluene-d8	96.7 %	70-130		03/19/22	03/19/22	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/L	mg/L		Analyst: JL		Batch: 2213017
Diesel Range Organics (C10-C28)	ND	1.00	1	03/21/22	03/21/22	
Oil Range Organics (C28-C36)	ND	2.00	1	03/21/22	03/21/22	
Surrogate: n-Nonane	83.2 %	50-200		03/21/22	03/21/22	
Total Metals by EPA 6010C						
	mg/L	mg/L		Analyst: RKS		Batch: 2212087
Arsenic	ND	0.0200	1	03/19/22	03/20/22	
Barium	ND	0.250	1	03/19/22	03/20/22	C4, C6
Cadmium	ND	0.0100	1	03/19/22	03/20/22	
Chromium	ND	0.0200	1	03/19/22	03/20/22	C4, C6
Lead	ND	0.0100	1	03/19/22	03/20/22	C4, C6
Selenium	ND	0.0500	1	03/19/22	03/20/22	
Silver	ND	0.0100	1	03/19/22	03/20/22	

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: W Lovington Strawn U. #8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/24/2022 6:26:08PM

MW - 3

E203110-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Dissolved Metals by EPA 6010C		mg/L	mg/L	Analyst: RKS		Batch: 2212080
Calcium	72.8	1.00	1	03/18/22	03/23/22	
Iron	ND	2.00	1	03/18/22	03/23/22	
Magnesium	10.1	1.00	1	03/18/22	03/23/22	
Potassium	ND	1.00	1	03/18/22	03/23/22	
Sodium	37.1	2.00	1	03/18/22	03/23/22	
Sodium Absorption Ratio (CALC)	1.08		1	03/24/22	03/24/22	
Anions by EPA 300.0/9056A		mg/L	mg/L	Analyst: RAS		Batch: 2212086
Fluoride	1.38	0.250	1	03/19/22	03/19/22	
Chloride	27.9	2.00	1	03/19/22	03/19/22	
Nitrite-N	ND	0.250	1	03/19/22 07:59	03/19/22 13:54	H1
Nitrate-N	1.69	0.250	1	03/19/22 07:59	03/19/22 13:54	H1
o-Phosphate-P	ND	0.250	1	03/19/22 07:59	03/19/22 13:54	H1
Sulfate	72.8	2.00	1	03/19/22	03/19/22	
Total Mercury by EPA 7470A		ug/L	ug/L	Analyst: RKS		Batch: 2212088
Mercury	ND	0.200	1	03/19/22	03/20/22	

QC Summary Data

Newell Law Firm	Project Name:	W Lovington Strawn U. #8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/24/2022 6:26:08PM

Volatile Organic Compounds by EPA 8260B

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
	ug/L	ug/L	ug/L	ug/L	%	%	%	%	

Blank (2212089-BLK1)

Prepared: 03/19/22 Analyzed: 03/19/22

Acetone	ND	40.0
Benzene	ND	1.00
Bromobenzene	ND	1.00
Bromochloromethane	ND	1.00
Bromodichloromethane	ND	1.00
Bromoform	ND	1.00
Bromomethane	ND	2.00
n-Butyl Benzene	ND	1.00
sec-Butylbenzene	ND	1.00
tert-Butylbenzene	ND	1.00
Carbon Tetrachloride	ND	1.00
Chlorobenzene	ND	1.00
Chloroethane	ND	2.00
Chloroform	ND	5.00
Chloromethane	ND	2.00
2-Chlorotoluene	ND	1.00
4-Chlorotoluene	ND	1.00
Dibromochloromethane	ND	1.00
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.00
1,2-Dibromoethane (EDB)	ND	2.00
Dibromomethane	ND	1.00
1,2-Dichlorobenzene	ND	1.00
1,3-Dichlorobenzene	ND	1.00
1,4-Dichlorobenzene	ND	1.00
Dichlorodifluoromethane (Freon-12)	ND	2.00
1,1-Dichloroethane	ND	1.00
1,2-Dichloroethane	ND	1.00
1,1-Dichloroethene	ND	1.00
cis-1,2-Dichloroethene	ND	1.00
trans-1,2-Dichloroethene	ND	1.00
1,2-Dichloropropane	ND	1.00
1,3-Dichloropropane	ND	1.00
2,2-Dichloropropane	ND	1.00
1,1-Dichloropropene	ND	1.00
cis-1,3-Dichloropropene	ND	1.00
trans-1,3-Dichloropropene	ND	1.00
Diisopropyl Ether (DIPE)	ND	1.00
Ethylbenzene	ND	1.00
Ethyl tert-Butyl Ether (ETBE)	ND	1.00
Hexachlorobutadiene	ND	5.00
2-Hexanone	ND	20.0
Isopropylbenzene	ND	1.00
4-Isopropyltoluene	ND	1.00
2-Butanone (MEK)	ND	20.0
Methylene Chloride	ND	2.00
1-Methylnaphthalene	ND	10.0
2-Methylnaphthalene	ND	10.0
4-Methyl-2-pentanone (MIBK)	ND	20.0
Methyl tert-Butyl Ether (MTBE)	ND	1.00
Naphthalene	ND	5.00
n-Propyl Benzene	ND	1.00
Styrene	ND	1.00
tert-Amyl Methyl ether (TAME)	ND	1.00
1,1,1,2-Tetrachloroethane	ND	1.00
1,1,2,2-Tetrachloroethane	ND	1.00
Tetrachloroethene	ND	1.00
1,2,3-Trichlorobenzene	ND	5.00
1,2,4-Trichlorobenzene	ND	5.00
1,1,1-Trichloroethane	ND	1.00
1,1,2-Trichloroethane	ND	1.00
Trichloroethene	ND	1.00
Trichlorofluoromethane (Freon-11)	ND	2.00
1,2,3-Trichloropropane	ND	2.00
1,2,4-Trimethylbenzene	ND	5.00



QC Summary Data

Newell Law Firm	Project Name:	W Lovington Strawn U. #8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/24/2022 6:26:08PM

Volatile Organic Compounds by EPA 8260B

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	ug/L	ug/L	ug/L	ug/L	%	%	%	%	

Blank (2212089-BLK1)

Prepared: 03/19/22 Analyzed: 03/19/22

1,3,5-Trimethylbenzene	ND	1.00							
Toluene	ND	1.00							
Vinyl chloride	ND	2.00							
o-Xylene	ND	1.00							
p,m-Xylene	ND	2.00							
Total Xylenes	ND	1.00							
Surrogate: Bromofluorobenzene	9.62		10.0		96.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	10.1		10.0		101	70-130			
Surrogate: Toluene-d8	9.93		10.0		99.3	70-130			

LCS (2212089-BS1)

Prepared: 03/19/22 Analyzed: 03/19/22

Benzene	46.7	1.00	50.0		93.3	70-130			
Bromochloromethane	45.1	1.00	50.0		90.1	70-130			
tert-Butylbenzene	42.6	1.00	50.0		85.2	70-130			
Chlorobenzene	46.9	1.00	50.0		93.7	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	38.3	5.00	50.0		76.6	65-135			
1,4-Dichlorobenzene	44.0	1.00	50.0		88.0	70-130			
1,1-Dichloroethene	44.3	1.00	50.0		88.6	80-120			
1,2-Dichloropropane	48.7	1.00	50.0		97.4	80-120			
Diisopropyl Ether (DIPE)	47.0	1.00	50.0		94.0	65-135			
Ethylbenzene	47.0	1.00	50.0		93.9	80-120			
Methylene Chloride	46.2	2.00	50.0		92.3	70-130			
4-Methyl-2-pentanone (MIBK)	85.5	20.0	100		85.5	50-160			
Methyl tert-Butyl Ether (MTBE)	83.3	1.00	100		83.3	70-130			
n-Propyl Benzene	47.3	1.00	50.0		94.6	70-130			
1,1,1,2-Tetrachloroethane	43.8	1.00	50.0		87.6	70-130			
Tetrachloroethene	44.4	1.00	50.0		88.7	70-130			
1,2,3-Trichlorobenzene	39.1	5.00	50.0		78.3	70-140			
1,1,1-Trichloroethane	40.7	1.00	50.0		81.4	70-130			
1,1,2-Trichloroethane	44.9	1.00	50.0		89.8	70-130			
Trichloroethene	44.5	1.00	50.0		88.9	70-130			
Toluene	46.7	1.00	50.0		93.4	80-120			
Vinyl chloride	54.7	2.00	50.0		109	80-120			
o-Xylene	45.5	1.00	50.0		91.0	70-130			
p,m-Xylene	90.9	2.00	100		90.9	70-130			
Total Xylenes	136	1.00	150		90.9	70-130			
Surrogate: Bromofluorobenzene	10.1		10.0		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	9.99		10.0		99.9	70-130			
Surrogate: Toluene-d8	10.0		10.0		100	70-130			

LCS Dup (2212089-BSD1)

Prepared: 03/19/22 Analyzed: 03/19/22

Benzene	51.2	1.00	50.0		102	70-130	9.28	20	
Bromochloromethane	48.8	1.00	50.0		97.7	70-130	8.07	20	
tert-Butylbenzene	47.2	1.00	50.0		94.4	70-130	10.2	20	
Chlorobenzene	52.1	1.00	50.0		104	70-130	10.6	20	
1,2-Dibromo-3-chloropropane (DBCP)	41.6	5.00	50.0		83.2	65-135	8.33	30	
1,4-Dichlorobenzene	49.6	1.00	50.0		99.2	70-130	12.0	20	
1,1-Dichloroethene	48.9	1.00	50.0		97.9	80-120	9.95	20	
1,2-Dichloropropane	53.9	1.00	50.0		108	80-120	10.2	20	
Diisopropyl Ether (DIPE)	51.4	1.00	50.0		103	65-135	8.91	20	
Ethylbenzene	52.1	1.00	50.0		104	80-120	10.3	20	
Methylene Chloride	50.5	2.00	50.0		101	70-130	8.92	20	
4-Methyl-2-pentanone (MIBK)	91.5	20.0	100		91.5	50-160	6.78	30	
Methyl tert-Butyl Ether (MTBE)	88.9	1.00	100		88.9	70-130	6.56	20	
n-Propyl Benzene	52.6	1.00	50.0		105	70-130	10.7	20	
1,1,1,2-Tetrachloroethane	48.8	1.00	50.0		97.7	70-130	10.9	20	
Tetrachloroethene	49.8	1.00	50.0		99.6	70-130	11.5	20	
1,2,3-Trichlorobenzene	43.7	5.00	50.0		87.4	70-140	11.0	20	
1,1,1-Trichloroethane	45.4	1.00	50.0		90.9	70-130	11.0	20	
1,1,2-Trichloroethane	48.9	1.00	50.0		97.8	70-130	8.49	20	
Trichloroethene	50.1	1.00	50.0		100	70-130	11.9	20	

QC Summary Data

Newell Law Firm	Project Name:	W Lovington Strawn U. #8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/24/2022 6:26:08PM

Volatile Organic Compounds by EPA 8260B

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	ug/L	ug/L	ug/L	ug/L	%	%	%	%	

LCS Dup (2212089-BSD1)

Prepared: 03/19/22 Analyzed: 03/19/22

Toluene	52.0	1.00	50.0		104	80-120	10.7	20	
Vinyl chloride	60.2	2.00	50.0		120	80-120	9.59	30	
o-Xylene	50.7	1.00	50.0		101	70-130	10.8	20	
p,m-Xylene	101	2.00	100		101	70-130	10.5	20	
Total Xylenes	152	1.00	150		101	70-130	10.6	20	
Surrogate: Bromofluorobenzene	9.98		10.0		99.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	9.97		10.0		99.7	70-130			
Surrogate: Toluene-d8	10.2		10.0		102	70-130			

QC Summary Data

Newell Law Firm	Project Name:	W Lovington Strawn U. #8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/24/2022 6:26:08PM

Wet Chem/Gravimetric by SM2540C

Analyst: RAS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	

Blank (2212068-BLK1)					Prepared: 03/17/22 Analyzed: 03/18/22				
Total Dissolved Solids	ND	10.0							
LCS (2212068-BS1)					Prepared: 03/17/22 Analyzed: 03/18/22				
Total Dissolved Solids	88.0	10.0	100	88.0	55-134				
Duplicate (2212068-DUP1)					Source: E203079-01	Prepared: 03/17/22 Analyzed: 03/18/22			
Total Dissolved Solids	43200	200		42100		2.39	5		
Duplicate (2212068-DUP2)					Source: E203111-07	Prepared: 03/17/22 Analyzed: 03/22/22			
Total Dissolved Solids	345	10.0		333		3.69	5		

QC Summary Data

Newell Law Firm	Project Name:	W Lovington Strawn U. #8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/24/2022 6:26:08PM

Wet Chemistry by 9040C/4500H+B

Analyst: KL

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	pH Units	pH Units	pH Units	pH Units	%	%	%	%	

LCS (2213006-BS1)	Prepared: 03/21/22 Analyzed: 03/21/22								
pH	8.00		8.00		100	98.75-101.25			
Duplicate (2213006-DUP1)	Source: E203111-07 Prepared: 03/21/22 Analyzed: 03/21/22								
pH	7.87			7.78		1.15	20		

QC Summary Data

Newell Law Firm	Project Name:	W Lovington Strawn U. #8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/24/2022 6:26:08PM

Wet Chemistry by SM2320B

Analyst: RAS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	

LCS (2213016-BS1)					Prepared: 03/21/22 Analyzed: 03/21/22				
Total Alkalinity (as CaCO3 at pH 4.5)	246	10.0	250		98.4	70-130			
LCS Dup (2213016-BSD1)					Prepared: 03/21/22 Analyzed: 03/21/22				
Total Alkalinity (as CaCO3 at pH 4.5)	242	10.0	250		96.8	70-130	1.64	20	

QC Summary Data

Newell Law Firm	Project Name:	W Lovington Strawn U. #8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/24/2022 6:26:08PM

Wet Chemistry by 9050A/2510B

Analyst: RAS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	uS/cm	uS/cm	uS/cm	uS/cm	%	%	%	%	

Blank (2213009-BLK1)					Prepared: 03/21/22 Analyzed: 03/21/22				
Specific Conductance (@ 25 C)	ND	10.0							
LCS (2213009-BS1)					Prepared: 03/21/22 Analyzed: 03/21/22				
Specific Conductance (@ 25 C)	1410	10.0	1410		99.8	98-102			
Duplicate (2213009-DUP1)					Source: E203110-03		Prepared: 03/21/22 Analyzed: 03/21/22		
Specific Conductance (@ 25 C)	616	10.0		616			0.00	20	

QC Summary Data

Newell Law Firm	Project Name:	W Lovington Strawn U. #8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/24/2022 6:26:08PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: IY

Analyte	Result mg/L	Reporting Limit mg/L	Spike Level mg/L	Source Result mg/L	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2212089-BLK1)

Prepared: 03/19/22 Analyzed: 03/19/22

Gasoline Range Organics (C6-C10)	ND	0.100							
Surrogate: Bromofluorobenzene	0.00962		0.0100		96.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0101		0.0100		101	70-130			
Surrogate: Toluene-d8	0.00993		0.0100		99.3	70-130			

LCS (2212089-BS2)

Prepared: 03/19/22 Analyzed: 03/19/22

Gasoline Range Organics (C6-C10)	1.10	0.100	1.00		110	70-130			
Surrogate: Bromofluorobenzene	0.00970		0.0100		97.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.00975		0.0100		97.5	70-130			
Surrogate: Toluene-d8	0.00998		0.0100		99.8	70-130			

LCS Dup (2212089-BSD2)

Prepared: 03/19/22 Analyzed: 03/19/22

Gasoline Range Organics (C6-C10)	1.15	0.100	1.00		115	70-130	4.95	20	
Surrogate: Bromofluorobenzene	0.00983		0.0100		98.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.00976		0.0100		97.6	70-130			
Surrogate: Toluene-d8	0.00995		0.0100		99.5	70-130			



QC Summary Data

Newell Law Firm	Project Name:	W Lovington Strawn U. #8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/24/2022 6:26:08PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: JL

Analyte	Result mg/L	Reporting Limit mg/L	Spike Level mg/L	Source Result mg/L	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2213017-BLK1) Prepared: 03/21/22 Analyzed: 03/22/22

Diesel Range Organics (C10-C28)	ND	1.00							
Oil Range Organics (C28-C36)	ND	2.00							
Surrogate: n-Nonane	2.65		2.50		106	50-200			

LCS (2213017-BS1) Prepared: 03/21/22 Analyzed: 03/22/22

Diesel Range Organics (C10-C28)	8.23	1.00	12.5		65.9	36-132			
Surrogate: n-Nonane	2.49		2.50		99.7	50-200			

LCS Dup (2213017-BSD1) Prepared: 03/21/22 Analyzed: 03/22/22

Diesel Range Organics (C10-C28)	8.60	1.00	12.5		68.8	36-132	4.29	20	
Surrogate: n-Nonane	2.54		2.50		101	50-200			

QC Summary Data

Newell Law Firm	Project Name:	W Lovington Strawn U. #8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/24/2022 6:26:08PM

Total Metals by EPA 6010C

Analyst: RKS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	

Blank (2212087-BLK1)

Prepared: 03/19/22 Analyzed: 03/20/22

Arsenic	ND	0.0200
Barium	ND	0.250
Cadmium	ND	0.0100
Chromium	ND	0.0200
Lead	ND	0.0100
Selenium	ND	0.0500
Silver	ND	0.0100

LCS (2212087-BS1)

Prepared: 03/19/22 Analyzed: 03/20/22

Arsenic	0.444	0.0200	0.500	88.8	80-120
Barium	11.4	0.250	12.5	91.0	80-120
Cadmium	0.236	0.0100	0.250	94.4	80-120
Chromium	0.939	0.0200	1.00	93.9	80-120
Lead	0.241	0.0100	0.250	96.2	80-120
Selenium	1.14	0.0500	1.25	91.2	80-120
Silver	0.0854	0.0100	0.100	85.4	80-120

Matrix Spike (2212087-MS1)

Source: E203093-01

Prepared: 03/19/22 Analyzed: 03/20/22

Arsenic	4.36	0.200	5.00	ND	87.2	75-125
Barium	111	2.50	125	ND	88.6	75-125
Cadmium	2.23	0.100	2.50	ND	89.3	75-125
Chromium	8.90	0.200	10.0	ND	89.0	75-125
Lead	2.28	0.100	2.50	ND	91.4	75-125
Selenium	11.2	0.500	12.5	ND	89.5	75-125
Silver	0.815	0.100	1.00	ND	81.5	75-125

Matrix Spike Dup (2212087-MSD1)

Source: E203093-01

Prepared: 03/19/22 Analyzed: 03/20/22

Arsenic	4.38	0.200	5.00	ND	87.5	75-125	0.389	20
Barium	110	2.50	125	ND	87.7	75-125	1.09	20
Cadmium	2.27	0.100	2.50	ND	90.7	75-125	1.51	20
Chromium	8.97	0.200	10.0	ND	89.7	75-125	0.851	20
Lead	2.31	0.100	2.50	ND	92.5	75-125	1.22	20
Selenium	11.2	0.500	12.5	ND	89.6	75-125	0.0893	20
Silver	0.828	0.100	1.00	ND	82.8	75-125	1.58	20

QC Summary Data

Newell Law Firm	Project Name:	W Lovington Strawn U. #8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/24/2022 6:26:08PM

Dissolved Metals by EPA 6010C

Analyst: RKS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	

Blank (2212080-BLK1)

Prepared: 03/18/22 Analyzed: 03/19/22

Calcium	ND	1.00
Iron	ND	2.00
Magnesium	ND	1.00
Potassium	ND	1.00
Sodium	ND	2.00

LCS (2212080-BS1)

Prepared: 03/18/22 Analyzed: 03/19/22

Calcium	48.3	1.00	50.0	96.6	80-120
Iron	101	2.00	100	101	80-120
Magnesium	49.9	1.00	50.0	99.9	80-120
Potassium	4.68	1.00	5.00	93.6	80-120
Sodium	17.9	2.00	20.0	89.6	80-120

Matrix Spike (2212080-MS1)

Source: E203110-03

Prepared: 03/18/22 Analyzed: 03/19/22

Calcium	91.6	1.00	50.0	48.4	86.4	75-125
Iron	99.6	2.00	100	ND	99.6	75-125
Magnesium	63.8	1.00	50.0	14.0	99.7	75-125
Potassium	8.12	1.00	5.00	3.23	97.6	75-125
Sodium	67.2	2.00	20.0	48.4	93.8	75-125

Matrix Spike Dup (2212080-MSD1)

Source: E203110-03

Prepared: 03/18/22 Analyzed: 03/19/22

Calcium	95.1	1.00	50.0	48.4	93.3	75-125	3.74	20
Iron	100	2.00	100	ND	100	75-125	0.481	20
Magnesium	63.9	1.00	50.0	14.0	99.9	75-125	0.188	20
Potassium	8.46	1.00	5.00	3.23	104	75-125	4.12	20
Sodium	69.0	2.00	20.0	48.4	103	75-125	2.67	20



QC Summary Data

Newell Law Firm	Project Name:	W Lovington Strawn U. #8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/24/2022 6:26:08PM

Anions by EPA 300.0/9056A

Analyst: RAS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	

Blank (2212086-BLK1)

Prepared: 03/19/22 Analyzed: 03/19/22

Fluoride	ND	0.250
Chloride	ND	2.00
Nitrite-N	ND	0.250
Nitrate-N	ND	0.250
o-Phosphate-P	ND	0.250
Sulfate	ND	2.00

LCS (2212086-BS1)

Prepared: 03/19/22 Analyzed: 03/19/22

Fluoride	2.57	0.250	2.50	103	90-110
Chloride	24.9	2.00	25.0	99.5	90-110
Nitrite-N	2.73	0.250	2.50	109	90-110
Nitrate-N	2.58	0.250	2.50	103	90-110
o-Phosphate-P	12.4	0.250	12.5	99.1	90-110
Sulfate	24.9	2.00	25.0	99.5	90-110

LCS Dup (2212086-BSD1)

Prepared: 03/19/22 Analyzed: 03/19/22

Fluoride	2.56	0.250	2.50	102	90-110	0.312	20
Chloride	24.8	2.00	25.0	99.0	90-110	0.552	20
Nitrite-N	2.54	0.250	2.50	102	90-110	6.95	20
Nitrate-N	2.58	0.250	2.50	103	90-110	0.271	20
o-Phosphate-P	12.3	0.250	12.5	98.7	90-110	0.404	20
Sulfate	24.7	2.00	25.0	98.9	90-110	0.524	20



QC Summary Data

Newell Law Firm	Project Name:	W Lovington Strawn U. #8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/24/2022 6:26:08PM

Total Mercury by EPA 7470A

Analyst: RKS

Analyte	Result ug/L	Reporting Limit ug/L	Spike Level ug/L	Source Result ug/L	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2212088-BLK1)

Prepared: 03/19/22 Analyzed: 03/20/22

Mercury	ND	0.200							
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LCS (2212088-BS1)

Prepared: 03/19/22 Analyzed: 03/20/22

Mercury	1.82	0.200	2.00		91.2	80-120			
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Matrix Spike (2212088-MS1)

Source: E203110-02

Prepared: 03/19/22 Analyzed: 03/20/22

Mercury	1.77	0.200	2.00	ND	88.7	75-125			
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Matrix Spike Dup (2212088-MSD1)

Source: E203110-02

Prepared: 03/19/22 Analyzed: 03/20/22

Mercury	1.76	0.200	2.00	ND	88.2	75-125	0.578	20	
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QC Summary Report Comment:

Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Definitions and Notes

Newell Law Firm	Project Name:	W Lovington Strawn U. #8	
10 W Adams Ave Ste E	Project Number:	20046-0001	Reported:
Lovington NM, 88260	Project Manager:	Natalie Gladden	03/24/22 18:26

- C1The CV recovery was above method acceptance limits.
- C4The CV recovery was below method acceptance limits.
- C6The CV recovery was outside acceptance limits. The sample was analyzed multiple times all with similar bracketing CV results.
- H1Sample was received past holding time and analyzed per client request.
- H5pH is specified to be performed in the field within 15 minutes of sampling. The sample was performed as quickly as possible.
- NDAnalyte NOT DETECTED at or above the reporting limit
- NRNot Reported
- RPDRelative Percent Difference
- DNIDid Not Ignite

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.

Released to: Imaging 3/23/2024 11:17:21 AM

Received by OCD: 10/15/2024 2:45:57 PM

Project Information

Chain of Custody

Page 1 of 1

Client: Newell Law Firm
Project: W Lovington Strawn v. #8
Project Manager: Mike Newell
Address: _____
City, State, Zip: _____
Phone: _____
Email: _____
Report due by: _____

Bill To
Attention: ESS
Address: 2427 W Country
City, State, Zip: Hobbs, NM
Phone: _____
Email: _____

Lab Use Only				TAT				EPA Program	
Lab WO#	Job Number	1D	2D	3D	Standard	CWA	SDWA		
<u>E 203110</u>	<u>20040-0001</u>		<input checked="" type="checkbox"/>						
Analysis and Method						RCRA			

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	DRO/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010 RCRA8	Chloride 300.0	C/A	BDOC NM	BDOC TX	State	Remarks
7:53	3/15	A	1	MW - 9S	1				X	X		X	X			
10:46				MW - 9M	2											
11:51				MW - 9D	3											
14:15				MW - 1	4											
14:53				MW - 5	5											
15:40				MW - 6	6											
16:33				MW - 3	7											

Additional Instructions:

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.
Sampled by: Chadwick

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature) <u>Mike Newell</u>	Date <u>3/15/22</u>	Time <u>4:45</u>	Received by: (Signature) <u>Chadwick</u>	Date <u>3-17-22</u>	Time <u>1445</u>	Lab Use Only Received on ice: <u>Y</u> / N
Relinquished by: (Signature) <u>Chadwick</u>	Date <u>3-17-22</u>	Time <u>1730</u>	Received by: (Signature) <u>Caroline Chilton</u>	Date <u>3/18/22</u>	Time <u>8:15</u>	T1 _____ T2 _____ T3 _____
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	AVG Temp °C <u>4</u>

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other _____ Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

Envirotech Analytical Laboratory

Printed: 3/24/2022 6:09:32PM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Newell Law Firm	Date Received:	03/18/22 08:15	Work Order ID:	E203110
Phone:	(575) 739-6395	Date Logged In:	03/17/22 17:38	Logged In By:	Caitlin Christian
Email:	natalie@energystaffingllc.com	Due Date:	03/24/22 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: Carrier**Comments/Resolution**

Samples recieved expired for Nitrite, Nitrate and O-Phosphate. Alkalinity was unable to be analyzed for Samples -03,-04,-05,-06 and -07 due to insufficient sample amount.

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:

Sample ID?	Yes
Date/Time Collected?	No
Collectors name?	No

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? Yes
22. Are sample(s) correctly preserved? Yes
24. Is lab filtration required and/or requested for dissolved metals? Yes

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: na

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:
Natalie Gladden



envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Newell Law Firm

Project Name: West Lovington Strawn Unit 8

Work Order: E203111

Job Number: 20046-0001

Received: 3/18/2022

Revision: 2

Report Reviewed By:

Walter Hinchman
Laboratory Director
3/25/22

5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.
Envirotech Inc. holds the NM SDWA certification for data reported. (Lab #NM00979)

Date Reported: 3/25/22

Natalie Gladden
10 W Adams Ave Ste E
Lovington, NM 88260



Project Name: West Lovington Strawn Unit 8
Workorder: E203111
Date Received: 3/18/2022 8:15:00AM

Natalie Gladden,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 3/18/2022 8:15:00AM, under the Project Name: West Lovington Strawn Unit 8.

The analytical test results summarized in this report with the Project Name: West Lovington Strawn Unit 8 apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman
Laboratory Director
Office: 505-632-1881
Cell: 775-287-1762
whinchman@envirotech-inc.com

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Technical Representative
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Envirotech Web Address: www.envirotech-inc.com

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Chain of Custody etc.

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Sample Summary

Newell Law Firm	Project Name:	West Lovington Strawn Unit 8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	03/25/22 16:10

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
MW - 2	E203111-01A	Aqueous	03/16/22	03/18/22	Poly 500mL
	E203111-01B	Aqueous	03/16/22	03/18/22	VOA Vial, 40mL; HCl
	E203111-01C	Aqueous	03/16/22	03/18/22	VOA Vial, 40mL; HCl
	E203111-01D	Aqueous	03/16/22	03/18/22	VOA Vial, 40mL; HCl
MW - 4	E203111-02A	Aqueous	03/16/22	03/18/22	Poly 250mL
	E203111-02B	Aqueous	03/16/22	03/18/22	VOA Vial, 40mL; HCl
	E203111-02C	Aqueous	03/16/22	03/18/22	VOA Vial, 40mL; HCl
MW - 8S	E203111-03A	Aqueous	03/16/22	03/18/22	Poly 250mL
	E203111-03B	Aqueous	03/16/22	03/18/22	VOA Vial, 40mL; HCl
	E203111-03C	Aqueous	03/16/22	03/18/22	VOA Vial, 40mL; HCl
MW - 8M	E203111-04A	Aqueous	03/16/22	03/18/22	Poly 250mL
	E203111-04B	Aqueous	03/16/22	03/18/22	VOA Vial, 40mL; HCl
	E203111-04C	Aqueous	03/16/22	03/18/22	VOA Vial, 40mL; HCl
MW - 8O	E203111-05A	Aqueous	03/16/22	03/18/22	Poly 250mL
	E203111-05B	Aqueous	03/16/22	03/18/22	VOA Vial, 40mL; HCl
	E203111-05C	Aqueous	03/16/22	03/18/22	VOA Vial, 40mL; HCl
MW - 7S	E203111-06A	Aqueous	03/16/22	03/18/22	Poly 250mL
	E203111-06B	Aqueous	03/16/22	03/18/22	VOA Vial, 40mL; HCl
	E203111-06C	Aqueous	03/16/22	03/18/22	VOA Vial, 40mL; HCl
MW - 7D	E203111-07A	Aqueous	03/16/22	03/18/22	Poly 500mL
	E203111-07B	Aqueous	03/16/22	03/18/22	VOA Vial, 40mL; HCl
	E203111-07C	Aqueous	03/16/22	03/18/22	VOA Vial, 40mL; HCl
	E203111-07D	Aqueous	03/16/22	03/18/22	VOA Vial, 40mL; HCl

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 2

E203111-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY		Batch: 2212089
Acetone	ND	80.0	2	03/21/22	03/21/22	
Benzene	ND	2.00	2	03/21/22	03/21/22	
Bromobenzene	ND	2.00	2	03/21/22	03/21/22	
Bromochloromethane	ND	2.00	2	03/21/22	03/21/22	
Bromodichloromethane	ND	2.00	2	03/21/22	03/21/22	
Bromoform	ND	2.00	2	03/21/22	03/21/22	
Bromomethane	ND	4.00	2	03/21/22	03/21/22	
n-Butyl Benzene	ND	2.00	2	03/21/22	03/21/22	
sec-Butylbenzene	ND	2.00	2	03/21/22	03/21/22	
tert-Butylbenzene	ND	2.00	2	03/21/22	03/21/22	
Carbon Tetrachloride	ND	2.00	2	03/21/22	03/21/22	
Chlorobenzene	ND	2.00	2	03/21/22	03/21/22	
Chloroethane	ND	4.00	2	03/21/22	03/21/22	
Chloroform	ND	10.0	2	03/21/22	03/21/22	
Chloromethane	ND	4.00	2	03/21/22	03/21/22	
2-Chlorotoluene	ND	2.00	2	03/21/22	03/21/22	
4-Chlorotoluene	ND	2.00	2	03/21/22	03/21/22	
Dibromochloromethane	ND	2.00	2	03/21/22	03/21/22	
1,2-Dibromo-3-chloropropane (DBCP)	ND	10.0	2	03/21/22	03/21/22	
1,2-Dibromoethane (EDB)	ND	4.00	2	03/21/22	03/21/22	
Dibromomethane	ND	2.00	2	03/21/22	03/21/22	
1,2-Dichlorobenzene	ND	2.00	2	03/21/22	03/21/22	
1,3-Dichlorobenzene	ND	2.00	2	03/21/22	03/21/22	
1,4-Dichlorobenzene	ND	2.00	2	03/21/22	03/21/22	
Dichlorodifluoromethane (Freon-12)	ND	4.00	2	03/21/22	03/21/22	
1,1-Dichloroethane	ND	2.00	2	03/21/22	03/21/22	
1,2-Dichloroethane	ND	2.00	2	03/21/22	03/21/22	
1,1-Dichloroethene	ND	2.00	2	03/21/22	03/21/22	
cis-1,2-Dichloroethene	ND	2.00	2	03/21/22	03/21/22	
trans-1,2-Dichloroethene	ND	2.00	2	03/21/22	03/21/22	
1,2-Dichloropropane	ND	2.00	2	03/21/22	03/21/22	
1,3-Dichloropropane	ND	2.00	2	03/21/22	03/21/22	
2,2-Dichloropropane	ND	2.00	2	03/21/22	03/21/22	
1,1-Dichloropropene	ND	2.00	2	03/21/22	03/21/22	
cis-1,3-Dichloropropene	ND	2.00	2	03/21/22	03/21/22	
trans-1,3-Dichloropropene	ND	2.00	2	03/21/22	03/21/22	
Diisopropyl Ether (DIPE)	ND	2.00	2	03/21/22	03/21/22	
Ethylbenzene	ND	2.00	2	03/21/22	03/21/22	
Ethyl tert-Butyl Ether (ETBE)	ND	2.00	2	03/21/22	03/21/22	
Hexachlorobutadiene	ND	10.0	2	03/21/22	03/21/22	
2-Hexanone	ND	40.0	2	03/21/22	03/21/22	
Isopropylbenzene	ND	2.00	2	03/21/22	03/21/22	
4-Isopropyltoluene	ND	2.00	2	03/21/22	03/21/22	
2-Butanone (MEK)	ND	40.0	2	03/21/22	03/21/22	
Methylene Chloride	ND	4.00	2	03/21/22	03/21/22	

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 2

E203111-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
1-Methylnaphthalene	ND	20.0	2	03/21/22	03/21/22	
2-Methylnaphthalene	ND	20.0	2	03/21/22	03/21/22	
4-Methyl-2-pentanone (MIBK)	ND	40.0	2	03/21/22	03/21/22	
Methyl tert-Butyl Ether (MTBE)	ND	2.00	2	03/21/22	03/21/22	
Naphthalene	ND	10.0	2	03/21/22	03/21/22	
n-Propyl Benzene	ND	2.00	2	03/21/22	03/21/22	
Styrene	ND	2.00	2	03/21/22	03/21/22	
tert-Amyl Methyl ether (TAME)	ND	2.00	2	03/21/22	03/21/22	
1,1,1,2-Tetrachloroethane	ND	2.00	2	03/21/22	03/21/22	
1,1,2,2-Tetrachloroethane	ND	2.00	2	03/21/22	03/21/22	
Tetrachloroethene	ND	2.00	2	03/21/22	03/21/22	
1,2,3-Trichlorobenzene	ND	10.0	2	03/21/22	03/21/22	
1,2,4-Trichlorobenzene	ND	10.0	2	03/21/22	03/21/22	
1,1,1-Trichloroethane	ND	2.00	2	03/21/22	03/21/22	
1,1,2-Trichloroethane	ND	2.00	2	03/21/22	03/21/22	
Trichloroethene	ND	2.00	2	03/21/22	03/21/22	
Trichlorofluoromethane (Freon-11)	ND	4.00	2	03/21/22	03/21/22	
1,2,3-Trichloropropane	ND	4.00	2	03/21/22	03/21/22	
1,2,4-Trimethylbenzene	ND	10.0	2	03/21/22	03/21/22	
1,3,5-Trimethylbenzene	ND	2.00	2	03/21/22	03/21/22	
Toluene	ND	2.00	2	03/21/22	03/21/22	
Vinyl chloride	ND	4.00	2	03/21/22	03/21/22	
o-Xylene	ND	2.00	2	03/21/22	03/21/22	
p,m-Xylene	ND	4.00	2	03/21/22	03/21/22	
Total Xylenes	ND	2.00	2	03/21/22	03/21/22	
Surrogate: Bromofluorobenzene	96.3 %	70-130		03/21/22	03/21/22	
Surrogate: 1,2-Dichloroethane-d4	98.1 %	70-130		03/21/22	03/21/22	
Surrogate: Toluene-d8	97.0 %	70-130		03/21/22	03/21/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 2

E203111-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C						
	mg/L	mg/L		Analyst: RAS		Batch: 2212068
Total Dissolved Solids	2490	25.0	1	03/17/22	03/22/22	
Wet Chemistry by 9040C/4500H+B						
	pH Units	pH Units		Analyst: KL		Batch: 2213006
pH @25°C	7.67		1	03/21/22 08:37	03/21/22 10:26	H5
Wet Chemistry by SM2320B						
	mg/L	mg/L		Analyst: RAS		Batch: 2213016
Total Alkalinity (as CaCO3 at pH 4.5)	568	10.0	1	03/21/22	03/21/22	
Wet Chemistry by 9050A/2510B						
	uS/cm	uS/cm		Analyst: RAS		Batch: 2213009
Specific Conductance (@ 25 C)	4600	10.0	1	03/21/22	03/21/22	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/L	mg/L		Analyst: IY		Batch: 2212089
Gasoline Range Organics (C6-C10)	ND	0.200	2	03/21/22	03/21/22	
Surrogate: Bromofluorobenzene	96.3 %	70-130		03/21/22	03/21/22	
Surrogate: 1,2-Dichloroethane-d4	98.1 %	70-130		03/21/22	03/21/22	
Surrogate: Toluene-d8	97.0 %	70-130		03/21/22	03/21/22	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/L	mg/L		Analyst: JL		Batch: 2213017
Diesel Range Organics (C10-C28)	ND	1.00	1	03/21/22	03/21/22	
Oil Range Organics (C28-C36)	ND	2.00	1	03/21/22	03/21/22	
Surrogate: n-Nonane	100 %	50-200		03/21/22	03/21/22	
Total Metals by EPA 6010C						
	mg/L	mg/L		Analyst: RKS		Batch: 2212087
Arsenic	ND	0.0200	1	03/19/22	03/20/22	
Barium	ND	0.250	1	03/19/22	03/20/22	C4, C6
Cadmium	ND	0.0100	1	03/19/22	03/20/22	
Chromium	ND	0.0200	1	03/19/22	03/20/22	C4, C6
Lead	ND	0.0100	1	03/19/22	03/20/22	C4, C6
Selenium	ND	0.0500	1	03/19/22	03/20/22	
Silver	ND	0.0100	1	03/19/22	03/20/22	

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 2

E203111-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Dissolved Metals by EPA 6010C		mg/L	mg/L	Analyst: RKS		Batch: 2212080
Calcium	137	1.00	1	03/18/22	03/23/22	
Iron	ND	2.00	1	03/18/22	03/23/22	
Magnesium	18.5	1.00	1	03/18/22	03/23/22	
Potassium	4.31	1.00	1	03/18/22	03/23/22	C1, C6
Sodium	827	20.0	10	03/18/22	03/23/22	C4, C6
Sodium Absorption Ratio (CALC)	17.6		1	03/24/22	03/24/22	
Anions by EPA 300.0/9056A		mg/L	mg/L	Analyst: RAS		Batch: 2212086
Fluoride	ND	5.00	20	03/19/22	03/19/22	
Chloride	1350	40.0	20	03/19/22	03/19/22	
Nitrite-N	ND	5.00	20	03/19/22 07:59	03/19/22 14:15	H2
Nitrate-N	ND	5.00	20	03/19/22 07:59	03/19/22 14:15	H2
o-Phosphate-P	ND	5.00	20	03/19/22 07:59	03/19/22 14:15	H2
Sulfate	200	40.0	20	03/19/22	03/19/22	
Total Mercury by EPA 7470A		ug/L	ug/L	Analyst: RKS		Batch: 2212088
Mercury	ND	0.200	1	03/19/22	03/20/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 4

E203111-02

Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
Acetone	ND	80.0	2	03/21/22	03/21/22	
Benzene	ND	2.00	2	03/21/22	03/21/22	
Bromobenzene	ND	2.00	2	03/21/22	03/21/22	
Bromochloromethane	ND	2.00	2	03/21/22	03/21/22	
Bromodichloromethane	ND	2.00	2	03/21/22	03/21/22	
Bromoform	ND	2.00	2	03/21/22	03/21/22	
Bromomethane	ND	4.00	2	03/21/22	03/21/22	
n-Butyl Benzene	ND	2.00	2	03/21/22	03/21/22	
sec-Butylbenzene	ND	2.00	2	03/21/22	03/21/22	
tert-Butylbenzene	ND	2.00	2	03/21/22	03/21/22	
Carbon Tetrachloride	ND	2.00	2	03/21/22	03/21/22	
Chlorobenzene	ND	2.00	2	03/21/22	03/21/22	
Chloroethane	ND	4.00	2	03/21/22	03/21/22	
Chloroform	ND	10.0	2	03/21/22	03/21/22	
Chloromethane	ND	4.00	2	03/21/22	03/21/22	
2-Chlorotoluene	ND	2.00	2	03/21/22	03/21/22	
4-Chlorotoluene	ND	2.00	2	03/21/22	03/21/22	
Dibromochloromethane	ND	2.00	2	03/21/22	03/21/22	
1,2-Dibromo-3-chloropropane (DBCP)	ND	10.0	2	03/21/22	03/21/22	
1,2-Dibromoethane (EDB)	ND	4.00	2	03/21/22	03/21/22	
Dibromomethane	ND	2.00	2	03/21/22	03/21/22	
1,2-Dichlorobenzene	ND	2.00	2	03/21/22	03/21/22	
1,3-Dichlorobenzene	ND	2.00	2	03/21/22	03/21/22	
1,4-Dichlorobenzene	ND	2.00	2	03/21/22	03/21/22	
Dichlorodifluoromethane (Freon-12)	ND	4.00	2	03/21/22	03/21/22	
1,1-Dichloroethane	ND	2.00	2	03/21/22	03/21/22	
1,2-Dichloroethane	ND	2.00	2	03/21/22	03/21/22	
1,1-Dichloroethene	ND	2.00	2	03/21/22	03/21/22	
cis-1,2-Dichloroethene	ND	2.00	2	03/21/22	03/21/22	
trans-1,2-Dichloroethene	ND	2.00	2	03/21/22	03/21/22	
1,2-Dichloropropane	ND	2.00	2	03/21/22	03/21/22	
1,3-Dichloropropane	ND	2.00	2	03/21/22	03/21/22	
2,2-Dichloropropane	ND	2.00	2	03/21/22	03/21/22	
1,1-Dichloropropene	ND	2.00	2	03/21/22	03/21/22	
cis-1,3-Dichloropropene	ND	2.00	2	03/21/22	03/21/22	
trans-1,3-Dichloropropene	ND	2.00	2	03/21/22	03/21/22	
Diisopropyl Ether (DIPE)	ND	2.00	2	03/21/22	03/21/22	
Ethylbenzene	ND	2.00	2	03/21/22	03/21/22	
Ethyl tert-Butyl Ether (ETBE)	ND	2.00	2	03/21/22	03/21/22	
Hexachlorobutadiene	ND	10.0	2	03/21/22	03/21/22	
2-Hexanone	ND	40.0	2	03/21/22	03/21/22	
Isopropylbenzene	ND	2.00	2	03/21/22	03/21/22	
4-Isopropyltoluene	ND	2.00	2	03/21/22	03/21/22	
2-Butanone (MEK)	ND	40.0	2	03/21/22	03/21/22	
Methylene Chloride	ND	4.00	2	03/21/22	03/21/22	
1-Methylnaphthalene	ND	20.0	2	03/21/22	03/21/22	
2-Methylnaphthalene	ND	20.0	2	03/21/22	03/21/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 4

E203111-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
4-Methyl-2-pentanone (MIBK)	ND	40.0	2	03/21/22	03/21/22	
Methyl tert-Butyl Ether (MTBE)	ND	2.00	2	03/21/22	03/21/22	
Naphthalene	ND	10.0	2	03/21/22	03/21/22	
n-Propyl Benzene	ND	2.00	2	03/21/22	03/21/22	
Styrene	ND	2.00	2	03/21/22	03/21/22	
tert-Amyl Methyl ether (TAME)	ND	2.00	2	03/21/22	03/21/22	
1,1,1,2-Tetrachloroethane	ND	2.00	2	03/21/22	03/21/22	
1,1,2,2-Tetrachloroethane	ND	2.00	2	03/21/22	03/21/22	
Tetrachloroethene	ND	2.00	2	03/21/22	03/21/22	
1,2,3-Trichlorobenzene	ND	10.0	2	03/21/22	03/21/22	
1,2,4-Trichlorobenzene	ND	10.0	2	03/21/22	03/21/22	
1,1,1-Trichloroethane	ND	2.00	2	03/21/22	03/21/22	
1,1,2-Trichloroethane	ND	2.00	2	03/21/22	03/21/22	
Trichloroethene	ND	2.00	2	03/21/22	03/21/22	
Trichlorofluoromethane (Freon-11)	ND	4.00	2	03/21/22	03/21/22	
1,2,3-Trichloropropane	ND	4.00	2	03/21/22	03/21/22	
1,2,4-Trimethylbenzene	ND	10.0	2	03/21/22	03/21/22	
1,3,5-Trimethylbenzene	ND	2.00	2	03/21/22	03/21/22	
Toluene	ND	2.00	2	03/21/22	03/21/22	
Vinyl chloride	ND	4.00	2	03/21/22	03/21/22	
o-Xylene	ND	2.00	2	03/21/22	03/21/22	
p,m-Xylene	ND	4.00	2	03/21/22	03/21/22	
Total Xylenes	ND	2.00	2	03/21/22	03/21/22	
Surrogate: Bromofluorobenzene	94.9 %	70-130		03/21/22	03/21/22	
Surrogate: 1,2-Dichloroethane-d4	102 %	70-130		03/21/22	03/21/22	
Surrogate: Toluene-d8	97.3 %	70-130		03/21/22	03/21/22	

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 4

E203111-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C						
	mg/L	mg/L		Analyst: RAS		Batch: 2212068
Total Dissolved Solids	830	25.0	1	03/17/22	03/22/22	
Wet Chemistry by 9040C/4500H+B						
	pH Units	pH Units		Analyst: KL		Batch: 2213006
pH @25°C	7.64		1	03/21/22 08:37	03/21/22 10:26	H5
Wet Chemistry by 9050A/2510B						
	uS/cm	uS/cm		Analyst: RAS		Batch: 2213009
Specific Conductance (@ 25 C)	1620	10.0	1	03/21/22	03/21/22	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/L	mg/L		Analyst: IY		Batch: 2212089
Gasoline Range Organics (C6-C10)	ND	0.200	2	03/21/22	03/21/22	
Surrogate: Bromofluorobenzene		94.9 %	70-130	03/21/22	03/21/22	
Surrogate: 1,2-Dichloroethane-d4		102 %	70-130	03/21/22	03/21/22	
Surrogate: Toluene-d8		97.3 %	70-130	03/21/22	03/21/22	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/L	mg/L		Analyst: JL		Batch: 2213017
Diesel Range Organics (C10-C28)	ND	1.00	1	03/21/22	03/21/22	
Oil Range Organics (C28-C36)	ND	2.00	1	03/21/22	03/21/22	
Surrogate: n-Nonane		107 %	50-200	03/21/22	03/21/22	
Total Metals by EPA 6010C						
	mg/L	mg/L		Analyst: RKS		Batch: 2212087
Arsenic	ND	0.0200	1	03/19/22	03/20/22	
Barium	ND	0.250	1	03/19/22	03/20/22	C4, C6
Cadmium	ND	0.0100	1	03/19/22	03/20/22	
Chromium	ND	0.0200	1	03/19/22	03/20/22	C4, C6
Lead	ND	0.0100	1	03/19/22	03/20/22	C4, C6
Selenium	ND	0.0500	1	03/19/22	03/20/22	
Silver	ND	0.0100	1	03/19/22	03/20/22	

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 4

E203111-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Dissolved Metals by EPA 6010C		mg/L	mg/L	Analyst: RKS		Batch: 2212080
Calcium	171	1.00	1	03/18/22	03/23/22	C4, C6
Iron	ND	2.00	1	03/18/22	03/23/22	
Magnesium	21.6	1.00	1	03/18/22	03/23/22	
Potassium	2.71	1.00	1	03/18/22	03/23/22	C1, C6
Sodium	132	2.00	1	03/18/22	03/23/22	C4, C6
Sodium Absorption Ratio (CALC)	2.53		1	03/24/22	03/24/22	
Anions by EPA 300.0/9056A		mg/L	mg/L	Analyst: RAS		Batch: 2212086
Fluoride	0.720	0.500	2	03/19/22	03/19/22	
Chloride	260	4.00	2	03/19/22	03/19/22	
Nitrite-N	ND	0.500	2	03/19/22 07:59	03/19/22 14:37	H2
Nitrate-N	6.20	0.500	2	03/19/22 07:59	03/19/22 14:37	H2
o-Phosphate-P	ND	0.500	2	03/19/22 07:59	03/19/22 14:37	H2
Sulfate	119	4.00	2	03/19/22	03/19/22	
Total Mercury by EPA 7470A		ug/L	ug/L	Analyst: RKS		Batch: 2212088
Mercury	ND	0.200	1	03/19/22	03/20/22	

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 8S

E203111-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
Acetone	ND	80.0	2	03/21/22	03/21/22	
Benzene	ND	2.00	2	03/21/22	03/21/22	
Bromobenzene	ND	2.00	2	03/21/22	03/21/22	
Bromochloromethane	ND	2.00	2	03/21/22	03/21/22	
Bromodichloromethane	ND	2.00	2	03/21/22	03/21/22	
Bromoform	ND	2.00	2	03/21/22	03/21/22	
Bromomethane	ND	4.00	2	03/21/22	03/21/22	
n-Butyl Benzene	ND	2.00	2	03/21/22	03/21/22	
sec-Butylbenzene	ND	2.00	2	03/21/22	03/21/22	
tert-Butylbenzene	ND	2.00	2	03/21/22	03/21/22	
Carbon Tetrachloride	ND	2.00	2	03/21/22	03/21/22	
Chlorobenzene	ND	2.00	2	03/21/22	03/21/22	
Chloroethane	ND	4.00	2	03/21/22	03/21/22	
Chloroform	ND	10.0	2	03/21/22	03/21/22	
Chloromethane	ND	4.00	2	03/21/22	03/21/22	
2-Chlorotoluene	ND	2.00	2	03/21/22	03/21/22	
4-Chlorotoluene	ND	2.00	2	03/21/22	03/21/22	
Dibromochloromethane	ND	2.00	2	03/21/22	03/21/22	
1,2-Dibromo-3-chloropropane (DBCP)	ND	10.0	2	03/21/22	03/21/22	
1,2-Dibromoethane (EDB)	ND	4.00	2	03/21/22	03/21/22	
Dibromomethane	ND	2.00	2	03/21/22	03/21/22	
1,2-Dichlorobenzene	ND	2.00	2	03/21/22	03/21/22	
1,3-Dichlorobenzene	ND	2.00	2	03/21/22	03/21/22	
1,4-Dichlorobenzene	ND	2.00	2	03/21/22	03/21/22	
Dichlorodifluoromethane (Freon-12)	ND	4.00	2	03/21/22	03/21/22	
1,1-Dichloroethane	ND	2.00	2	03/21/22	03/21/22	
1,2-Dichloroethane	ND	2.00	2	03/21/22	03/21/22	
1,1-Dichloroethene	ND	2.00	2	03/21/22	03/21/22	
cis-1,2-Dichloroethene	ND	2.00	2	03/21/22	03/21/22	
trans-1,2-Dichloroethene	ND	2.00	2	03/21/22	03/21/22	
1,2-Dichloropropane	ND	2.00	2	03/21/22	03/21/22	
1,3-Dichloropropane	ND	2.00	2	03/21/22	03/21/22	
2,2-Dichloropropane	ND	2.00	2	03/21/22	03/21/22	
1,1-Dichloropropene	ND	2.00	2	03/21/22	03/21/22	
cis-1,3-Dichloropropene	ND	2.00	2	03/21/22	03/21/22	
trans-1,3-Dichloropropene	ND	2.00	2	03/21/22	03/21/22	
Diisopropyl Ether (DIPE)	ND	2.00	2	03/21/22	03/21/22	
Ethylbenzene	ND	2.00	2	03/21/22	03/21/22	
Ethyl tert-Butyl Ether (ETBE)	ND	2.00	2	03/21/22	03/21/22	
Hexachlorobutadiene	ND	10.0	2	03/21/22	03/21/22	
2-Hexanone	ND	40.0	2	03/21/22	03/21/22	
Isopropylbenzene	ND	2.00	2	03/21/22	03/21/22	
4-Isopropyltoluene	ND	2.00	2	03/21/22	03/21/22	
2-Butanone (MEK)	ND	40.0	2	03/21/22	03/21/22	
Methylene Chloride	ND	4.00	2	03/21/22	03/21/22	
1-Methylnaphthalene	ND	20.0	2	03/21/22	03/21/22	
2-Methylnaphthalene	ND	20.0	2	03/21/22	03/21/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 8S

E203111-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
4-Methyl-2-pentanone (MIBK)	ND	40.0	2	03/21/22	03/21/22	
Methyl tert-Butyl Ether (MTBE)	ND	2.00	2	03/21/22	03/21/22	
Naphthalene	ND	10.0	2	03/21/22	03/21/22	
n-Propyl Benzene	ND	2.00	2	03/21/22	03/21/22	
Styrene	ND	2.00	2	03/21/22	03/21/22	
tert-Amyl Methyl ether (TAME)	ND	2.00	2	03/21/22	03/21/22	
1,1,1,2-Tetrachloroethane	ND	2.00	2	03/21/22	03/21/22	
1,1,2,2-Tetrachloroethane	ND	2.00	2	03/21/22	03/21/22	
Tetrachloroethene	ND	2.00	2	03/21/22	03/21/22	
1,2,3-Trichlorobenzene	ND	10.0	2	03/21/22	03/21/22	
1,2,4-Trichlorobenzene	ND	10.0	2	03/21/22	03/21/22	
1,1,1-Trichloroethane	ND	2.00	2	03/21/22	03/21/22	
1,1,2-Trichloroethane	ND	2.00	2	03/21/22	03/21/22	
Trichloroethene	ND	2.00	2	03/21/22	03/21/22	
Trichlorofluoromethane (Freon-11)	ND	4.00	2	03/21/22	03/21/22	
1,2,3-Trichloropropane	ND	4.00	2	03/21/22	03/21/22	
1,2,4-Trimethylbenzene	ND	10.0	2	03/21/22	03/21/22	
1,3,5-Trimethylbenzene	ND	2.00	2	03/21/22	03/21/22	
Toluene	ND	2.00	2	03/21/22	03/21/22	
Vinyl chloride	ND	4.00	2	03/21/22	03/21/22	
o-Xylene	ND	2.00	2	03/21/22	03/21/22	
p,m-Xylene	ND	4.00	2	03/21/22	03/21/22	
Total Xylenes	ND	2.00	2	03/21/22	03/21/22	
Surrogate: Bromofluorobenzene	94.9 %	70-130		03/21/22	03/21/22	
Surrogate: 1,2-Dichloroethane-d4	101 %	70-130		03/21/22	03/21/22	
Surrogate: Toluene-d8	96.7 %	70-130		03/21/22	03/21/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 8S

E203111-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C						
	mg/L	mg/L		Analyst: RAS		Batch: 2212068
Total Dissolved Solids	908	25.0	1	03/17/22	03/22/22	
Wet Chemistry by 9040C/4500H+B						
	pH Units	pH Units		Analyst: KL		Batch: 2213006
pH @25°C	7.90		1	03/21/22 08:37	03/21/22 10:26	H5
Wet Chemistry by 9050A/2510B						
	uS/cm	uS/cm		Analyst: RAS		Batch: 2213009
Specific Conductance (@ 25 C)	613	10.0	1	03/21/22	03/21/22	
Nonhalogenated Organics by EPA 8015D - GRO						
	mg/L	mg/L		Analyst: IY		Batch: 2212089
Gasoline Range Organics (C6-C10)	ND	0.200	2	03/21/22	03/21/22	
Surrogate: Bromofluorobenzene	94.9 %	70-130		03/21/22	03/21/22	
Surrogate: 1,2-Dichloroethane-d4	101 %	70-130		03/21/22	03/21/22	
Surrogate: Toluene-d8	96.7 %	70-130		03/21/22	03/21/22	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
	mg/L	mg/L		Analyst: JL		Batch: 2213017
Diesel Range Organics (C10-C28)	ND	1.00	1	03/21/22	03/21/22	
Oil Range Organics (C28-C36)	ND	2.00	1	03/21/22	03/21/22	
Surrogate: n-Nonane	103 %	50-200		03/21/22	03/21/22	
Total Metals by EPA 6010C						
	mg/L	mg/L		Analyst: RKS		Batch: 2212087
Arsenic	ND	0.0200	1	03/19/22	03/20/22	
Barium	ND	0.250	1	03/19/22	03/20/22	C4, C6
Cadmium	ND	0.0100	1	03/19/22	03/20/22	
Chromium	ND	0.0200	1	03/19/22	03/20/22	C4, C6
Lead	ND	0.0100	1	03/19/22	03/20/22	C4, C6
Selenium	ND	0.0500	1	03/19/22	03/20/22	
Silver	ND	0.0100	1	03/19/22	03/20/22	

Sample Data

Newell Law Firm 10 W Adams Ave Ste E Lovington NM, 88260	Project Name: West Lovington Strawn Unit 8 Project Number: 20046-0001 Project Manager: Natalie Gladden	Reported: 3/25/2022 4:10:14PM
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MW - 8S

E203111-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Dissolved Metals by EPA 6010C						
	mg/L	mg/L		Analyst: RKS		Batch: 2212080
Calcium	68.9	1.00	1	03/18/22	03/23/22	C4, C6
Iron	ND	2.00	1	03/18/22	03/23/22	
Magnesium	10.5	1.00	1	03/18/22	03/23/22	
Potassium	2.33	1.00	1	03/18/22	03/23/22	C1, C6
Sodium	41.0	2.00	1	03/18/22	03/23/22	C4, C6
Sodium Absorption Ratio (CALC)	1.22		1	03/24/22	03/24/22	
Anions by EPA 300.0/9056A						
	mg/L	mg/L		Analyst: RAS		Batch: 2212086
Fluoride	1.15	0.250	1	03/19/22	03/19/22	
Chloride	22.8	2.00	1	03/19/22	03/19/22	
Nitrite-N	ND	0.250	1	03/19/22 07:59	03/19/22 14:59	H2
Nitrate-N	0.472	0.250	1	03/19/22 07:59	03/19/22 14:59	H2
o-Phosphate-P	ND	0.250	1	03/19/22 07:59	03/19/22 14:59	H2
Sulfate	52.4	2.00	1	03/19/22	03/19/22	
Total Mercury by EPA 7470A						
	ug/L	ug/L		Analyst: RKS		Batch: 2212088
Mercury	ND	0.200	1	03/19/22	03/20/22	

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 8M

E203111-04

Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
Acetone	ND	80.0	2	03/21/22	03/21/22	
Benzene	ND	2.00	2	03/21/22	03/21/22	
Bromobenzene	ND	2.00	2	03/21/22	03/21/22	
Bromochloromethane	ND	2.00	2	03/21/22	03/21/22	
Bromodichloromethane	ND	2.00	2	03/21/22	03/21/22	
Bromoform	ND	2.00	2	03/21/22	03/21/22	
Bromomethane	ND	4.00	2	03/21/22	03/21/22	
n-Butyl Benzene	ND	2.00	2	03/21/22	03/21/22	
sec-Butylbenzene	ND	2.00	2	03/21/22	03/21/22	
tert-Butylbenzene	ND	2.00	2	03/21/22	03/21/22	
Carbon Tetrachloride	ND	2.00	2	03/21/22	03/21/22	
Chlorobenzene	ND	2.00	2	03/21/22	03/21/22	
Chloroethane	ND	4.00	2	03/21/22	03/21/22	
Chloroform	ND	10.0	2	03/21/22	03/21/22	
Chloromethane	ND	4.00	2	03/21/22	03/21/22	
2-Chlorotoluene	ND	2.00	2	03/21/22	03/21/22	
4-Chlorotoluene	ND	2.00	2	03/21/22	03/21/22	
Dibromochloromethane	ND	2.00	2	03/21/22	03/21/22	
1,2-Dibromo-3-chloropropane (DBCP)	ND	10.0	2	03/21/22	03/21/22	
1,2-Dibromoethane (EDB)	ND	4.00	2	03/21/22	03/21/22	
Dibromomethane	ND	2.00	2	03/21/22	03/21/22	
1,2-Dichlorobenzene	ND	2.00	2	03/21/22	03/21/22	
1,3-Dichlorobenzene	ND	2.00	2	03/21/22	03/21/22	
1,4-Dichlorobenzene	ND	2.00	2	03/21/22	03/21/22	
Dichlorodifluoromethane (Freon-12)	ND	4.00	2	03/21/22	03/21/22	
1,1-Dichloroethane	ND	2.00	2	03/21/22	03/21/22	
1,2-Dichloroethane	ND	2.00	2	03/21/22	03/21/22	
1,1-Dichloroethene	ND	2.00	2	03/21/22	03/21/22	
cis-1,2-Dichloroethene	ND	2.00	2	03/21/22	03/21/22	
trans-1,2-Dichloroethene	ND	2.00	2	03/21/22	03/21/22	
1,2-Dichloropropane	ND	2.00	2	03/21/22	03/21/22	
1,3-Dichloropropane	ND	2.00	2	03/21/22	03/21/22	
2,2-Dichloropropane	ND	2.00	2	03/21/22	03/21/22	
1,1-Dichloropropene	ND	2.00	2	03/21/22	03/21/22	
cis-1,3-Dichloropropene	ND	2.00	2	03/21/22	03/21/22	
trans-1,3-Dichloropropene	ND	2.00	2	03/21/22	03/21/22	
Diisopropyl Ether (DIPE)	ND	2.00	2	03/21/22	03/21/22	
Ethylbenzene	ND	2.00	2	03/21/22	03/21/22	
Ethyl tert-Butyl Ether (ETBE)	ND	2.00	2	03/21/22	03/21/22	
Hexachlorobutadiene	ND	10.0	2	03/21/22	03/21/22	
2-Hexanone	ND	40.0	2	03/21/22	03/21/22	
Isopropylbenzene	ND	2.00	2	03/21/22	03/21/22	
4-Isopropyltoluene	ND	2.00	2	03/21/22	03/21/22	
2-Butanone (MEK)	ND	40.0	2	03/21/22	03/21/22	
Methylene Chloride	ND	4.00	2	03/21/22	03/21/22	
1-Methylnaphthalene	ND	20.0	2	03/21/22	03/21/22	
2-Methylnaphthalene	ND	20.0	2	03/21/22	03/21/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 8M

E203111-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
4-Methyl-2-pentanone (MIBK)	ND	40.0	2	03/21/22	03/21/22	
Methyl tert-Butyl Ether (MTBE)	ND	2.00	2	03/21/22	03/21/22	
Naphthalene	ND	10.0	2	03/21/22	03/21/22	
n-Propyl Benzene	ND	2.00	2	03/21/22	03/21/22	
Styrene	ND	2.00	2	03/21/22	03/21/22	
tert-Amyl Methyl ether (TAME)	ND	2.00	2	03/21/22	03/21/22	
1,1,1,2-Tetrachloroethane	ND	2.00	2	03/21/22	03/21/22	
1,1,2,2-Tetrachloroethane	ND	2.00	2	03/21/22	03/21/22	
Tetrachloroethene	ND	2.00	2	03/21/22	03/21/22	
1,2,3-Trichlorobenzene	ND	10.0	2	03/21/22	03/21/22	
1,2,4-Trichlorobenzene	ND	10.0	2	03/21/22	03/21/22	
1,1,1-Trichloroethane	ND	2.00	2	03/21/22	03/21/22	
1,1,2-Trichloroethane	ND	2.00	2	03/21/22	03/21/22	
Trichloroethene	ND	2.00	2	03/21/22	03/21/22	
Trichlorofluoromethane (Freon-11)	ND	4.00	2	03/21/22	03/21/22	
1,2,3-Trichloropropane	ND	4.00	2	03/21/22	03/21/22	
1,2,4-Trimethylbenzene	ND	10.0	2	03/21/22	03/21/22	
1,3,5-Trimethylbenzene	ND	2.00	2	03/21/22	03/21/22	
Toluene	ND	2.00	2	03/21/22	03/21/22	
Vinyl chloride	ND	4.00	2	03/21/22	03/21/22	
o-Xylene	ND	2.00	2	03/21/22	03/21/22	
p,m-Xylene	ND	4.00	2	03/21/22	03/21/22	
Total Xylenes	ND	2.00	2	03/21/22	03/21/22	
Surrogate: Bromofluorobenzene	93.1 %	70-130		03/21/22	03/21/22	
Surrogate: 1,2-Dichloroethane-d4	104 %	70-130		03/21/22	03/21/22	
Surrogate: Toluene-d8	96.0 %	70-130		03/21/22	03/21/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 8M

E203111-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C						
Total Dissolved Solids	mg/L	mg/L	Analyst: RAS			Batch: 2212068
	583	10.0	1	03/17/22	03/22/22	
Nonhalogenated Organics by EPA 8015D - GRO						
Gasoline Range Organics (C6-C10)	mg/L	mg/L	Analyst: IY			Batch: 2212089
	ND	0.200	2	03/21/22	03/21/22	
Surrogate: Bromofluorobenzene	93.1 %	70-130		03/21/22	03/21/22	
Surrogate: 1,2-Dichloroethane-d4	104 %	70-130		03/21/22	03/21/22	
Surrogate: Toluene-d8	96.0 %	70-130		03/21/22	03/21/22	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
Diesel Range Organics (C10-C28)	mg/L	mg/L	Analyst: JL			Batch: 2213017
	1.45	1.00	1	03/21/22	03/21/22	T17
Oil Range Organics (C28-C36)	ND	2.00	1	03/21/22	03/21/22	
Surrogate: n-Nonane	103 %	50-200		03/21/22	03/21/22	
Total Metals by EPA 6010C						
	mg/L	mg/L	Analyst: RKS			Batch: 2212087
Arsenic	ND	0.0200	1	03/19/22	03/20/22	
Barium	ND	0.250	1	03/19/22	03/20/22	C4, C6
Cadmium	ND	0.0100	1	03/19/22	03/20/22	
Chromium	ND	0.0200	1	03/19/22	03/20/22	C4, C6
Lead	ND	0.0100	1	03/19/22	03/20/22	C4, C6
Selenium	ND	0.0500	1	03/19/22	03/20/22	
Silver	ND	0.0100	1	03/19/22	03/20/22	
Dissolved Metals by EPA 6010C						
	mg/L	mg/L	Analyst: RKS			Batch: 2212080
Calcium	104	1.00	1	03/18/22	03/23/22	C4, C6
Iron	ND	2.00	1	03/18/22	03/23/22	
Magnesium	25.3	1.00	1	03/18/22	03/23/22	
Potassium	3.57	1.00	1	03/18/22	03/23/22	C1, C6
Sodium	55.0	2.00	1	03/18/22	03/23/22	C4, C6
Sodium Absorption Ratio (CALC)	1.25		1	03/24/22	03/24/22	

Sample Data

Newell Law Firm	Project Name:	West Lovington Strawn Unit 8	Reported: 3/25/2022 4:10:14PM
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	

MW - 8M

E203111-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/L	mg/L	Analyst: RAS		Batch: 2212086	
Fluoride	0.851	0.250	1	03/19/22	03/19/22	
Chloride	50.5	2.00	1	03/19/22	03/19/22	
Nitrite-N	ND	0.250	1	03/19/22 07:59	03/19/22 16:03	H2
Nitrate-N	1.16	0.250	1	03/19/22 07:59	03/19/22 16:03	H2
o-Phosphate-P	ND	0.250	1	03/19/22 07:59	03/19/22 16:03	H2
Sulfate	198	2.00	1	03/19/22	03/19/22	
Total Mercury by EPA 7470A	ug/L	ug/L	Analyst: RKS		Batch: 2212088	
Mercury	ND	0.200	1	03/19/22	03/20/22	

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 80

E203111-05

Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
Acetone	ND	80.0	2	03/21/22	03/21/22	
Benzene	ND	2.00	2	03/21/22	03/21/22	
Bromobenzene	ND	2.00	2	03/21/22	03/21/22	
Bromochloromethane	ND	2.00	2	03/21/22	03/21/22	
Bromodichloromethane	ND	2.00	2	03/21/22	03/21/22	
Bromoform	ND	2.00	2	03/21/22	03/21/22	
Bromomethane	ND	4.00	2	03/21/22	03/21/22	
n-Butyl Benzene	ND	2.00	2	03/21/22	03/21/22	
sec-Butylbenzene	ND	2.00	2	03/21/22	03/21/22	
tert-Butylbenzene	ND	2.00	2	03/21/22	03/21/22	
Carbon Tetrachloride	ND	2.00	2	03/21/22	03/21/22	
Chlorobenzene	ND	2.00	2	03/21/22	03/21/22	
Chloroethane	ND	4.00	2	03/21/22	03/21/22	
Chloroform	ND	10.0	2	03/21/22	03/21/22	
Chloromethane	ND	4.00	2	03/21/22	03/21/22	
2-Chlorotoluene	ND	2.00	2	03/21/22	03/21/22	
4-Chlorotoluene	ND	2.00	2	03/21/22	03/21/22	
Dibromochloromethane	ND	2.00	2	03/21/22	03/21/22	
1,2-Dibromo-3-chloropropane (DBCP)	ND	10.0	2	03/21/22	03/21/22	
1,2-Dibromoethane (EDB)	ND	4.00	2	03/21/22	03/21/22	
Dibromomethane	ND	2.00	2	03/21/22	03/21/22	
1,2-Dichlorobenzene	ND	2.00	2	03/21/22	03/21/22	
1,3-Dichlorobenzene	ND	2.00	2	03/21/22	03/21/22	
1,4-Dichlorobenzene	ND	2.00	2	03/21/22	03/21/22	
Dichlorodifluoromethane (Freon-12)	ND	4.00	2	03/21/22	03/21/22	
1,1-Dichloroethane	ND	2.00	2	03/21/22	03/21/22	
1,2-Dichloroethane	ND	2.00	2	03/21/22	03/21/22	
1,1-Dichloroethene	ND	2.00	2	03/21/22	03/21/22	
cis-1,2-Dichloroethene	ND	2.00	2	03/21/22	03/21/22	
trans-1,2-Dichloroethene	ND	2.00	2	03/21/22	03/21/22	
1,2-Dichloropropane	ND	2.00	2	03/21/22	03/21/22	
1,3-Dichloropropane	ND	2.00	2	03/21/22	03/21/22	
2,2-Dichloropropane	ND	2.00	2	03/21/22	03/21/22	
1,1-Dichloropropene	ND	2.00	2	03/21/22	03/21/22	
cis-1,3-Dichloropropene	ND	2.00	2	03/21/22	03/21/22	
trans-1,3-Dichloropropene	ND	2.00	2	03/21/22	03/21/22	
Diisopropyl Ether (DIPE)	ND	2.00	2	03/21/22	03/21/22	
Ethylbenzene	ND	2.00	2	03/21/22	03/21/22	
Ethyl tert-Butyl Ether (ETBE)	ND	2.00	2	03/21/22	03/21/22	
Hexachlorobutadiene	ND	10.0	2	03/21/22	03/21/22	
2-Hexanone	ND	40.0	2	03/21/22	03/21/22	
Isopropylbenzene	ND	2.00	2	03/21/22	03/21/22	
4-Isopropyltoluene	ND	2.00	2	03/21/22	03/21/22	
2-Butanone (MEK)	ND	40.0	2	03/21/22	03/21/22	
Methylene Chloride	ND	4.00	2	03/21/22	03/21/22	
1-Methylnaphthalene	ND	20.0	2	03/21/22	03/21/22	
2-Methylnaphthalene	ND	20.0	2	03/21/22	03/21/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 80

E203111-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
4-Methyl-2-pentanone (MIBK)	ND	40.0	2	03/21/22	03/21/22	
Methyl tert-Butyl Ether (MTBE)	ND	2.00	2	03/21/22	03/21/22	
Naphthalene	ND	10.0	2	03/21/22	03/21/22	
n-Propyl Benzene	ND	2.00	2	03/21/22	03/21/22	
Styrene	ND	2.00	2	03/21/22	03/21/22	
tert-Amyl Methyl ether (TAME)	ND	2.00	2	03/21/22	03/21/22	
1,1,1,2-Tetrachloroethane	ND	2.00	2	03/21/22	03/21/22	
1,1,2,2-Tetrachloroethane	ND	2.00	2	03/21/22	03/21/22	
Tetrachloroethene	ND	2.00	2	03/21/22	03/21/22	
1,2,3-Trichlorobenzene	ND	10.0	2	03/21/22	03/21/22	
1,2,4-Trichlorobenzene	ND	10.0	2	03/21/22	03/21/22	
1,1,1-Trichloroethane	ND	2.00	2	03/21/22	03/21/22	
1,1,2-Trichloroethane	ND	2.00	2	03/21/22	03/21/22	
Trichloroethene	ND	2.00	2	03/21/22	03/21/22	
Trichlorofluoromethane (Freon-11)	ND	4.00	2	03/21/22	03/21/22	
1,2,3-Trichloropropane	ND	4.00	2	03/21/22	03/21/22	
1,2,4-Trimethylbenzene	ND	10.0	2	03/21/22	03/21/22	
1,3,5-Trimethylbenzene	ND	2.00	2	03/21/22	03/21/22	
Toluene	ND	2.00	2	03/21/22	03/21/22	
Vinyl chloride	ND	4.00	2	03/21/22	03/21/22	
o-Xylene	ND	2.00	2	03/21/22	03/21/22	
p,m-Xylene	ND	4.00	2	03/21/22	03/21/22	
Total Xylenes	ND	2.00	2	03/21/22	03/21/22	
Surrogate: Bromofluorobenzene	94.1 %	70-130		03/21/22	03/21/22	
Surrogate: 1,2-Dichloroethane-d4	100 %	70-130		03/21/22	03/21/22	
Surrogate: Toluene-d8	96.2 %	70-130		03/21/22	03/21/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 80

E203111-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C						
Total Dissolved Solids	472	11.1	1	03/17/22	03/22/22	Batch: 2212068
Nonhalogenated Organics by EPA 8015D - GRO						
Gasoline Range Organics (C6-C10)	ND	0.200	2	03/21/22	03/21/22	Batch: 2212089
Surrogate: Bromofluorobenzene	94.1 %	70-130		03/21/22	03/21/22	
Surrogate: 1,2-Dichloroethane-d4	100 %	70-130		03/21/22	03/21/22	
Surrogate: Toluene-d8	96.2 %	70-130		03/21/22	03/21/22	
Nonhalogenated Organics by EPA 8015D - DRO/ORO						
Diesel Range Organics (C10-C28)	ND	1.00	1	03/21/22	03/22/22	Batch: 2213017
Oil Range Organics (C28-C36)	ND	2.00	1	03/21/22	03/22/22	
Surrogate: n-Nonane	106 %	50-200		03/21/22	03/22/22	
Total Metals by EPA 6010C						
Arsenic	ND	0.0200	1	03/19/22	03/24/22	
Barium	ND	0.250	1	03/19/22	03/24/22	
Cadmium	ND	0.0100	1	03/19/22	03/24/22	
Chromium	ND	0.0200	1	03/19/22	03/24/22	
Lead	ND	0.0100	1	03/19/22	03/24/22	
Selenium	ND	0.0500	1	03/19/22	03/24/22	
Silver	ND	0.0100	1	03/19/22	03/24/22	
Dissolved Metals by EPA 6010C						
Calcium	74.4	1.00	1	03/18/22	03/23/22	C4, C6
Iron	ND	2.00	1	03/18/22	03/23/22	
Magnesium	19.7	1.00	1	03/18/22	03/23/22	
Potassium	4.71	1.00	1	03/18/22	03/23/22	C1, C6
Sodium	53.8	2.00	1	03/18/22	03/23/22	C4, C6
Sodium Absorption Ratio (CALC)	1.43		1	03/24/22	03/24/22	

Sample Data

Newell Law Firm	Project Name:	West Lovington Strawn Unit 8	
10 W Adams Ave Ste E	Project Number:	20046-0001	Reported:
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/25/2022 4:10:14PM

MW - 80

E203111-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Anions by EPA 300.0/9056A	mg/L	mg/L		Analyst: RAS		Batch: 2212086
Fluoride	0.818	0.250	1	03/19/22	03/19/22	
Chloride	44.6	2.00	1	03/19/22	03/19/22	
Nitrite-N	ND	0.250	1	03/19/22 07:59	03/19/22 16:25	H2
Nitrate-N	0.520	0.250	1	03/19/22 07:59	03/19/22 16:25	H2
o-Phosphate-P	ND	0.250	1	03/19/22 07:59	03/19/22 16:25	H2
Sulfate	141	2.00	1	03/19/22	03/19/22	
Total Mercury by EPA 7470A	ug/L	ug/L		Analyst: RKS		Batch: 2212088
Mercury	ND	0.200	1	03/19/22	03/20/22	

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 7S

E203111-06

Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
Acetone	ND	80.0	2	03/21/22	03/21/22	
Benzene	ND	2.00	2	03/21/22	03/21/22	
Bromobenzene	ND	2.00	2	03/21/22	03/21/22	
Bromochloromethane	ND	2.00	2	03/21/22	03/21/22	
Bromodichloromethane	ND	2.00	2	03/21/22	03/21/22	
Bromoform	ND	2.00	2	03/21/22	03/21/22	
Bromomethane	ND	4.00	2	03/21/22	03/21/22	
n-Butyl Benzene	ND	2.00	2	03/21/22	03/21/22	
sec-Butylbenzene	ND	2.00	2	03/21/22	03/21/22	
tert-Butylbenzene	ND	2.00	2	03/21/22	03/21/22	
Carbon Tetrachloride	ND	2.00	2	03/21/22	03/21/22	
Chlorobenzene	ND	2.00	2	03/21/22	03/21/22	
Chloroethane	ND	4.00	2	03/21/22	03/21/22	
Chloroform	ND	10.0	2	03/21/22	03/21/22	
Chloromethane	ND	4.00	2	03/21/22	03/21/22	
2-Chlorotoluene	ND	2.00	2	03/21/22	03/21/22	
4-Chlorotoluene	ND	2.00	2	03/21/22	03/21/22	
Dibromochloromethane	ND	2.00	2	03/21/22	03/21/22	
1,2-Dibromo-3-chloropropane (DBCP)	ND	10.0	2	03/21/22	03/21/22	
1,2-Dibromoethane (EDB)	ND	4.00	2	03/21/22	03/21/22	
Dibromomethane	ND	2.00	2	03/21/22	03/21/22	
1,2-Dichlorobenzene	ND	2.00	2	03/21/22	03/21/22	
1,3-Dichlorobenzene	ND	2.00	2	03/21/22	03/21/22	
1,4-Dichlorobenzene	ND	2.00	2	03/21/22	03/21/22	
Dichlorodifluoromethane (Freon-12)	ND	4.00	2	03/21/22	03/21/22	
1,1-Dichloroethane	ND	2.00	2	03/21/22	03/21/22	
1,2-Dichloroethane	ND	2.00	2	03/21/22	03/21/22	
1,1-Dichloroethene	ND	2.00	2	03/21/22	03/21/22	
cis-1,2-Dichloroethene	ND	2.00	2	03/21/22	03/21/22	
trans-1,2-Dichloroethene	ND	2.00	2	03/21/22	03/21/22	
1,2-Dichloropropane	ND	2.00	2	03/21/22	03/21/22	
1,3-Dichloropropane	ND	2.00	2	03/21/22	03/21/22	
2,2-Dichloropropane	ND	2.00	2	03/21/22	03/21/22	
1,1-Dichloropropene	ND	2.00	2	03/21/22	03/21/22	
cis-1,3-Dichloropropene	ND	2.00	2	03/21/22	03/21/22	
trans-1,3-Dichloropropene	ND	2.00	2	03/21/22	03/21/22	
Diisopropyl Ether (DIPE)	ND	2.00	2	03/21/22	03/21/22	
Ethylbenzene	ND	2.00	2	03/21/22	03/21/22	
Ethyl tert-Butyl Ether (ETBE)	ND	2.00	2	03/21/22	03/21/22	
Hexachlorobutadiene	ND	10.0	2	03/21/22	03/21/22	
2-Hexanone	ND	40.0	2	03/21/22	03/21/22	
Isopropylbenzene	ND	2.00	2	03/21/22	03/21/22	
4-Isopropyltoluene	ND	2.00	2	03/21/22	03/21/22	
2-Butanone (MEK)	ND	40.0	2	03/21/22	03/21/22	
Methylene Chloride	ND	4.00	2	03/21/22	03/21/22	
1-Methylnaphthalene	ND	20.0	2	03/21/22	03/21/22	
2-Methylnaphthalene	ND	20.0	2	03/21/22	03/21/22	

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 7S

E203111-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
4-Methyl-2-pentanone (MIBK)	ND	40.0	2	03/21/22	03/21/22	
Methyl tert-Butyl Ether (MTBE)	ND	2.00	2	03/21/22	03/21/22	
Naphthalene	ND	10.0	2	03/21/22	03/21/22	
n-Propyl Benzene	ND	2.00	2	03/21/22	03/21/22	
Styrene	ND	2.00	2	03/21/22	03/21/22	
tert-Amyl Methyl ether (TAME)	ND	2.00	2	03/21/22	03/21/22	
1,1,1,2-Tetrachloroethane	ND	2.00	2	03/21/22	03/21/22	
1,1,2,2-Tetrachloroethane	ND	2.00	2	03/21/22	03/21/22	
Tetrachloroethene	ND	2.00	2	03/21/22	03/21/22	
1,2,3-Trichlorobenzene	ND	10.0	2	03/21/22	03/21/22	
1,2,4-Trichlorobenzene	ND	10.0	2	03/21/22	03/21/22	
1,1,1-Trichloroethane	ND	2.00	2	03/21/22	03/21/22	
1,1,2-Trichloroethane	ND	2.00	2	03/21/22	03/21/22	
Trichloroethene	ND	2.00	2	03/21/22	03/21/22	
Trichlorofluoromethane (Freon-11)	ND	4.00	2	03/21/22	03/21/22	
1,2,3-Trichloropropane	ND	4.00	2	03/21/22	03/21/22	
1,2,4-Trimethylbenzene	ND	10.0	2	03/21/22	03/21/22	
1,3,5-Trimethylbenzene	ND	2.00	2	03/21/22	03/21/22	
Toluene	ND	2.00	2	03/21/22	03/21/22	
Vinyl chloride	ND	4.00	2	03/21/22	03/21/22	
o-Xylene	ND	2.00	2	03/21/22	03/21/22	
p,m-Xylene	ND	4.00	2	03/21/22	03/21/22	
Total Xylenes	ND	2.00	2	03/21/22	03/21/22	
Surrogate: Bromofluorobenzene	95.2 %	70-130		03/21/22	03/21/22	
Surrogate: 1,2-Dichloroethane-d4	101 %	70-130		03/21/22	03/21/22	
Surrogate: Toluene-d8	96.8 %	70-130		03/21/22	03/21/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 7S

E203111-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C	mg/L	mg/L		Analyst: RAS		Batch: 2212068
Total Dissolved Solids	287	33.3	1	03/17/22	03/22/22	
Wet Chemistry by 9040C/4500H+B	pH Units	pH Units		Analyst: KL		Batch: 2213006
pH @25°C	7.35		1	03/21/22 08:37	03/21/22 10:26	H5
Wet Chemistry by 9050A/2510B	uS/cm	uS/cm		Analyst: RAS		Batch: 2213009
Specific Conductance (@ 25 C)	924	10.0	1	03/21/22	03/21/22	
Nonhalogenated Organics by EPA 8015D - GRO	mg/L	mg/L		Analyst: IY		Batch: 2212089
Gasoline Range Organics (C6-C10)	ND	0.200	2	03/21/22	03/21/22	
Surrogate: Bromofluorobenzene		95.2 %	70-130	03/21/22	03/21/22	
Surrogate: 1,2-Dichloroethane-d4		101 %	70-130	03/21/22	03/21/22	
Surrogate: Toluene-d8		96.8 %	70-130	03/21/22	03/21/22	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/L	mg/L		Analyst: JL		Batch: 2213017
Diesel Range Organics (C10-C28)	ND	1.00	1	03/21/22	03/22/22	
Oil Range Organics (C28-C36)	ND	2.00	1	03/21/22	03/22/22	
Surrogate: n-Nonane		103 %	50-200	03/21/22	03/22/22	
Total Metals by EPA 6010C	mg/L	mg/L		Analyst: RKS		Batch: 2212087
Arsenic	ND	0.0200	1	03/19/22	03/24/22	
Barium	ND	0.250	1	03/19/22	03/24/22	
Cadmium	ND	0.0100	1	03/19/22	03/24/22	
Chromium	ND	0.0200	1	03/19/22	03/24/22	
Lead	ND	0.0100	1	03/19/22	03/24/22	
Selenium	ND	0.0500	1	03/19/22	03/24/22	
Silver	ND	0.0100	1	03/19/22	03/24/22	

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 7S

E203111-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Dissolved Metals by EPA 6010C						
	mg/L	mg/L		Analyst: RKS		Batch: 2212080
Calcium	77.8	1.00	1	03/18/22	03/23/22	C4, C6
Iron	ND	2.00	1	03/18/22	03/23/22	
Magnesium	11.3	1.00	1	03/18/22	03/23/22	
Potassium	2.84	1.00	1	03/18/22	03/23/22	C1, C6
Sodium	43.2	2.00	1	03/18/22	03/23/22	C4, C6
Sodium Absorption Ratio (CALC)	1.21		1	03/24/22	03/24/22	
Anions by EPA 300.0/9056A						
	mg/L	mg/L		Analyst: RAS		Batch: 2212086
Fluoride	1.09	0.250	1	03/19/22	03/19/22	
Chloride	40.5	2.00	1	03/19/22	03/19/22	
Nitrite-N	ND	0.250	1	03/19/22 07:59	03/19/22 16:46	H2
Nitrate-N	0.858	0.250	1	03/19/22 07:59	03/19/22 16:46	H2
o-Phosphate-P	ND	0.250	1	03/19/22 07:59	03/19/22 16:46	H2
Sulfate	80.0	2.00	1	03/19/22	03/19/22	
Total Mercury by EPA 7470A						
	ug/L	ug/L		Analyst: RKS		Batch: 2212088
Mercury	ND	0.200	1	03/19/22	03/20/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 7D

E203111-07

Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
Acetone	ND	80.0	2	03/21/22	03/21/22	
Benzene	ND	2.00	2	03/21/22	03/21/22	
Bromobenzene	ND	2.00	2	03/21/22	03/21/22	
Bromochloromethane	ND	2.00	2	03/21/22	03/21/22	
Bromodichloromethane	ND	2.00	2	03/21/22	03/21/22	
Bromoform	ND	2.00	2	03/21/22	03/21/22	
Bromomethane	ND	4.00	2	03/21/22	03/21/22	
n-Butyl Benzene	ND	2.00	2	03/21/22	03/21/22	
sec-Butylbenzene	ND	2.00	2	03/21/22	03/21/22	
tert-Butylbenzene	ND	2.00	2	03/21/22	03/21/22	
Carbon Tetrachloride	ND	2.00	2	03/21/22	03/21/22	
Chlorobenzene	ND	2.00	2	03/21/22	03/21/22	
Chloroethane	ND	4.00	2	03/21/22	03/21/22	
Chloroform	ND	10.0	2	03/21/22	03/21/22	
Chloromethane	ND	4.00	2	03/21/22	03/21/22	
2-Chlorotoluene	ND	2.00	2	03/21/22	03/21/22	
4-Chlorotoluene	ND	2.00	2	03/21/22	03/21/22	
Dibromochloromethane	ND	2.00	2	03/21/22	03/21/22	
1,2-Dibromo-3-chloropropane (DBCP)	ND	10.0	2	03/21/22	03/21/22	
1,2-Dibromoethane (EDB)	ND	4.00	2	03/21/22	03/21/22	
Dibromomethane	ND	2.00	2	03/21/22	03/21/22	
1,2-Dichlorobenzene	ND	2.00	2	03/21/22	03/21/22	
1,3-Dichlorobenzene	ND	2.00	2	03/21/22	03/21/22	
1,4-Dichlorobenzene	ND	2.00	2	03/21/22	03/21/22	
Dichlorodifluoromethane (Freon-12)	ND	4.00	2	03/21/22	03/21/22	
1,1-Dichloroethane	ND	2.00	2	03/21/22	03/21/22	
1,2-Dichloroethane	ND	2.00	2	03/21/22	03/21/22	
1,1-Dichloroethene	ND	2.00	2	03/21/22	03/21/22	
cis-1,2-Dichloroethene	ND	2.00	2	03/21/22	03/21/22	
trans-1,2-Dichloroethene	ND	2.00	2	03/21/22	03/21/22	
1,2-Dichloropropane	ND	2.00	2	03/21/22	03/21/22	
1,3-Dichloropropane	ND	2.00	2	03/21/22	03/21/22	
2,2-Dichloropropane	ND	2.00	2	03/21/22	03/21/22	
1,1-Dichloropropene	ND	2.00	2	03/21/22	03/21/22	
cis-1,3-Dichloropropene	ND	2.00	2	03/21/22	03/21/22	
trans-1,3-Dichloropropene	ND	2.00	2	03/21/22	03/21/22	
Diisopropyl Ether (DIPE)	ND	2.00	2	03/21/22	03/21/22	
Ethylbenzene	ND	2.00	2	03/21/22	03/21/22	
Ethyl tert-Butyl Ether (ETBE)	ND	2.00	2	03/21/22	03/21/22	
Hexachlorobutadiene	ND	10.0	2	03/21/22	03/21/22	
2-Hexanone	ND	40.0	2	03/21/22	03/21/22	
Isopropylbenzene	ND	2.00	2	03/21/22	03/21/22	
4-Isopropyltoluene	ND	2.00	2	03/21/22	03/21/22	
2-Butanone (MEK)	ND	40.0	2	03/21/22	03/21/22	
Methylene Chloride	ND	4.00	2	03/21/22	03/21/22	
1-Methylnaphthalene	ND	20.0	2	03/21/22	03/21/22	
2-Methylnaphthalene	ND	20.0	2	03/21/22	03/21/22	



Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 7D

E203111-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B		ug/L	ug/L	Analyst: IY	Batch: 2212089	
4-Methyl-2-pentanone (MIBK)	ND	40.0	2	03/21/22	03/21/22	
Methyl tert-Butyl Ether (MTBE)	ND	2.00	2	03/21/22	03/21/22	
Naphthalene	ND	10.0	2	03/21/22	03/21/22	
n-Propyl Benzene	ND	2.00	2	03/21/22	03/21/22	
Styrene	ND	2.00	2	03/21/22	03/21/22	
tert-Amyl Methyl ether (TAME)	ND	2.00	2	03/21/22	03/21/22	
1,1,1,2-Tetrachloroethane	ND	2.00	2	03/21/22	03/21/22	
1,1,2,2-Tetrachloroethane	ND	2.00	2	03/21/22	03/21/22	
Tetrachloroethene	ND	2.00	2	03/21/22	03/21/22	
1,2,3-Trichlorobenzene	ND	10.0	2	03/21/22	03/21/22	
1,2,4-Trichlorobenzene	ND	10.0	2	03/21/22	03/21/22	
1,1,1-Trichloroethane	ND	2.00	2	03/21/22	03/21/22	
1,1,2-Trichloroethane	ND	2.00	2	03/21/22	03/21/22	
Trichloroethene	ND	2.00	2	03/21/22	03/21/22	
Trichlorofluoromethane (Freon-11)	ND	4.00	2	03/21/22	03/21/22	
1,2,3-Trichloropropane	ND	4.00	2	03/21/22	03/21/22	
1,2,4-Trimethylbenzene	ND	10.0	2	03/21/22	03/21/22	
1,3,5-Trimethylbenzene	ND	2.00	2	03/21/22	03/21/22	
Toluene	ND	2.00	2	03/21/22	03/21/22	
Vinyl chloride	ND	4.00	2	03/21/22	03/21/22	
o-Xylene	ND	2.00	2	03/21/22	03/21/22	
p,m-Xylene	ND	4.00	2	03/21/22	03/21/22	
Total Xylenes	ND	2.00	2	03/21/22	03/21/22	
Surrogate: Bromofluorobenzene	93.5 %	70-130		03/21/22	03/21/22	
Surrogate: 1,2-Dichloroethane-d4	103 %	70-130		03/21/22	03/21/22	
Surrogate: Toluene-d8	96.1 %	70-130		03/21/22	03/21/22	

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 7D

E203111-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C	mg/L	mg/L		Analyst: RAS		Batch: 2212068
Total Dissolved Solids	333	25.0	1	03/17/22	03/22/22	
Wet Chemistry by 9040C/4500H+B	pH Units	pH Units		Analyst: KL		Batch: 2213006
pH @25°C	7.78		1	03/21/22 08:37	03/21/22 10:26	H5
Wet Chemistry by 9050A/2510B	uS/cm	uS/cm		Analyst: RAS		Batch: 2213009
Specific Conductance (@ 25 C)	604	10.0	1	03/21/22	03/21/22	
Nonhalogenated Organics by EPA 8015D - GRO	mg/L	mg/L		Analyst: IY		Batch: 2212089
Gasoline Range Organics (C6-C10)	ND	0.200	2	03/21/22	03/21/22	
Surrogate: Bromofluorobenzene		93.5 %	70-130	03/21/22	03/21/22	
Surrogate: 1,2-Dichloroethane-d4		103 %	70-130	03/21/22	03/21/22	
Surrogate: Toluene-d8		96.1 %	70-130	03/21/22	03/21/22	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/L	mg/L		Analyst: JL		Batch: 2213017
Diesel Range Organics (C10-C28)	ND	1.00	1	03/21/22	03/22/22	
Oil Range Organics (C28-C36)	ND	2.00	1	03/21/22	03/22/22	
Surrogate: n-Nonane		103 %	50-200	03/21/22	03/22/22	
Total Metals by EPA 6010C	mg/L	mg/L		Analyst: RKS		Batch: 2212087
Arsenic	ND	0.0200	1	03/19/22	03/24/22	
Barium	0.275	0.250	1	03/19/22	03/24/22	
Cadmium	ND	0.0100	1	03/19/22	03/24/22	
Chromium	ND	0.0200	1	03/19/22	03/24/22	
Lead	ND	0.0100	1	03/19/22	03/24/22	
Selenium	ND	0.0500	1	03/19/22	03/24/22	
Silver	ND	0.0100	1	03/19/22	03/24/22	

Sample Data

Newell Law Firm
10 W Adams Ave Ste E
Lovington NM, 88260

Project Name: West Lovington Strawn Unit 8
Project Number: 20046-0001
Project Manager: Natalie Gladden

Reported:
3/25/2022 4:10:14PM

MW - 7D

E203111-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Dissolved Metals by EPA 6010C		mg/L	mg/L	Analyst: RKS		Batch: 2212080
Calcium	59.8	1.00	1	03/18/22	03/23/22	C4, C6
Iron	ND	2.00	1	03/18/22	03/23/22	
Magnesium	9.94	1.00	1	03/18/22	03/23/22	
Potassium	3.55	1.00	1	03/18/22	03/23/22	C1, C6
Sodium	47.5	2.00	1	03/18/22	03/23/22	C4, C6
Sodium Absorption Ratio (CALC)	1.50		1	03/24/22	03/24/22	
Anions by EPA 300.0/9056A		mg/L	mg/L	Analyst: RAS		Batch: 2212086
Fluoride	0.995	0.250	1	03/19/22	03/19/22	
Chloride	38.5	2.00	1	03/19/22	03/19/22	
Nitrite-N	ND	0.250	1	03/19/22 07:59	03/19/22 17:08	H2
Nitrate-N	1.27	0.250	1	03/19/22 07:59	03/19/22 17:08	H2
o-Phosphate-P	ND	0.250	1	03/19/22 07:59	03/19/22 17:08	H2
Sulfate	65.3	2.00	1	03/19/22	03/19/22	
Total Mercury by EPA 7470A		ug/L	ug/L	Analyst: RKS		Batch: 2212088
Mercury	ND	0.200	1	03/19/22	03/20/22	

QC Summary Data

Newell Law Firm	Project Name:	West Lovington Strawn Unit 8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/25/2022 4:10:14PM

Volatile Organic Compounds by EPA 8260B

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	ug/L	ug/L	ug/L	ug/L	%	%	%	%	

Blank (2212089-BLK1) Prepared: 03/19/22 Analyzed: 03/19/22

Acetone	ND	40.0
Benzene	ND	1.00
Bromobenzene	ND	1.00
Bromochloromethane	ND	1.00
Bromodichloromethane	ND	1.00
Bromoform	ND	1.00
Bromomethane	ND	2.00
n-Butyl Benzene	ND	1.00
sec-Butylbenzene	ND	1.00
tert-Butylbenzene	ND	1.00
Carbon Tetrachloride	ND	1.00
Chlorobenzene	ND	1.00
Chloroethane	ND	2.00
Chloroform	ND	5.00
Chloromethane	ND	2.00
2-Chlorotoluene	ND	1.00
4-Chlorotoluene	ND	1.00
Dibromochloromethane	ND	1.00
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.00
1,2-Dibromoethane (EDB)	ND	2.00
Dibromomethane	ND	1.00
1,2-Dichlorobenzene	ND	1.00
1,3-Dichlorobenzene	ND	1.00
1,4-Dichlorobenzene	ND	1.00
Dichlorodifluoromethane (Freon-12)	ND	2.00
1,1-Dichloroethane	ND	1.00
1,2-Dichloroethane	ND	1.00
1,1-Dichloroethene	ND	1.00
cis-1,2-Dichloroethene	ND	1.00
trans-1,2-Dichloroethene	ND	1.00
1,2-Dichloropropane	ND	1.00
1,3-Dichloropropane	ND	1.00
2,2-Dichloropropane	ND	1.00
1,1-Dichloropropene	ND	1.00
cis-1,3-Dichloropropene	ND	1.00
trans-1,3-Dichloropropene	ND	1.00
Diisopropyl Ether (DIPE)	ND	1.00
Ethylbenzene	ND	1.00
Ethyl tert-Butyl Ether (ETBE)	ND	1.00
Hexachlorobutadiene	ND	5.00
2-Hexanone	ND	20.0
Isopropylbenzene	ND	1.00
4-Isopropyltoluene	ND	1.00
2-Butanone (MEK)	ND	20.0
Methylene Chloride	ND	2.00
1-Methylnaphthalene	ND	10.0
2-Methylnaphthalene	ND	10.0
4-Methyl-2-pentanone (MIBK)	ND	20.0
Methyl tert-Butyl Ether (MTBE)	ND	1.00
Naphthalene	ND	5.00
n-Propyl Benzene	ND	1.00
Styrene	ND	1.00
tert-Amyl Methyl ether (TAME)	ND	1.00
1,1,1,2-Tetrachloroethane	ND	1.00
1,1,2,2-Tetrachloroethane	ND	1.00
Tetrachloroethene	ND	1.00
1,2,3-Trichlorobenzene	ND	5.00
1,2,4-Trichlorobenzene	ND	5.00
1,1,1-Trichloroethane	ND	1.00
1,1,2-Trichloroethane	ND	1.00
Trichloroethene	ND	1.00
Trichlorofluoromethane (Freon-11)	ND	2.00
1,2,3-Trichloropropane	ND	2.00
1,2,4-Trimethylbenzene	ND	5.00

QC Summary Data

Newell Law Firm	Project Name:	West Lovington Strawn Unit 8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/25/2022 4:10:14PM

Volatile Organic Compounds by EPA 8260B

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	ug/L	ug/L	ug/L	ug/L	%	%	%	%	

Blank (2212089-BLK1) Prepared: 03/19/22 Analyzed: 03/19/22

1,3,5-Trimethylbenzene	ND	1.00							
Toluene	ND	1.00							
Vinyl chloride	ND	2.00							
o-Xylene	ND	1.00							
p,m-Xylene	ND	2.00							
Total Xylenes	ND	1.00							
Surrogate: Bromofluorobenzene	9.62		10.0		96.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	10.1		10.0		101	70-130			
Surrogate: Toluene-d8	9.93		10.0		99.3	70-130			

LCS (2212089-BS1) Prepared: 03/19/22 Analyzed: 03/19/22

Benzene	46.7	1.00	50.0	93.3	70-130				
Bromochloromethane	45.1	1.00	50.0	90.1	70-130				
tert-Butylbenzene	42.6	1.00	50.0	85.2	70-130				
Chlorobenzene	46.9	1.00	50.0	93.7	70-130				
1,2-Dibromo-3-chloropropane (DBCP)	38.3	5.00	50.0	76.6	65-135				
1,4-Dichlorobenzene	44.0	1.00	50.0	88.0	70-130				
1,1-Dichloroethene	44.3	1.00	50.0	88.6	80-120				
1,2-Dichloropropane	48.7	1.00	50.0	97.4	80-120				
Diisopropyl Ether (DIPE)	47.0	1.00	50.0	94.0	65-135				
Ethylbenzene	47.0	1.00	50.0	93.9	80-120				
Methylene Chloride	46.2	2.00	50.0	92.3	70-130				
4-Methyl-2-pentanone (MIBK)	85.5	20.0	100	85.5	50-160				
Methyl tert-Butyl Ether (MTBE)	83.3	1.00	100	83.3	70-130				
n-Propyl Benzene	47.3	1.00	50.0	94.6	70-130				
1,1,1,2-Tetrachloroethane	43.8	1.00	50.0	87.6	70-130				
Tetrachloroethene	44.4	1.00	50.0	88.7	70-130				
1,2,3-Trichlorobenzene	39.1	5.00	50.0	78.3	70-140				
1,1,1-Trichloroethane	40.7	1.00	50.0	81.4	70-130				
1,1,2-Trichloroethane	44.9	1.00	50.0	89.8	70-130				
Trichloroethene	44.5	1.00	50.0	88.9	70-130				
Toluene	46.7	1.00	50.0	93.4	80-120				
Vinyl chloride	54.7	2.00	50.0	109	80-120				
o-Xylene	45.5	1.00	50.0	91.0	70-130				
p,m-Xylene	90.9	2.00	100	90.9	70-130				
Total Xylenes	136	1.00	150	90.9	70-130				
Surrogate: Bromofluorobenzene	10.1		10.0	101	70-130				
Surrogate: 1,2-Dichloroethane-d4	9.99		10.0	99.9	70-130				
Surrogate: Toluene-d8	10.0		10.0	100	70-130				

LCS Dup (2212089-BSD1) Prepared: 03/19/22 Analyzed: 03/19/22

Benzene	51.2	1.00	50.0	102	70-130	9.28	20		
Bromochloromethane	48.8	1.00	50.0	97.7	70-130	8.07	20		
tert-Butylbenzene	47.2	1.00	50.0	94.4	70-130	10.2	20		
Chlorobenzene	52.1	1.00	50.0	104	70-130	10.6	20		
1,2-Dibromo-3-chloropropane (DBCP)	41.6	5.00	50.0	83.2	65-135	8.33	30		
1,4-Dichlorobenzene	49.6	1.00	50.0	99.2	70-130	12.0	20		
1,1-Dichloroethene	48.9	1.00	50.0	97.9	80-120	9.95	20		
1,2-Dichloropropane	53.9	1.00	50.0	108	80-120	10.2	20		
Diisopropyl Ether (DIPE)	51.4	1.00	50.0	103	65-135	8.91	20		
Ethylbenzene	52.1	1.00	50.0	104	80-120	10.3	20		
Methylene Chloride	50.5	2.00	50.0	101	70-130	8.92	20		
4-Methyl-2-pentanone (MIBK)	91.5	20.0	100	91.5	50-160	6.78	30		
Methyl tert-Butyl Ether (MTBE)	88.9	1.00	100	88.9	70-130	6.56	20		
n-Propyl Benzene	52.6	1.00	50.0	105	70-130	10.7	20		
1,1,1,2-Tetrachloroethane	48.8	1.00	50.0	97.7	70-130	10.9	20		
Tetrachloroethene	49.8	1.00	50.0	99.6	70-130	11.5	20		
1,2,3-Trichlorobenzene	43.7	5.00	50.0	87.4	70-140	11.0	20		
1,1,1-Trichloroethane	45.4	1.00	50.0	90.9	70-130	11.0	20		
1,1,2-Trichloroethane	48.9	1.00	50.0	97.8	70-130	8.49	20		
Trichloroethene	50.1	1.00	50.0	100	70-130	11.9	20		

QC Summary Data

Newell Law Firm	Project Name:	West Lovington Strawn Unit 8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/25/2022 4:10:14PM

Volatile Organic Compounds by EPA 8260B

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	ug/L	ug/L	ug/L	ug/L	%	%	%	%	

LCS Dup (2212089-BSD1)					Prepared: 03/19/22 Analyzed: 03/19/22				
Toluene	52.0	1.00	50.0		104	80-120	10.7	20	
Vinyl chloride	60.2	2.00	50.0		120	80-120	9.59	30	
o-Xylene	50.7	1.00	50.0		101	70-130	10.8	20	
p,m-Xylene	101	2.00	100		101	70-130	10.5	20	
Total Xylenes	152	1.00	150		101	70-130	10.6	20	
Surrogate: Bromofluorobenzene	9.98		10.0		99.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	9.97		10.0		99.7	70-130			
Surrogate: Toluene-d8	10.2		10.0		102	70-130			

QC Summary Data

Newell Law Firm	Project Name:	West Lovington Strawn Unit 8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/25/2022 4:10:14PM

Wet Chem/Gravimetric by SM2540C

Analyst: RAS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	

Blank (2212068-BLK1)					Prepared: 03/17/22 Analyzed: 03/18/22				
Total Dissolved Solids	ND	10.0							
LCS (2212068-BS1)					Prepared: 03/17/22 Analyzed: 03/18/22				
Total Dissolved Solids	88.0	10.0	100	88.0	55-134				
Duplicate (2212068-DUP1)					Source: E203079-01 Prepared: 03/17/22 Analyzed: 03/18/22				
Total Dissolved Solids	43200	200		42100	2.39	5			
Duplicate (2212068-DUP2)					Source: E203111-07 Prepared: 03/17/22 Analyzed: 03/22/22				
Total Dissolved Solids	345	10.0		333	3.69	5			

QC Summary Data

Newell Law Firm	Project Name:	West Lovington Strawn Unit 8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/25/2022 4:10:14PM

Wet Chemistry by 9040C/4500H+B

Analyst: KL

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	pH Units	pH Units	pH Units	pH Units	%	%	%	%	

LCS (2213006-BS1)	Prepared: 03/21/22 Analyzed: 03/21/22								
pH	8.00		8.00		100	98.75-101.25			
Duplicate (2213006-DUP1)	Source: E203111-07 Prepared: 03/21/22 Analyzed: 03/21/22								
pH	7.87			7.78		1.15	20		

QC Summary Data

Newell Law Firm	Project Name:	West Lovington Strawn Unit 8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/25/2022 4:10:14PM

Wet Chemistry by SM2320B

Analyst: RAS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	

LCS (2213016-BS1)					Prepared: 03/21/22 Analyzed: 03/21/22				
Total Alkalinity (as CaCO3 at pH 4.5)	246	10.0	250		98.4	70-130			
LCS Dup (2213016-BSD1)					Prepared: 03/21/22 Analyzed: 03/21/22				
Total Alkalinity (as CaCO3 at pH 4.5)	242	10.0	250		96.8	70-130	1.64	20	

QC Summary Data

Newell Law Firm	Project Name:	West Lovington Strawn Unit 8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/25/2022 4:10:14PM

Wet Chemistry by 9050A/2510B

Analyst: RAS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	uS/cm	uS/cm	uS/cm	uS/cm	%	%	%	%	

Blank (2213009-BLK1)	Prepared: 03/21/22 Analyzed: 03/21/22								
Specific Conductance (@ 25 C)	ND	10.0							
LCS (2213009-BS1)	Prepared: 03/21/22 Analyzed: 03/21/22								
Specific Conductance (@ 25 C)	1410	10.0	1410		99.8	98-102			
Duplicate (2213009-DUP1)	Source: E203110-03 Prepared: 03/21/22 Analyzed: 03/21/22								
Specific Conductance (@ 25 C)	616	10.0		616			0.00	20	

QC Summary Data

Newell Law Firm	Project Name:	West Lovington Strawn Unit 8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/25/2022 4:10:14PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	

Blank (2212089-BLK1) Prepared: 03/19/22 Analyzed: 03/19/22

Gasoline Range Organics (C6-C10)	ND	0.100							
Surrogate: Bromofluorobenzene	0.00962		0.0100		96.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0101		0.0100		101	70-130			
Surrogate: Toluene-d8	0.00993		0.0100		99.3	70-130			

LCS (2212089-BS2) Prepared: 03/19/22 Analyzed: 03/19/22

Gasoline Range Organics (C6-C10)	1.10	0.100	1.00		110	70-130			
Surrogate: Bromofluorobenzene	0.00970		0.0100		97.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.00975		0.0100		97.5	70-130			
Surrogate: Toluene-d8	0.00998		0.0100		99.8	70-130			

LCS Dup (2212089-BSD2) Prepared: 03/19/22 Analyzed: 03/19/22

Gasoline Range Organics (C6-C10)	1.15	0.100	1.00		115	70-130	4.95	20	
Surrogate: Bromofluorobenzene	0.00983		0.0100		98.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.00976		0.0100		97.6	70-130			
Surrogate: Toluene-d8	0.00995		0.0100		99.5	70-130			

QC Summary Data

Newell Law Firm	Project Name:	West Lovington Strawn Unit 8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/25/2022 4:10:14PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: JL

Analyte	Result mg/L	Reporting Limit mg/L	Spike Level mg/L	Source Result mg/L	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2213017-BLK1)

Prepared: 03/21/22 Analyzed: 03/22/22

Diesel Range Organics (C10-C28)	ND	1.00							
Oil Range Organics (C28-C36)	ND	2.00							
Surrogate: <i>n</i> -Nonane	2.65		2.50		106	50-200			

LCS (2213017-BS1)

Prepared: 03/21/22 Analyzed: 03/22/22

Diesel Range Organics (C10-C28)	8.23	1.00	12.5		65.9	36-132			
Surrogate: <i>n</i> -Nonane	2.49		2.50		99.7	50-200			

LCS Dup (2213017-BSD1)

Prepared: 03/21/22 Analyzed: 03/22/22

Diesel Range Organics (C10-C28)	8.60	1.00	12.5		68.8	36-132	4.29	20	
Surrogate: <i>n</i> -Nonane	2.54		2.50		101	50-200			



QC Summary Data

Newell Law Firm	Project Name:	West Lovington Strawn Unit 8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/25/2022 4:10:14PM

Total Metals by EPA 6010C

Analyst: RKS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	

Blank (2212087-BLK1)

Prepared: 03/19/22 Analyzed: 03/20/22

Arsenic	ND	0.0200
Barium	ND	0.250
Cadmium	ND	0.0100
Chromium	ND	0.0200
Lead	ND	0.0100
Selenium	ND	0.0500
Silver	ND	0.0100

LCS (2212087-BS1)

Prepared: 03/19/22 Analyzed: 03/20/22

Arsenic	0.444	0.0200	0.500	88.8	80-120
Barium	11.4	0.250	12.5	91.0	80-120
Cadmium	0.236	0.0100	0.250	94.4	80-120
Chromium	0.939	0.0200	1.00	93.9	80-120
Lead	0.241	0.0100	0.250	96.2	80-120
Selenium	1.14	0.0500	1.25	91.2	80-120
Silver	0.0854	0.0100	0.100	85.4	80-120

Matrix Spike (2212087-MS1)

Source: E203093-01

Prepared: 03/19/22 Analyzed: 03/20/22

Arsenic	4.36	0.200	5.00	ND	87.2	75-125
Barium	111	2.50	125	ND	88.6	75-125
Cadmium	2.23	0.100	2.50	ND	89.3	75-125
Chromium	8.90	0.200	10.0	ND	89.0	75-125
Lead	2.28	0.100	2.50	ND	91.4	75-125
Selenium	11.2	0.500	12.5	ND	89.5	75-125
Silver	0.815	0.100	1.00	ND	81.5	75-125

Matrix Spike Dup (2212087-MSD1)

Source: E203093-01

Prepared: 03/19/22 Analyzed: 03/20/22

Arsenic	4.38	0.200	5.00	ND	87.5	75-125	0.389	20
Barium	110	2.50	125	ND	87.7	75-125	1.09	20
Cadmium	2.27	0.100	2.50	ND	90.7	75-125	1.51	20
Chromium	8.97	0.200	10.0	ND	89.7	75-125	0.851	20
Lead	2.31	0.100	2.50	ND	92.5	75-125	1.22	20
Selenium	11.2	0.500	12.5	ND	89.6	75-125	0.0893	20
Silver	0.828	0.100	1.00	ND	82.8	75-125	1.58	20



QC Summary Data

Newell Law Firm	Project Name:	West Lovington Strawn Unit 8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/25/2022 4:10:14PM

Dissolved Metals by EPA 6010C

Analyst: RKS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	

Blank (2212080-BLK1)

Prepared: 03/18/22 Analyzed: 03/19/22

Calcium	ND	1.00
Iron	ND	2.00
Magnesium	ND	1.00
Potassium	ND	1.00
Sodium	ND	2.00

LCS (2212080-BS1)

Prepared: 03/18/22 Analyzed: 03/19/22

Calcium	48.3	1.00	50.0	96.6	80-120
Iron	101	2.00	100	101	80-120
Magnesium	49.9	1.00	50.0	99.9	80-120
Potassium	4.68	1.00	5.00	93.6	80-120
Sodium	17.9	2.00	20.0	89.6	80-120

Matrix Spike (2212080-MS1)

Source: E203110-03

Prepared: 03/18/22 Analyzed: 03/19/22

Calcium	91.6	1.00	50.0	48.4	86.4	75-125
Iron	99.6	2.00	100	ND	99.6	75-125
Magnesium	63.8	1.00	50.0	14.0	99.7	75-125
Potassium	8.12	1.00	5.00	3.23	97.6	75-125
Sodium	67.2	2.00	20.0	48.4	93.8	75-125

Matrix Spike Dup (2212080-MSD1)

Source: E203110-03

Prepared: 03/18/22 Analyzed: 03/19/22

Calcium	95.1	1.00	50.0	48.4	93.3	75-125	3.74	20
Iron	100	2.00	100	ND	100	75-125	0.481	20
Magnesium	63.9	1.00	50.0	14.0	99.9	75-125	0.188	20
Potassium	8.46	1.00	5.00	3.23	104	75-125	4.12	20
Sodium	69.0	2.00	20.0	48.4	103	75-125	2.67	20



QC Summary Data

Newell Law Firm	Project Name:	West Lovington Strawn Unit 8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/25/2022 4:10:14PM

Anions by EPA 300.0/9056A

Analyst: RAS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	

Blank (2212086-BLK1)

Prepared: 03/19/22 Analyzed: 03/19/22

Fluoride	ND	0.250
Chloride	ND	2.00
Nitrite-N	ND	0.250
Nitrate-N	ND	0.250
o-Phosphate-P	ND	0.250
Sulfate	ND	2.00

LCS (2212086-BS1)

Prepared: 03/19/22 Analyzed: 03/19/22

Fluoride	2.57	0.250	2.50	103	90-110
Chloride	24.9	2.00	25.0	99.5	90-110
Nitrite-N	2.73	0.250	2.50	109	90-110
Nitrate-N	2.58	0.250	2.50	103	90-110
o-Phosphate-P	12.4	0.250	12.5	99.1	90-110
Sulfate	24.9	2.00	25.0	99.5	90-110

LCS Dup (2212086-BSD1)

Prepared: 03/19/22 Analyzed: 03/19/22

Fluoride	2.56	0.250	2.50	102	90-110	0.312	20
Chloride	24.8	2.00	25.0	99.0	90-110	0.552	20
Nitrite-N	2.54	0.250	2.50	102	90-110	6.95	20
Nitrate-N	2.58	0.250	2.50	103	90-110	0.271	20
o-Phosphate-P	12.3	0.250	12.5	98.7	90-110	0.404	20
Sulfate	24.7	2.00	25.0	98.9	90-110	0.524	20

QC Summary Data

Newell Law Firm	Project Name:	West Lovington Strawn Unit 8	Reported:
10 W Adams Ave Ste E	Project Number:	20046-0001	
Lovington NM, 88260	Project Manager:	Natalie Gladden	3/25/2022 4:10:14PM

Total Mercury by EPA 7470A

Analyst: RKS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	ug/L	ug/L	ug/L	ug/L	%	%	%	%	

Blank (2212088-BLK1)					Prepared: 03/19/22 Analyzed: 03/20/22				
Mercury	ND	0.200							
LCS (2212088-BS1)					Prepared: 03/19/22 Analyzed: 03/20/22				
Mercury	1.82	0.200	2.00		91.2	80-120			
Matrix Spike (2212088-MS1)					Source: E203110-02		Prepared: 03/19/22 Analyzed: 03/20/22		
Mercury	1.77	0.200	2.00	ND	88.7	75-125			
Matrix Spike Dup (2212088-MSD1)					Source: E203110-02		Prepared: 03/19/22 Analyzed: 03/20/22		
Mercury	1.76	0.200	2.00	ND	88.2	75-125	0.578	20	

QC Summary Report Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.
Therefore, hand calculated values may differ slightly.

Definitions and Notes

Newell Law Firm	Project Name:	West Lovington Strawn Unit 8	
10 W Adams Ave Ste E	Project Number:	20046-0001	Reported:
Lovington NM, 88260	Project Manager:	Natalie Gladden	03/25/22 16:10

- C1 The CV recovery was above method acceptance limits.
- C4 The CV recovery was below method acceptance limits.
- C6 The CV recovery was outside acceptance limits. The sample was analyzed multiple times all with similar bracketing CV results.
- H2 Sample was receive with an insufficient amount of time to prepare and analyze the sample within the method prescribed holding time.
The analysis was performed as quickly as possible per client request.
- H5 pH is specified to be performed in the field within 15 minutes of sampling. The sample was performed as quickly as possible.
- T17 The sample chromatographic pattern does not resemble the typical fuel standard used for quantitation.
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.

Released to: Mustang 3/21/2025 11:17:51 AM

Received by OCD: 10/15/2024 2:45:57 PM

Project Information

Chain of Custody

Page 1 of 1

Client: Newell Law Firm
Project: West Lovington Strawn Unit 8
Project Manager: Mike Newell
Address:
City, State, Zip Lovington, NM
Phone:
Email:
Report due by:

Bill To
Attention: ESS
Address: 2427 County Rd
City, State, Zip Hobbs, NM
Phone:
Email: Natalie

Lab Use Only				TAT				EPA Program	
Lab WO#	Job Number	1D	2D	3D	Standard	CWA	SDWA		
<u>E203111</u>	<u>20046-0001</u>		<input checked="" type="checkbox"/>						
Analysis and Method							RCRA		
DRO/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	State			
					<u>C/A</u>	NM	CO		
						<input checked="" type="checkbox"/>	UT		
							AZ		
							TX		
						Remarks			

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number
09:11	3/16	A	1	MW-2	1
09:48				MW-4	2
10:36				MW-8S	3
11:30				MW-8M	4
14:20				MW-8D	5
15:11				MW-7S	6
16:32				MW-7D	7

Additional Instructions:

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: [Signature]

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Lab Use Only
<u>[Signature]</u>	3/16	5:30	<u>[Signature]</u>	3/17/22	1445	Received on ice: <input checked="" type="checkbox"/> Y / N
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	T1 T2 T3
<u>[Signature]</u>	3/17/22	1730	<u>Chatter Chatter</u>	3/18/22	8:15	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	AVG Temp °C <u>4</u>

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

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Envirotech Analytical Laboratory

Printed: 3/25/2022 3:13:34PM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Newell Law Firm	Date Received:	03/18/22 08:15	Work Order ID:	E203111
Phone:	(575) 739-6395	Date Logged In:	03/17/22 17:48	Logged In By:	Caitlin Christian
Email:	natalie@energystaffingllc.com	Due Date:	03/25/22 17:00 (5 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CarrierComments/Resolution

Samples recieved without enough time to run within holding time for Nitrates, Nitrites, and O-Phosphates. Alkalinity was not analyzed for samples 2-7 due to insufficient sample amount. Sample 4 & 5 were not analyzed for Conductivity or pH as well.

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? Yes
15. Are VOC samples collected in VOA Vials? Yes
16. Is the head space less than 6-8 mm (pea sized or less)? Yes
17. Was a trip blank (TB) included for VOC analyses? No
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:

Sample ID?	Yes
Date/Time Collected?	No
Collectors name?	No

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? Yes
22. Are sample(s) correctly preserved? Yes
24. Is lab filtration required and/or requested for dissolved metals? Yes

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: na

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



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

April 13, 2022

Clayton Barnhill
CMB Environmental
P. O. Box 2304
Roswell, NM 88202-2304
TEL: (575) 622-6510
FAX: (575) 625-0538

RE: Energy Resources Corp West Lovington
Strawn Unit 8 Unit L Sec. 34, T15, SR. 35E

OrderNo.: 2203A30

Dear Clayton Barnhill:

Hall Environmental Analysis Laboratory received 19 sample(s) on 3/18/2022 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: W. Windmill Water Well

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 11:00:00 AM

Lab ID: 2203A30-001

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS							Analyst: DBK
Antimony	ND	0.0010		mg/L	1	4/1/2022 1:56:16 PM	A86914
Arsenic	0.0084	0.0010		mg/L	1	4/1/2022 1:56:16 PM	A86914
Beryllium	ND	0.0010		mg/L	1	4/1/2022 1:56:16 PM	A86914
Cadmium	ND	0.00050		mg/L	1	4/1/2022 1:56:16 PM	A86914
Selenium	0.0049	0.0010		mg/L	1	4/1/2022 8:01:12 PM	A86914
Thallium	ND	0.00025		mg/L	1	4/1/2022 1:56:16 PM	A86914
EPA METHOD 300.0: ANIONS							Analyst: LRN
Chloride	24	5.0		mg/L	10	3/21/2022 11:19:54 AM	R86662
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	590	10		µmhos/c	1	3/22/2022 1:45:49 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	367	20.0		mg/L	1	3/24/2022 10:56:00 AM	66320
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.92		H	pH units	1	3/22/2022 1:45:49 PM	R86681
EPA METHOD 200.7: METALS							Analyst: ELS
Barium	0.071	0.0030		mg/L	1	3/24/2022 8:57:55 AM	A86739
Chromium	ND	0.0060		mg/L	1	3/24/2022 8:57:55 AM	A86739
Nickel	ND	0.010		mg/L	1	3/24/2022 8:57:55 AM	A86739
Sodium	33	1.0		mg/L	1	3/24/2022 8:57:55 AM	A86739
Zinc	ND	0.010		mg/L	1	3/24/2022 8:57:55 AM	A86739
EPA METHOD 245.1: MERCURY							Analyst: VP
Mercury	ND	0.00020		mg/L	1	3/28/2022 3:14:15 PM	66425

Refer to the QC Summary report and sample login checklist for flagged QC data 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 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: House Water Well

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 11:25:00 AM

Lab ID: 2203A30-002

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS							Analyst: DBK
Antimony	ND	0.0010		mg/L	1	4/1/2022 2:01:35 PM	A86914
Arsenic	0.0078	0.0010		mg/L	1	4/1/2022 2:01:35 PM	A86914
Beryllium	ND	0.0010		mg/L	1	4/1/2022 2:01:35 PM	A86914
Cadmium	ND	0.00050		mg/L	1	4/1/2022 2:01:35 PM	A86914
Selenium	0.0047	0.0010		mg/L	1	4/1/2022 8:17:12 PM	A86914
Thallium	ND	0.00025		mg/L	1	4/1/2022 2:01:35 PM	A86914
EPA METHOD 300.0: ANIONS							Analyst: LRN
Chloride	32	5.0		mg/L	10	3/21/2022 12:11:19 PM	R86662
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	700	10		µmhos/c	1	3/22/2022 1:50:21 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	438	20.0		mg/L	1	3/24/2022 10:56:00 AM	66320
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.69		H	pH units	1	3/22/2022 1:50:21 PM	R86681
EPA METHOD 200.7: METALS							Analyst: ELS
Barium	0.063	0.0030		mg/L	1	3/24/2022 9:04:41 AM	A86739
Chromium	ND	0.0060		mg/L	1	3/24/2022 9:04:41 AM	A86739
Nickel	ND	0.010		mg/L	1	3/24/2022 9:04:41 AM	A86739
Sodium	42	1.0		mg/L	1	3/24/2022 9:04:41 AM	A86739
Zinc	ND	0.010		mg/L	1	3/24/2022 9:04:41 AM	A86739
EPA METHOD 245.1: MERCURY							Analyst: VP
Mercury	ND	0.00020		mg/L	1	3/28/2022 3:16:24 PM	66425

Refer to the QC Summary report and sample login checklist for flagged QC data 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 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: Pond Water Well

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 11:30:00 AM

Lab ID: 2203A30-003

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: METALS							Analyst: DBK
Antimony	ND	0.0010		mg/L	1	4/1/2022 2:23:12 PM	A86914
Arsenic	0.0067	0.0010		mg/L	1	4/1/2022 2:23:12 PM	A86914
Beryllium	ND	0.0010		mg/L	1	4/1/2022 2:23:12 PM	A86914
Cadmium	ND	0.00050		mg/L	1	4/1/2022 2:23:12 PM	A86914
Selenium	0.0041	0.0010		mg/L	1	4/1/2022 8:22:33 PM	A86914
Thallium	ND	0.00025		mg/L	1	4/1/2022 2:23:12 PM	A86914
EPA METHOD 300.0: ANIONS							Analyst: LRN
Chloride	32	5.0		mg/L	10	3/21/2022 1:02:46 PM	R86662
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	700	10		µmhos/c	1	3/22/2022 1:54:48 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	437	20.0		mg/L	1	3/24/2022 10:56:00 AM	66320
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.94		H	pH units	1	3/22/2022 1:54:48 PM	R86681
EPA METHOD 200.7: METALS							Analyst: ELS
Barium	0.098	0.0030		mg/L	1	3/24/2022 9:06:20 AM	A86739
Chromium	ND	0.0060		mg/L	1	3/24/2022 9:06:20 AM	A86739
Nickel	ND	0.010		mg/L	1	3/24/2022 9:06:20 AM	A86739
Sodium	38	1.0		mg/L	1	3/24/2022 9:06:20 AM	A86739
Zinc	ND	0.010		mg/L	1	3/24/2022 9:06:20 AM	A86739
EPA METHOD 245.1: MERCURY							Analyst: VP
Mercury	ND	0.00020		mg/L	1	3/28/2022 3:18:32 PM	66425

Refer to the QC Summary report and sample login checklist for flagged QC data 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 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-9S

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 9:41:00 AM

Lab ID: 2203A30-004

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LRN
Chloride	27	5.0		mg/L	10	3/21/2022 1:28:32 PM	R86662
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	640	10		µmhos/c	1	3/22/2022 2:03:11 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	360	100	D	mg/L	1	3/24/2022 10:56:00 AM	66320
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.44		H	pH units	1	3/22/2022 2:03:11 PM	R86681
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Acenaphthylene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Aniline	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Anthracene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Azobenzene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Benz(a)anthracene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Benzo(a)pyrene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Benzo(b)fluoranthene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Benzo(k)fluoranthene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Benzoic acid	ND	20		µg/L	1	3/24/2022 8:45:17 PM	66307
Benzyl alcohol	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/24/2022 8:45:17 PM	66307
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Butyl benzyl phthalate	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Carbazole	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
4-Chloro-3-methylphenol	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
4-Chloroaniline	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
2-Chloronaphthalene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
2-Chlorophenol	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
4-Chlorophenyl phenyl ether	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Chrysene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Di-n-butyl phthalate	ND	10		µg/L	1	3/24/2022 8:45:17 PM	66307
Di-n-octyl phthalate	ND	20		µg/L	1	3/24/2022 8:45:17 PM	66307
Dibenz(a,h)anthracene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Dibenzofuran	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-9S

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 9:41:00 AM

Lab ID: 2203A30-004

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,2-Dichlorobenzene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
1,3-Dichlorobenzene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
1,4-Dichlorobenzene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
3,3'-Dichlorobenzidine	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Diethyl phthalate	ND	10		µg/L	1	3/24/2022 8:45:17 PM	66307
Dimethyl phthalate	ND	10		µg/L	1	3/24/2022 8:45:17 PM	66307
2,4-Dichlorophenol	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
2,4-Dimethylphenol	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
4,6-Dinitro-2-methylphenol	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
2,4-Dinitrophenol	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
2,4-Dinitrotoluene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
2,6-Dinitrotoluene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Fluoranthene	ND	10		µg/L	1	3/24/2022 8:45:17 PM	66307
Fluorene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Hexachlorobenzene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Hexachlorobutadiene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Hexachlorocyclopentadiene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Hexachloroethane	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Indeno(1,2,3-cd)pyrene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Isophorone	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
1-Methylnaphthalene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
2-Methylnaphthalene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
2-Methylphenol	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
3+4-Methylphenol	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
N-Nitrosodi-n-propylamine	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
N-Nitrosodimethylamine	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
N-Nitrosodiphenylamine	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Naphthalene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
2-Nitroaniline	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
3-Nitroaniline	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
4-Nitroaniline	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Nitrobenzene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
2-Nitrophenol	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
4-Nitrophenol	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Pentachlorophenol	ND	20		µg/L	1	3/24/2022 8:45:17 PM	66307
Phenanthrene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Phenol	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Pyrene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Pyridine	ND	10		µg/L	1	3/24/2022 8:45:17 PM	66307

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-9S

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 9:41:00 AM

Lab ID: 2203A30-004

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
2,4,5-Trichlorophenol	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
2,4,6-Trichlorophenol	ND	5.0		µg/L	1	3/24/2022 8:45:17 PM	66307
Surr: 2-Fluorophenol	56.7	29.4-87.7		%Rec	1	3/24/2022 8:45:17 PM	66307
Surr: Phenol-d5	40.8	28.5-64.7		%Rec	1	3/24/2022 8:45:17 PM	66307
Surr: 2,4,6-Tribromophenol	86.2	18.6-129		%Rec	1	3/24/2022 8:45:17 PM	66307
Surr: Nitrobenzene-d5	64.2	36.9-103		%Rec	1	3/24/2022 8:45:17 PM	66307
Surr: 2-Fluorobiphenyl	62.7	38.1-99.9		%Rec	1	3/24/2022 8:45:17 PM	66307
Surr: 4-Terphenyl-d14	104	48-155		%Rec	1	3/24/2022 8:45:17 PM	66307
EPA METHOD 8260B: VOLATILES							Analyst: JR
Benzene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
Toluene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
Ethylbenzene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
Naphthalene	ND	2.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
1-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
2-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
Acetone	ND	10		µg/L	1	3/23/2022 5:44:33 PM	R86690
Bromobenzene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
Bromodichloromethane	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
Bromoform	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
Bromomethane	ND	3.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
2-Butanone	ND	10		µg/L	1	3/23/2022 5:44:33 PM	R86690
Carbon disulfide	ND	10		µg/L	1	3/23/2022 5:44:33 PM	R86690
Carbon Tetrachloride	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
Chlorobenzene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
Chloroethane	ND	2.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
Chloroform	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
Chloromethane	ND	3.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
2-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
4-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
cis-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
Dibromochloromethane	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-9S

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 9:41:00 AM

Lab ID: 2203A30-004

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Dibromomethane	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
1,1-Dichloroethane	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
1,1-Dichloroethene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
1,2-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
1,3-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
2,2-Dichloropropane	ND	2.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
1,1-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
Hexachlorobutadiene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
2-Hexanone	ND	10		µg/L	1	3/23/2022 5:44:33 PM	R86690
Isopropylbenzene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
4-Isopropyltoluene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
4-Methyl-2-pentanone	ND	10		µg/L	1	3/23/2022 5:44:33 PM	R86690
Methylene Chloride	ND	3.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
n-Butylbenzene	ND	3.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
n-Propylbenzene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
sec-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
Styrene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
tert-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
trans-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
Trichlorofluoromethane	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
Vinyl chloride	ND	1.0		µg/L	1	3/23/2022 5:44:33 PM	R86690
Xylenes, Total	ND	1.5		µg/L	1	3/23/2022 5:44:33 PM	R86690
Surr: 1,2-Dichloroethane-d4	84.2	70-130		%Rec	1	3/23/2022 5:44:33 PM	R86690
Surr: 4-Bromofluorobenzene	99.3	70-130		%Rec	1	3/23/2022 5:44:33 PM	R86690
Surr: Dibromofluoromethane	87.9	70-130		%Rec	1	3/23/2022 5:44:33 PM	R86690

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

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

CLIENT: CMB Environmental Client Sample ID: MW-9S
Project: Energy Resources Corp West Lovington Collection Date: 3/15/2022 9:41:00 AM
Lab ID: 2203A30-004 Matrix: AQUEOUS Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Surr: Toluene-d8	103	70-130		%Rec	1	3/23/2022 5:44:33 PM	R86690

Refer to the QC Summary report and sample login checklist for flagged QC data 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 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-9M

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 10:38:00 AM

Lab ID: 2203A30-005

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LRN
Chloride	46	5.0		mg/L	10	3/21/2022 1:54:15 PM	R86662
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	720	10		µmhos/c	1	3/22/2022 2:07:40 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	404	40.0	D	mg/L	1	3/24/2022 10:56:00 AM	66320
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	8.26		H	pH units	1	3/22/2022 2:07:40 PM	R86681
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Acenaphthylene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Aniline	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Anthracene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Azobenzene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Benz(a)anthracene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Benzo(a)pyrene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Benzo(b)fluoranthene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Benzo(k)fluoranthene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Benzoic acid	ND	20		µg/L	1	3/24/2022 9:27:13 PM	66307
Benzyl alcohol	5.2	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/24/2022 9:27:13 PM	66307
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Butyl benzyl phthalate	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Carbazole	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
4-Chloro-3-methylphenol	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
4-Chloroaniline	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
2-Chloronaphthalene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
2-Chlorophenol	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
4-Chlorophenyl phenyl ether	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Chrysene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Di-n-butyl phthalate	ND	10		µg/L	1	3/24/2022 9:27:13 PM	66307
Di-n-octyl phthalate	ND	20		µg/L	1	3/24/2022 9:27:13 PM	66307
Dibenz(a,h)anthracene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Dibenzofuran	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-9M

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 10:38:00 AM

Lab ID: 2203A30-005

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,2-Dichlorobenzene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
1,3-Dichlorobenzene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
1,4-Dichlorobenzene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
3,3'-Dichlorobenzidine	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Diethyl phthalate	ND	10		µg/L	1	3/24/2022 9:27:13 PM	66307
Dimethyl phthalate	ND	10		µg/L	1	3/24/2022 9:27:13 PM	66307
2,4-Dichlorophenol	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
2,4-Dimethylphenol	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
4,6-Dinitro-2-methylphenol	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
2,4-Dinitrophenol	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
2,4-Dinitrotoluene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
2,6-Dinitrotoluene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Fluoranthene	ND	10		µg/L	1	3/24/2022 9:27:13 PM	66307
Fluorene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Hexachlorobenzene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Hexachlorobutadiene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Hexachlorocyclopentadiene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Hexachloroethane	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Indeno(1,2,3-cd)pyrene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Isophorone	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
1-Methylnaphthalene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
2-Methylnaphthalene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
2-Methylphenol	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
3+4-Methylphenol	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
N-Nitrosodi-n-propylamine	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
N-Nitrosodimethylamine	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
N-Nitrosodiphenylamine	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Naphthalene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
2-Nitroaniline	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
3-Nitroaniline	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
4-Nitroaniline	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Nitrobenzene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
2-Nitrophenol	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
4-Nitrophenol	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Pentachlorophenol	ND	20		µg/L	1	3/24/2022 9:27:13 PM	66307
Phenanthrene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Phenol	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Pyrene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Pyridine	ND	10		µg/L	1	3/24/2022 9:27:13 PM	66307

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-9M

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 10:38:00 AM

Lab ID: 2203A30-005

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
2,4,5-Trichlorophenol	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
2,4,6-Trichlorophenol	ND	5.0		µg/L	1	3/24/2022 9:27:13 PM	66307
Surr: 2-Fluorophenol	34.4	29.4-87.7		%Rec	1	3/24/2022 9:27:13 PM	66307
Surr: Phenol-d5	33.6	28.5-64.7		%Rec	1	3/24/2022 9:27:13 PM	66307
Surr: 2,4,6-Tribromophenol	81.6	18.6-129		%Rec	1	3/24/2022 9:27:13 PM	66307
Surr: Nitrobenzene-d5	41.1	36.9-103		%Rec	1	3/24/2022 9:27:13 PM	66307
Surr: 2-Fluorobiphenyl	38.5	38.1-99.9		%Rec	1	3/24/2022 9:27:13 PM	66307
Surr: 4-Terphenyl-d14	98.0	48-155		%Rec	1	3/24/2022 9:27:13 PM	66307
EPA METHOD 8260B: VOLATILES							Analyst: JR
Benzene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
Toluene	2.9	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
Ethylbenzene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
Naphthalene	ND	2.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
1-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
2-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
Acetone	ND	10		µg/L	1	3/23/2022 6:13:10 PM	R86690
Bromobenzene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
Bromodichloromethane	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
Bromoform	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
Bromomethane	ND	3.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
2-Butanone	ND	10		µg/L	1	3/23/2022 6:13:10 PM	R86690
Carbon disulfide	ND	10		µg/L	1	3/23/2022 6:13:10 PM	R86690
Carbon Tetrachloride	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
Chlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
Chloroethane	ND	2.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
Chloroform	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
Chloromethane	ND	3.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
2-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
4-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
cis-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
Dibromochloromethane	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-9M

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 10:38:00 AM

Lab ID: 2203A30-005

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Dibromomethane	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
1,1-Dichloroethane	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
1,1-Dichloroethene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
1,2-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
1,3-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
2,2-Dichloropropane	ND	2.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
1,1-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
Hexachlorobutadiene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
2-Hexanone	ND	10		µg/L	1	3/23/2022 6:13:10 PM	R86690
Isopropylbenzene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
4-Isopropyltoluene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
4-Methyl-2-pentanone	ND	10		µg/L	1	3/23/2022 6:13:10 PM	R86690
Methylene Chloride	ND	3.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
n-Butylbenzene	ND	3.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
n-Propylbenzene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
sec-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
Styrene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
tert-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
trans-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
Trichlorofluoromethane	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
Vinyl chloride	ND	1.0		µg/L	1	3/23/2022 6:13:10 PM	R86690
Xylenes, Total	ND	1.5		µg/L	1	3/23/2022 6:13:10 PM	R86690
Surr: 1,2-Dichloroethane-d4	87.7	70-130		%Rec	1	3/23/2022 6:13:10 PM	R86690
Surr: 4-Bromofluorobenzene	95.7	70-130		%Rec	1	3/23/2022 6:13:10 PM	R86690
Surr: Dibromofluoromethane	92.3	70-130		%Rec	1	3/23/2022 6:13:10 PM	R86690

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

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

CLIENT: CMB Environmental Client Sample ID: MW-9M
Project: Energy Resources Corp West Lovington Collection Date: 3/15/2022 10:38:00 AM
Lab ID: 2203A30-005 Matrix: AQUEOUS Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Surr: Toluene-d8	102	70-130		%Rec	1	3/23/2022 6:13:10 PM	R86690

Refer to the QC Summary report and sample login checklist for flagged QC data 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 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-9D

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 11:45:00 AM

Lab ID: 2203A30-006

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LRN
Chloride	29	5.0		mg/L	10	3/21/2022 2:19:58 PM	R86662
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	530	10		µmhos/c	1	3/22/2022 2:11:44 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	366	40.0	D	mg/L	1	3/24/2022 10:56:00 AM	66320
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.91		H	pH units	1	3/22/2022 2:11:44 PM	R86681
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Acenaphthylene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Aniline	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Anthracene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Azobenzene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Benz(a)anthracene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Benzo(a)pyrene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Benzo(b)fluoranthene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Benzo(k)fluoranthene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Benzoic acid	ND	20		µg/L	1	3/24/2022 10:08:57 PM	66307
Benzyl alcohol	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/24/2022 10:08:57 PM	66307
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Butyl benzyl phthalate	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Carbazole	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
4-Chloro-3-methylphenol	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
4-Chloroaniline	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
2-Chloronaphthalene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
2-Chlorophenol	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
4-Chlorophenyl phenyl ether	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Chrysene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Di-n-butyl phthalate	ND	10		µg/L	1	3/24/2022 10:08:57 PM	66307
Di-n-octyl phthalate	ND	20		µg/L	1	3/24/2022 10:08:57 PM	66307
Dibenz(a,h)anthracene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Dibenzofuran	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-9D

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 11:45:00 AM

Lab ID: 2203A30-006

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,2-Dichlorobenzene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
1,3-Dichlorobenzene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
1,4-Dichlorobenzene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
3,3'-Dichlorobenzidine	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Diethyl phthalate	ND	10		µg/L	1	3/24/2022 10:08:57 PM	66307
Dimethyl phthalate	ND	10		µg/L	1	3/24/2022 10:08:57 PM	66307
2,4-Dichlorophenol	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
2,4-Dimethylphenol	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
4,6-Dinitro-2-methylphenol	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
2,4-Dinitrophenol	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
2,4-Dinitrotoluene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
2,6-Dinitrotoluene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Fluoranthene	ND	10		µg/L	1	3/24/2022 10:08:57 PM	66307
Fluorene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Hexachlorobenzene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Hexachlorobutadiene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Hexachlorocyclopentadiene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Hexachloroethane	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Indeno(1,2,3-cd)pyrene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Isophorone	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
1-Methylnaphthalene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
2-Methylnaphthalene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
2-Methylphenol	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
3+4-Methylphenol	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
N-Nitrosodi-n-propylamine	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
N-Nitrosodimethylamine	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
N-Nitrosodiphenylamine	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Naphthalene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
2-Nitroaniline	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
3-Nitroaniline	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
4-Nitroaniline	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Nitrobenzene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
2-Nitrophenol	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
4-Nitrophenol	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Pentachlorophenol	ND	20		µg/L	1	3/24/2022 10:08:57 PM	66307
Phenanthrene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Phenol	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Pyrene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Pyridine	ND	10		µg/L	1	3/24/2022 10:08:57 PM	66307

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-9D

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 11:45:00 AM

Lab ID: 2203A30-006

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
2,4,5-Trichlorophenol	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
2,4,6-Trichlorophenol	ND	5.0		µg/L	1	3/24/2022 10:08:57 PM	66307
Surr: 2-Fluorophenol	38.7	29.4-87.7		%Rec	1	3/24/2022 10:08:57 PM	66307
Surr: Phenol-d5	31.0	28.5-64.7		%Rec	1	3/24/2022 10:08:57 PM	66307
Surr: 2,4,6-Tribromophenol	57.4	18.6-129		%Rec	1	3/24/2022 10:08:57 PM	66307
Surr: Nitrobenzene-d5	45.6	36.9-103		%Rec	1	3/24/2022 10:08:57 PM	66307
Surr: 2-Fluorobiphenyl	45.2	38.1-99.9		%Rec	1	3/24/2022 10:08:57 PM	66307
Surr: 4-Terphenyl-d14	90.6	48-155		%Rec	1	3/24/2022 10:08:57 PM	66307
EPA METHOD 8260B: VOLATILES							Analyst: JR
Benzene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
Toluene	1.6	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
Ethylbenzene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
Naphthalene	ND	2.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
1-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
2-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
Acetone	ND	10		µg/L	1	3/23/2022 6:41:45 PM	R86690
Bromobenzene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
Bromodichloromethane	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
Bromoform	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
Bromomethane	ND	3.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
2-Butanone	ND	10		µg/L	1	3/23/2022 6:41:45 PM	R86690
Carbon disulfide	ND	10		µg/L	1	3/23/2022 6:41:45 PM	R86690
Carbon Tetrachloride	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
Chlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
Chloroethane	ND	2.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
Chloroform	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
Chloromethane	ND	3.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
2-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
4-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
cis-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
Dibromochloromethane	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-9D

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 11:45:00 AM

Lab ID: 2203A30-006

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Dibromomethane	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
1,1-Dichloroethane	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
1,1-Dichloroethene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
1,2-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
1,3-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
2,2-Dichloropropane	ND	2.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
1,1-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
Hexachlorobutadiene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
2-Hexanone	ND	10		µg/L	1	3/23/2022 6:41:45 PM	R86690
Isopropylbenzene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
4-Isopropyltoluene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
4-Methyl-2-pentanone	ND	10		µg/L	1	3/23/2022 6:41:45 PM	R86690
Methylene Chloride	ND	3.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
n-Butylbenzene	ND	3.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
n-Propylbenzene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
sec-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
Styrene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
tert-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
trans-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
Trichlorofluoromethane	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
Vinyl chloride	ND	1.0		µg/L	1	3/23/2022 6:41:45 PM	R86690
Xylenes, Total	ND	1.5		µg/L	1	3/23/2022 6:41:45 PM	R86690
Surr: 1,2-Dichloroethane-d4	88.2	70-130		%Rec	1	3/23/2022 6:41:45 PM	R86690
Surr: 4-Bromofluorobenzene	98.8	70-130		%Rec	1	3/23/2022 6:41:45 PM	R86690
Surr: Dibromofluoromethane	93.0	70-130		%Rec	1	3/23/2022 6:41:45 PM	R86690

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

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2203A30
Date Reported: 4/13/2022

CLIENT: CMB Environmental

Client Sample ID: MW-9D

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 11:45:00 AM

Lab ID: 2203A30-006

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Surr: Toluene-d8	98.0	70-130		%Rec	1	3/23/2022 6:41:45 PM	R86690

Refer to the QC Summary report and sample login checklist for flagged QC data 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 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-1

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 2:10:00 PM

Lab ID: 2203A30-007

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LRN
Chloride	26	5.0		mg/L	10	3/21/2022 2:45:42 PM	R86662
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	640	10		µmhos/c	1	3/22/2022 2:16:13 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	390	100	D	mg/L	1	3/24/2022 10:56:00 AM	66320
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.74		H	pH units	1	3/22/2022 2:16:13 PM	R86681
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Acenaphthylene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Aniline	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Anthracene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Azobenzene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Benz(a)anthracene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Benzo(a)pyrene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Benzo(b)fluoranthene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Benzo(k)fluoranthene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Benzoic acid	ND	20		µg/L	1	3/24/2022 10:50:42 PM	66307
Benzyl alcohol	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/24/2022 10:50:42 PM	66307
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Butyl benzyl phthalate	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Carbazole	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
4-Chloro-3-methylphenol	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
4-Chloroaniline	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
2-Chloronaphthalene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
2-Chlorophenol	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
4-Chlorophenyl phenyl ether	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Chrysene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Di-n-butyl phthalate	ND	10		µg/L	1	3/24/2022 10:50:42 PM	66307
Di-n-octyl phthalate	ND	20		µg/L	1	3/24/2022 10:50:42 PM	66307
Dibenz(a,h)anthracene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Dibenzofuran	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307

Refer to the QC Summary report and sample login checklist for flagged QC data 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 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-1

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 2:10:00 PM

Lab ID: 2203A30-007

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,2-Dichlorobenzene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
1,3-Dichlorobenzene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
1,4-Dichlorobenzene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
3,3'-Dichlorobenzidine	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Diethyl phthalate	ND	10		µg/L	1	3/24/2022 10:50:42 PM	66307
Dimethyl phthalate	ND	10		µg/L	1	3/24/2022 10:50:42 PM	66307
2,4-Dichlorophenol	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
2,4-Dimethylphenol	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
4,6-Dinitro-2-methylphenol	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
2,4-Dinitrophenol	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
2,4-Dinitrotoluene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
2,6-Dinitrotoluene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Fluoranthene	ND	10		µg/L	1	3/24/2022 10:50:42 PM	66307
Fluorene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Hexachlorobenzene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Hexachlorobutadiene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Hexachlorocyclopentadiene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Hexachloroethane	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Indeno(1,2,3-cd)pyrene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Isophorone	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
1-Methylnaphthalene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
2-Methylnaphthalene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
2-Methylphenol	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
3+4-Methylphenol	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
N-Nitrosodi-n-propylamine	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
N-Nitrosodimethylamine	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
N-Nitrosodiphenylamine	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Naphthalene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
2-Nitroaniline	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
3-Nitroaniline	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
4-Nitroaniline	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Nitrobenzene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
2-Nitrophenol	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
4-Nitrophenol	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Pentachlorophenol	ND	20		µg/L	1	3/24/2022 10:50:42 PM	66307
Phenanthrene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Phenol	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Pyrene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Pyridine	ND	10		µg/L	1	3/24/2022 10:50:42 PM	66307

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-1

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 2:10:00 PM

Lab ID: 2203A30-007

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
2,4,5-Trichlorophenol	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
2,4,6-Trichlorophenol	ND	5.0		µg/L	1	3/24/2022 10:50:42 PM	66307
Surr: 2-Fluorophenol	52.6	29.4-87.7		%Rec	1	3/24/2022 10:50:42 PM	66307
Surr: Phenol-d5	39.2	28.5-64.7		%Rec	1	3/24/2022 10:50:42 PM	66307
Surr: 2,4,6-Tribromophenol	74.8	18.6-129		%Rec	1	3/24/2022 10:50:42 PM	66307
Surr: Nitrobenzene-d5	66.1	36.9-103		%Rec	1	3/24/2022 10:50:42 PM	66307
Surr: 2-Fluorobiphenyl	61.7	38.1-99.9		%Rec	1	3/24/2022 10:50:42 PM	66307
Surr: 4-Terphenyl-d14	95.3	48-155		%Rec	1	3/24/2022 10:50:42 PM	66307
EPA METHOD 8260B: VOLATILES							Analyst: JR
Benzene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
Toluene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
Ethylbenzene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
Naphthalene	ND	2.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
1-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
2-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
Acetone	ND	10		µg/L	1	3/23/2022 7:10:10 PM	R86690
Bromobenzene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
Bromodichloromethane	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
Bromoform	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
Bromomethane	ND	3.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
2-Butanone	ND	10		µg/L	1	3/23/2022 7:10:10 PM	R86690
Carbon disulfide	ND	10		µg/L	1	3/23/2022 7:10:10 PM	R86690
Carbon Tetrachloride	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
Chlorobenzene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
Chloroethane	ND	2.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
Chloroform	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
Chloromethane	ND	3.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
2-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
4-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
cis-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
Dibromochloromethane	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690

Refer to the QC Summary report and sample login checklist for flagged QC data 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 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-1

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 2:10:00 PM

Lab ID: 2203A30-007

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Dibromomethane	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
1,1-Dichloroethane	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
1,1-Dichloroethene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
1,2-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
1,3-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
2,2-Dichloropropane	ND	2.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
1,1-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
Hexachlorobutadiene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
2-Hexanone	ND	10		µg/L	1	3/23/2022 7:10:10 PM	R86690
Isopropylbenzene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
4-Isopropyltoluene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
4-Methyl-2-pentanone	ND	10		µg/L	1	3/23/2022 7:10:10 PM	R86690
Methylene Chloride	ND	3.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
n-Butylbenzene	ND	3.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
n-Propylbenzene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
sec-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
Styrene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
tert-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
trans-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
Trichlorofluoromethane	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
Vinyl chloride	ND	1.0		µg/L	1	3/23/2022 7:10:10 PM	R86690
Xylenes, Total	ND	1.5		µg/L	1	3/23/2022 7:10:10 PM	R86690
Surr: 1,2-Dichloroethane-d4	84.2	70-130		%Rec	1	3/23/2022 7:10:10 PM	R86690
Surr: 4-Bromofluorobenzene	99.6	70-130		%Rec	1	3/23/2022 7:10:10 PM	R86690
Surr: Dibromofluoromethane	93.3	70-130		%Rec	1	3/23/2022 7:10:10 PM	R86690

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

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Analytical Report

Lab Order **2203A30**

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-1

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 2:10:00 PM

Lab ID: 2203A30-007

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Surr: Toluene-d8	100	70-130		%Rec	1	3/23/2022 7:10:10 PM	R86690

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-5

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 2:46:00 PM

Lab ID: 2203A30-008

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LRN
Chloride	25	5.0		mg/L	10	3/21/2022 3:37:09 PM	R86662
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	640	10		µmhos/c	1	3/22/2022 2:20:42 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	510	200	*D	mg/L	1	3/24/2022 10:56:00 AM	66320
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.82		H	pH units	1	3/22/2022 2:20:42 PM	R86681
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Acenaphthylene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Aniline	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Anthracene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Azobenzene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Benz(a)anthracene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Benzo(a)pyrene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Benzo(b)fluoranthene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Benzo(k)fluoranthene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Benzoic acid	ND	20		µg/L	1	3/24/2022 11:32:14 PM	66307
Benzyl alcohol	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/24/2022 11:32:14 PM	66307
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Butyl benzyl phthalate	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Carbazole	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
4-Chloro-3-methylphenol	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
4-Chloroaniline	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
2-Chloronaphthalene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
2-Chlorophenol	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
4-Chlorophenyl phenyl ether	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Chrysene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Di-n-butyl phthalate	ND	10		µg/L	1	3/24/2022 11:32:14 PM	66307
Di-n-octyl phthalate	ND	20		µg/L	1	3/24/2022 11:32:14 PM	66307
Dibenz(a,h)anthracene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Dibenzofuran	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-5

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 2:46:00 PM

Lab ID: 2203A30-008

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,2-Dichlorobenzene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
1,3-Dichlorobenzene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
1,4-Dichlorobenzene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
3,3'-Dichlorobenzidine	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Diethyl phthalate	ND	10		µg/L	1	3/24/2022 11:32:14 PM	66307
Dimethyl phthalate	ND	10		µg/L	1	3/24/2022 11:32:14 PM	66307
2,4-Dichlorophenol	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
2,4-Dimethylphenol	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
4,6-Dinitro-2-methylphenol	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
2,4-Dinitrophenol	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
2,4-Dinitrotoluene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
2,6-Dinitrotoluene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Fluoranthene	ND	10		µg/L	1	3/24/2022 11:32:14 PM	66307
Fluorene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Hexachlorobenzene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Hexachlorobutadiene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Hexachlorocyclopentadiene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Hexachloroethane	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Indeno(1,2,3-cd)pyrene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Isophorone	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
1-Methylnaphthalene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
2-Methylnaphthalene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
2-Methylphenol	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
3+4-Methylphenol	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
N-Nitrosodi-n-propylamine	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
N-Nitrosodimethylamine	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
N-Nitrosodiphenylamine	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Naphthalene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
2-Nitroaniline	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
3-Nitroaniline	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
4-Nitroaniline	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Nitrobenzene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
2-Nitrophenol	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
4-Nitrophenol	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Pentachlorophenol	ND	20		µg/L	1	3/24/2022 11:32:14 PM	66307
Phenanthrene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Phenol	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Pyrene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Pyridine	ND	10		µg/L	1	3/24/2022 11:32:14 PM	66307

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-5

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 2:46:00 PM

Lab ID: 2203A30-008

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
2,4,5-Trichlorophenol	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
2,4,6-Trichlorophenol	ND	5.0		µg/L	1	3/24/2022 11:32:14 PM	66307
Surr: 2-Fluorophenol	56.4	29.4-87.7		%Rec	1	3/24/2022 11:32:14 PM	66307
Surr: Phenol-d5	42.3	28.5-64.7		%Rec	1	3/24/2022 11:32:14 PM	66307
Surr: 2,4,6-Tribromophenol	72.5	18.6-129		%Rec	1	3/24/2022 11:32:14 PM	66307
Surr: Nitrobenzene-d5	68.2	36.9-103		%Rec	1	3/24/2022 11:32:14 PM	66307
Surr: 2-Fluorobiphenyl	66.8	38.1-99.9		%Rec	1	3/24/2022 11:32:14 PM	66307
Surr: 4-Terphenyl-d14	105	48-155		%Rec	1	3/24/2022 11:32:14 PM	66307
EPA METHOD 8260B: VOLATILES							Analyst: JR
Benzene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
Toluene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
Ethylbenzene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
Naphthalene	ND	2.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
1-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
2-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
Acetone	ND	10		µg/L	1	3/23/2022 7:38:44 PM	R86690
Bromobenzene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
Bromodichloromethane	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
Bromoform	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
Bromomethane	ND	3.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
2-Butanone	ND	10		µg/L	1	3/23/2022 7:38:44 PM	R86690
Carbon disulfide	ND	10		µg/L	1	3/23/2022 7:38:44 PM	R86690
Carbon Tetrachloride	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
Chlorobenzene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
Chloroethane	ND	2.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
Chloroform	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
Chloromethane	ND	3.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
2-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
4-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
cis-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
Dibromochloromethane	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-5

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 2:46:00 PM

Lab ID: 2203A30-008

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Dibromomethane	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
1,1-Dichloroethane	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
1,1-Dichloroethene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
1,2-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
1,3-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
2,2-Dichloropropane	ND	2.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
1,1-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
Hexachlorobutadiene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
2-Hexanone	ND	10		µg/L	1	3/23/2022 7:38:44 PM	R86690
Isopropylbenzene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
4-Isopropyltoluene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
4-Methyl-2-pentanone	ND	10		µg/L	1	3/23/2022 7:38:44 PM	R86690
Methylene Chloride	ND	3.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
n-Butylbenzene	ND	3.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
n-Propylbenzene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
sec-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
Styrene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
tert-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
trans-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
Trichlorofluoromethane	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
Vinyl chloride	ND	1.0		µg/L	1	3/23/2022 7:38:44 PM	R86690
Xylenes, Total	ND	1.5		µg/L	1	3/23/2022 7:38:44 PM	R86690
Surr: 1,2-Dichloroethane-d4	90.0	70-130		%Rec	1	3/23/2022 7:38:44 PM	R86690
Surr: 4-Bromofluorobenzene	98.1	70-130		%Rec	1	3/23/2022 7:38:44 PM	R86690
Surr: Dibromofluoromethane	96.5	70-130		%Rec	1	3/23/2022 7:38:44 PM	R86690

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

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **2203A30**

Date Reported: 4/13/2022

CLIENT: CMB Environmental

Client Sample ID: MW-5

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 2:46:00 PM

Lab ID: 2203A30-008

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Surr: Toluene-d8	103	70-130		%Rec	1	3/23/2022 7:38:44 PM	R86690

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-6

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 3:33:00 PM

Lab ID: 2203A30-009

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LRN
Chloride	1000	50	*	mg/L	100	3/21/2022 4:15:44 PM	R86662
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	4500	10		µmhos/c	1	3/22/2022 2:25:12 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	2510	100	*D	mg/L	1	3/24/2022 10:56:00 AM	66320
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	8.10		H	pH units	1	3/22/2022 2:25:12 PM	R86681
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Acenaphthylene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Aniline	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Anthracene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Azobenzene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Benz(a)anthracene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Benzo(a)pyrene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Benzo(b)fluoranthene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Benzo(k)fluoranthene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Benzoic acid	ND	20		µg/L	1	3/25/2022 12:13:40 AM	66307
Benzyl alcohol	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/25/2022 12:13:40 AM	66307
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Butyl benzyl phthalate	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Carbazole	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
4-Chloro-3-methylphenol	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
4-Chloroaniline	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
2-Chloronaphthalene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
2-Chlorophenol	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
4-Chlorophenyl phenyl ether	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Chrysene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Di-n-butyl phthalate	ND	10		µg/L	1	3/25/2022 12:13:40 AM	66307
Di-n-octyl phthalate	ND	20		µg/L	1	3/25/2022 12:13:40 AM	66307
Dibenz(a,h)anthracene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Dibenzofuran	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-6

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 3:33:00 PM

Lab ID: 2203A30-009

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,2-Dichlorobenzene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
1,3-Dichlorobenzene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
1,4-Dichlorobenzene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
3,3'-Dichlorobenzidine	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Diethyl phthalate	ND	10		µg/L	1	3/25/2022 12:13:40 AM	66307
Dimethyl phthalate	ND	10		µg/L	1	3/25/2022 12:13:40 AM	66307
2,4-Dichlorophenol	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
2,4-Dimethylphenol	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
4,6-Dinitro-2-methylphenol	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
2,4-Dinitrophenol	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
2,4-Dinitrotoluene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
2,6-Dinitrotoluene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Fluoranthene	ND	10		µg/L	1	3/25/2022 12:13:40 AM	66307
Fluorene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Hexachlorobenzene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Hexachlorobutadiene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Hexachlorocyclopentadiene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Hexachloroethane	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Indeno(1,2,3-cd)pyrene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Isophorone	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
1-Methylnaphthalene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
2-Methylnaphthalene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
2-Methylphenol	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
3+4-Methylphenol	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
N-Nitrosodi-n-propylamine	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
N-Nitrosodimethylamine	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
N-Nitrosodiphenylamine	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Naphthalene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
2-Nitroaniline	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
3-Nitroaniline	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
4-Nitroaniline	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Nitrobenzene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
2-Nitrophenol	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
4-Nitrophenol	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Pentachlorophenol	ND	20		µg/L	1	3/25/2022 12:13:40 AM	66307
Phenanthrene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Phenol	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Pyrene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Pyridine	ND	10		µg/L	1	3/25/2022 12:13:40 AM	66307

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-6

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 3:33:00 PM

Lab ID: 2203A30-009

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
2,4,5-Trichlorophenol	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
2,4,6-Trichlorophenol	ND	5.0		µg/L	1	3/25/2022 12:13:40 AM	66307
Surr: 2-Fluorophenol	52.6	29.4-87.7		%Rec	1	3/25/2022 12:13:40 AM	66307
Surr: Phenol-d5	41.1	28.5-64.7		%Rec	1	3/25/2022 12:13:40 AM	66307
Surr: 2,4,6-Tribromophenol	69.9	18.6-129		%Rec	1	3/25/2022 12:13:40 AM	66307
Surr: Nitrobenzene-d5	62.1	36.9-103		%Rec	1	3/25/2022 12:13:40 AM	66307
Surr: 2-Fluorobiphenyl	63.2	38.1-99.9		%Rec	1	3/25/2022 12:13:40 AM	66307
Surr: 4-Terphenyl-d14	96.3	48-155		%Rec	1	3/25/2022 12:13:40 AM	66307
EPA METHOD 8260B: VOLATILES							Analyst: JR
Benzene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
Toluene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
Ethylbenzene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
Naphthalene	ND	2.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
1-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
2-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
Acetone	ND	10		µg/L	1	3/23/2022 8:07:17 PM	R86690
Bromobenzene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
Bromodichloromethane	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
Bromoform	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
Bromomethane	ND	3.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
2-Butanone	ND	10		µg/L	1	3/23/2022 8:07:17 PM	R86690
Carbon disulfide	ND	10		µg/L	1	3/23/2022 8:07:17 PM	R86690
Carbon Tetrachloride	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
Chlorobenzene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
Chloroethane	ND	2.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
Chloroform	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
Chloromethane	ND	3.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
2-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
4-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
cis-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
Dibromochloromethane	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690

Refer to the QC Summary report and sample login checklist for flagged QC data 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 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-6

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 3:33:00 PM

Lab ID: 2203A30-009

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Dibromomethane	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
1,1-Dichloroethane	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
1,1-Dichloroethene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
1,2-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
1,3-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
2,2-Dichloropropane	ND	2.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
1,1-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
Hexachlorobutadiene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
2-Hexanone	ND	10		µg/L	1	3/23/2022 8:07:17 PM	R86690
Isopropylbenzene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
4-Isopropyltoluene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
4-Methyl-2-pentanone	ND	10		µg/L	1	3/23/2022 8:07:17 PM	R86690
Methylene Chloride	ND	3.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
n-Butylbenzene	ND	3.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
n-Propylbenzene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
sec-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
Styrene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
tert-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
trans-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
Trichlorofluoromethane	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
Vinyl chloride	ND	1.0		µg/L	1	3/23/2022 8:07:17 PM	R86690
Xylenes, Total	ND	1.5		µg/L	1	3/23/2022 8:07:17 PM	R86690
Surr: 1,2-Dichloroethane-d4	86.4	70-130		%Rec	1	3/23/2022 8:07:17 PM	R86690
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	3/23/2022 8:07:17 PM	R86690
Surr: Dibromofluoromethane	93.2	70-130		%Rec	1	3/23/2022 8:07:17 PM	R86690

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

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **2203A30**

Date Reported: 4/13/2022

CLIENT: CMB Environmental

Client Sample ID: MW-6

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 3:33:00 PM

Lab ID: 2203A30-009

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Surr: Toluene-d8	98.5	70-130		%Rec	1	3/23/2022 8:07:17 PM	R86690

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-3

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 4:30:00 PM

Lab ID: 2203A30-010

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LRN
Chloride	25	5.0		mg/L	10	3/21/2022 4:28:35 PM	R86662
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	620	10		µmhos/c	1	3/22/2022 2:29:19 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	550	200	*D	mg/L	1	3/24/2022 10:56:00 AM	66320
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.61		H	pH units	1	3/22/2022 2:29:19 PM	R86681
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JME
Acenaphthene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Acenaphthylene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Aniline	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Anthracene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Azobenzene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Benz(a)anthracene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Benzo(a)pyrene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Benzo(b)fluoranthene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Benzo(k)fluoranthene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Benzoic acid	ND	20		µg/L	1	4/2/2022 1:22:22 AM	66307
Benzyl alcohol	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	4/2/2022 1:22:22 AM	66307
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Butyl benzyl phthalate	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Carbazole	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
4-Chloro-3-methylphenol	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
4-Chloroaniline	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
2-Chloronaphthalene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
2-Chlorophenol	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
4-Chlorophenyl phenyl ether	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Chrysene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Di-n-butyl phthalate	ND	10		µg/L	1	4/2/2022 1:22:22 AM	66307
Di-n-octyl phthalate	ND	20		µg/L	1	4/2/2022 1:22:22 AM	66307
Dibenz(a,h)anthracene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Dibenzofuran	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307

Refer to the QC Summary report and sample login checklist for flagged QC data 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 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-3

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 4:30:00 PM

Lab ID: 2203A30-010

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JME
1,2-Dichlorobenzene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
1,3-Dichlorobenzene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
1,4-Dichlorobenzene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
3,3'-Dichlorobenzidine	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Diethyl phthalate	ND	10		µg/L	1	4/2/2022 1:22:22 AM	66307
Dimethyl phthalate	ND	10		µg/L	1	4/2/2022 1:22:22 AM	66307
2,4-Dichlorophenol	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
2,4-Dimethylphenol	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	4/2/2022 1:22:22 AM	66307
2,4-Dinitrophenol	ND	20		µg/L	1	4/2/2022 1:22:22 AM	66307
2,4-Dinitrotoluene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
2,6-Dinitrotoluene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Fluoranthene	ND	10		µg/L	1	4/2/2022 1:22:22 AM	66307
Fluorene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Hexachlorobenzene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Hexachlorobutadiene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Hexachlorocyclopentadiene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Hexachloroethane	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Indeno(1,2,3-cd)pyrene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Isophorone	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
1-Methylnaphthalene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
2-Methylnaphthalene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
2-Methylphenol	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
3+4-Methylphenol	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
N-Nitrosodi-n-propylamine	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
N-Nitrosodimethylamine	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
N-Nitrosodiphenylamine	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Naphthalene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
2-Nitroaniline	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
3-Nitroaniline	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
4-Nitroaniline	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Nitrobenzene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
2-Nitrophenol	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
4-Nitrophenol	ND	10		µg/L	1	4/2/2022 1:22:22 AM	66307
Pentachlorophenol	ND	20		µg/L	1	4/2/2022 1:22:22 AM	66307
Phenanthrene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Phenol	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Pyrene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Pyridine	ND	10		µg/L	1	4/2/2022 1:22:22 AM	66307

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-3

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 4:30:00 PM

Lab ID: 2203A30-010

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JME
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
2,4,5-Trichlorophenol	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
2,4,6-Trichlorophenol	ND	5.0		µg/L	1	4/2/2022 1:22:22 AM	66307
Surr: 2-Fluorophenol	49.4	29.4-87.7		%Rec	1	4/2/2022 1:22:22 AM	66307
Surr: Phenol-d5	39.4	28.5-64.7		%Rec	1	4/2/2022 1:22:22 AM	66307
Surr: 2,4,6-Tribromophenol	63.5	18.6-129		%Rec	1	4/2/2022 1:22:22 AM	66307
Surr: Nitrobenzene-d5	67.4	36.9-103		%Rec	1	4/2/2022 1:22:22 AM	66307
Surr: 2-Fluorobiphenyl	63.4	38.1-99.9		%Rec	1	4/2/2022 1:22:22 AM	66307
Surr: 4-Terphenyl-d14	85.4	48-155		%Rec	1	4/2/2022 1:22:22 AM	66307
EPA METHOD 8260B: VOLATILES							Analyst: JR
Benzene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
Toluene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
Ethylbenzene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
Naphthalene	ND	2.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
1-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
2-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
Acetone	ND	10		µg/L	1	3/23/2022 8:35:51 PM	R86690
Bromobenzene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
Bromodichloromethane	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
Bromoform	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
Bromomethane	ND	3.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
2-Butanone	ND	10		µg/L	1	3/23/2022 8:35:51 PM	R86690
Carbon disulfide	ND	10		µg/L	1	3/23/2022 8:35:51 PM	R86690
Carbon Tetrachloride	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
Chlorobenzene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
Chloroethane	ND	2.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
Chloroform	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
Chloromethane	ND	3.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
2-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
4-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
cis-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
Dibromochloromethane	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-3

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 4:30:00 PM

Lab ID: 2203A30-010

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Dibromomethane	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
1,1-Dichloroethane	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
1,1-Dichloroethene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
1,2-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
1,3-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
2,2-Dichloropropane	ND	2.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
1,1-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
Hexachlorobutadiene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
2-Hexanone	ND	10		µg/L	1	3/23/2022 8:35:51 PM	R86690
Isopropylbenzene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
4-Isopropyltoluene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
4-Methyl-2-pentanone	ND	10		µg/L	1	3/23/2022 8:35:51 PM	R86690
Methylene Chloride	ND	3.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
n-Butylbenzene	ND	3.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
n-Propylbenzene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
sec-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
Styrene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
tert-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
trans-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
Trichlorofluoromethane	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
Vinyl chloride	ND	1.0		µg/L	1	3/23/2022 8:35:51 PM	R86690
Xylenes, Total	ND	1.5		µg/L	1	3/23/2022 8:35:51 PM	R86690
Surr: 1,2-Dichloroethane-d4	87.0	70-130		%Rec	1	3/23/2022 8:35:51 PM	R86690
Surr: 4-Bromofluorobenzene	96.2	70-130		%Rec	1	3/23/2022 8:35:51 PM	R86690
Surr: Dibromofluoromethane	91.2	70-130		%Rec	1	3/23/2022 8:35:51 PM	R86690

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-3

Project: Energy Resources Corp West Lovington

Collection Date: 3/15/2022 4:30:00 PM

Lab ID: 2203A30-010

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Surr: Toluene-d8	102	70-130		%Rec	1	3/23/2022 8:35:51 PM	R86690

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-2

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 9:00:00 AM

Lab ID: 2203A30-011

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LRN
Chloride	1200	50	*	mg/L	100	3/21/2022 5:07:10 PM	R86662
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	4900	10		µmhos/c	1	3/22/2022 2:39:47 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	2930	200	*D	mg/L	1	3/24/2022 10:56:00 AM	66320
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.55		H	pH units	1	3/22/2022 2:39:47 PM	R86681
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JME
Acenaphthene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Acenaphthylene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Aniline	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Anthracene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Azobenzene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Benz(a)anthracene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Benzo(a)pyrene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Benzo(b)fluoranthene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Benzo(k)fluoranthene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Benzoic acid	ND	20		µg/L	1	4/2/2022 2:03:23 AM	66307
Benzyl alcohol	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	4/2/2022 2:03:23 AM	66307
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Butyl benzyl phthalate	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Carbazole	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
4-Chloro-3-methylphenol	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
4-Chloroaniline	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
2-Chloronaphthalene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
2-Chlorophenol	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
4-Chlorophenyl phenyl ether	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Chrysene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Di-n-butyl phthalate	ND	10		µg/L	1	4/2/2022 2:03:23 AM	66307
Di-n-octyl phthalate	ND	20		µg/L	1	4/2/2022 2:03:23 AM	66307
Dibenz(a,h)anthracene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Dibenzofuran	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-2

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 9:00:00 AM

Lab ID: 2203A30-011

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JME
1,2-Dichlorobenzene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
1,3-Dichlorobenzene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
1,4-Dichlorobenzene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
3,3'-Dichlorobenzidine	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Diethyl phthalate	ND	10		µg/L	1	4/2/2022 2:03:23 AM	66307
Dimethyl phthalate	ND	10		µg/L	1	4/2/2022 2:03:23 AM	66307
2,4-Dichlorophenol	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
2,4-Dimethylphenol	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	4/2/2022 2:03:23 AM	66307
2,4-Dinitrophenol	ND	20		µg/L	1	4/2/2022 2:03:23 AM	66307
2,4-Dinitrotoluene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
2,6-Dinitrotoluene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Fluoranthene	ND	10		µg/L	1	4/2/2022 2:03:23 AM	66307
Fluorene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Hexachlorobenzene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Hexachlorobutadiene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Hexachlorocyclopentadiene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Hexachloroethane	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Indeno(1,2,3-cd)pyrene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Isophorone	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
1-Methylnaphthalene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
2-Methylnaphthalene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
2-Methylphenol	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
3+4-Methylphenol	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
N-Nitrosodi-n-propylamine	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
N-Nitrosodimethylamine	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
N-Nitrosodiphenylamine	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Naphthalene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
2-Nitroaniline	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
3-Nitroaniline	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
4-Nitroaniline	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Nitrobenzene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
2-Nitrophenol	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
4-Nitrophenol	ND	10		µg/L	1	4/2/2022 2:03:23 AM	66307
Pentachlorophenol	ND	20		µg/L	1	4/2/2022 2:03:23 AM	66307
Phenanthrene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Phenol	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Pyrene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Pyridine	ND	10		µg/L	1	4/2/2022 2:03:23 AM	66307

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-2

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 9:00:00 AM

Lab ID: 2203A30-011

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JME
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
2,4,5-Trichlorophenol	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
2,4,6-Trichlorophenol	ND	5.0		µg/L	1	4/2/2022 2:03:23 AM	66307
Surr: 2-Fluorophenol	46.9	29.4-87.7		%Rec	1	4/2/2022 2:03:23 AM	66307
Surr: Phenol-d5	38.4	28.5-64.7		%Rec	1	4/2/2022 2:03:23 AM	66307
Surr: 2,4,6-Tribromophenol	57.0	18.6-129		%Rec	1	4/2/2022 2:03:23 AM	66307
Surr: Nitrobenzene-d5	60.3	36.9-103		%Rec	1	4/2/2022 2:03:23 AM	66307
Surr: 2-Fluorobiphenyl	55.6	38.1-99.9		%Rec	1	4/2/2022 2:03:23 AM	66307
Surr: 4-Terphenyl-d14	91.6	48-155		%Rec	1	4/2/2022 2:03:23 AM	66307
EPA METHOD 8260B: VOLATILES							Analyst: JR
Benzene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
Toluene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
Ethylbenzene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
Naphthalene	ND	2.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
1-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
2-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
Acetone	ND	10		µg/L	1	3/23/2022 9:04:26 PM	R86690
Bromobenzene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
Bromodichloromethane	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
Bromoform	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
Bromomethane	ND	3.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
2-Butanone	ND	10		µg/L	1	3/23/2022 9:04:26 PM	R86690
Carbon disulfide	ND	10		µg/L	1	3/23/2022 9:04:26 PM	R86690
Carbon Tetrachloride	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
Chlorobenzene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
Chloroethane	ND	2.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
Chloroform	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
Chloromethane	ND	3.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
2-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
4-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
cis-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
Dibromochloromethane	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-2

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 9:00:00 AM

Lab ID: 2203A30-011

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Dibromomethane	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
1,1-Dichloroethane	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
1,1-Dichloroethene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
1,2-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
1,3-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
2,2-Dichloropropane	ND	2.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
1,1-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
Hexachlorobutadiene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
2-Hexanone	ND	10		µg/L	1	3/23/2022 9:04:26 PM	R86690
Isopropylbenzene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
4-Isopropyltoluene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
4-Methyl-2-pentanone	ND	10		µg/L	1	3/23/2022 9:04:26 PM	R86690
Methylene Chloride	ND	3.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
n-Butylbenzene	ND	3.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
n-Propylbenzene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
sec-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
Styrene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
tert-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
trans-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
Trichlorofluoromethane	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
Vinyl chloride	ND	1.0		µg/L	1	3/23/2022 9:04:26 PM	R86690
Xylenes, Total	ND	1.5		µg/L	1	3/23/2022 9:04:26 PM	R86690
Surr: 1,2-Dichloroethane-d4	89.5	70-130		%Rec	1	3/23/2022 9:04:26 PM	R86690
Surr: 4-Bromofluorobenzene	99.1	70-130		%Rec	1	3/23/2022 9:04:26 PM	R86690
Surr: Dibromofluoromethane	94.3	70-130		%Rec	1	3/23/2022 9:04:26 PM	R86690

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-2

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 9:00:00 AM

Lab ID: 2203A30-011

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Surr: Toluene-d8	107	70-130		%Rec	1	3/23/2022 9:04:26 PM	R86690

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-4

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 9:40:00 AM

Lab ID: 2203A30-012

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LRN
Chloride	230	50		mg/L	100	3/21/2022 5:32:54 PM	R86662
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	1600	10		µmhos/c	1	3/22/2022 2:44:17 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	1100	200	*D	mg/L	1	3/24/2022 10:56:00 AM	66320
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.45		H	pH units	1	3/22/2022 2:44:17 PM	R86681
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Acenaphthylene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Aniline	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Anthracene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Azobenzene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Benz(a)anthracene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Benzo(a)pyrene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Benzo(b)fluoranthene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Benzo(k)fluoranthene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Benzoic acid	ND	20		µg/L	1	3/25/2022 2:17:27 AM	66307
Benzyl alcohol	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/25/2022 2:17:27 AM	66307
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Butyl benzyl phthalate	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Carbazole	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
4-Chloro-3-methylphenol	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
4-Chloroaniline	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
2-Chloronaphthalene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
2-Chlorophenol	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
4-Chlorophenyl phenyl ether	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Chrysene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Di-n-butyl phthalate	ND	10		µg/L	1	3/25/2022 2:17:27 AM	66307
Di-n-octyl phthalate	ND	20		µg/L	1	3/25/2022 2:17:27 AM	66307
Dibenz(a,h)anthracene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Dibenzofuran	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-4

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 9:40:00 AM

Lab ID: 2203A30-012

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,2-Dichlorobenzene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
1,3-Dichlorobenzene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
1,4-Dichlorobenzene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
3,3'-Dichlorobenzidine	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Diethyl phthalate	ND	10		µg/L	1	3/25/2022 2:17:27 AM	66307
Dimethyl phthalate	ND	10		µg/L	1	3/25/2022 2:17:27 AM	66307
2,4-Dichlorophenol	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
2,4-Dimethylphenol	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
4,6-Dinitro-2-methylphenol	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
2,4-Dinitrophenol	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
2,4-Dinitrotoluene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
2,6-Dinitrotoluene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Fluoranthene	ND	10		µg/L	1	3/25/2022 2:17:27 AM	66307
Fluorene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Hexachlorobenzene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Hexachlorobutadiene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Hexachlorocyclopentadiene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Hexachloroethane	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Indeno(1,2,3-cd)pyrene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Isophorone	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
1-Methylnaphthalene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
2-Methylnaphthalene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
2-Methylphenol	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
3+4-Methylphenol	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
N-Nitrosodi-n-propylamine	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
N-Nitrosodimethylamine	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
N-Nitrosodiphenylamine	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Naphthalene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
2-Nitroaniline	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
3-Nitroaniline	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
4-Nitroaniline	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Nitrobenzene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
2-Nitrophenol	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
4-Nitrophenol	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Pentachlorophenol	ND	20		µg/L	1	3/25/2022 2:17:27 AM	66307
Phenanthrene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Phenol	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Pyrene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Pyridine	ND	10		µg/L	1	3/25/2022 2:17:27 AM	66307

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-4

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 9:40:00 AM

Lab ID: 2203A30-012

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
2,4,5-Trichlorophenol	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
2,4,6-Trichlorophenol	ND	5.0		µg/L	1	3/25/2022 2:17:27 AM	66307
Surr: 2-Fluorophenol	58.1	29.4-87.7		%Rec	1	3/25/2022 2:17:27 AM	66307
Surr: Phenol-d5	45.4	28.5-64.7		%Rec	1	3/25/2022 2:17:27 AM	66307
Surr: 2,4,6-Tribromophenol	71.9	18.6-129		%Rec	1	3/25/2022 2:17:27 AM	66307
Surr: Nitrobenzene-d5	70.0	36.9-103		%Rec	1	3/25/2022 2:17:27 AM	66307
Surr: 2-Fluorobiphenyl	70.9	38.1-99.9		%Rec	1	3/25/2022 2:17:27 AM	66307
Surr: 4-Terphenyl-d14	101	48-155		%Rec	1	3/25/2022 2:17:27 AM	66307
EPA METHOD 8260B: VOLATILES							Analyst: JR
Benzene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
Toluene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
Ethylbenzene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
Naphthalene	ND	2.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
1-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
2-Methylnaphthalene	ND	4.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
Acetone	ND	10		µg/L	1	3/23/2022 9:32:57 PM	R86690
Bromobenzene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
Bromodichloromethane	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
Bromoform	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
Bromomethane	ND	3.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
2-Butanone	ND	10		µg/L	1	3/23/2022 9:32:57 PM	R86690
Carbon disulfide	ND	10		µg/L	1	3/23/2022 9:32:57 PM	R86690
Carbon Tetrachloride	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
Chlorobenzene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
Chloroethane	ND	2.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
Chloroform	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
Chloromethane	ND	3.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
2-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
4-Chlorotoluene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
cis-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
Dibromochloromethane	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-4

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 9:40:00 AM

Lab ID: 2203A30-012

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Dibromomethane	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
1,1-Dichloroethane	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
1,1-Dichloroethene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
1,2-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
1,3-Dichloropropane	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
2,2-Dichloropropane	ND	2.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
1,1-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
Hexachlorobutadiene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
2-Hexanone	ND	10		µg/L	1	3/23/2022 9:32:57 PM	R86690
Isopropylbenzene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
4-Isopropyltoluene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
4-Methyl-2-pentanone	ND	10		µg/L	1	3/23/2022 9:32:57 PM	R86690
Methylene Chloride	ND	3.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
n-Butylbenzene	ND	3.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
n-Propylbenzene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
sec-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
Styrene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
tert-Butylbenzene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
trans-1,2-DCE	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
Trichlorofluoromethane	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
Vinyl chloride	ND	1.0		µg/L	1	3/23/2022 9:32:57 PM	R86690
Xylenes, Total	ND	1.5		µg/L	1	3/23/2022 9:32:57 PM	R86690
Surr: 1,2-Dichloroethane-d4	87.5	70-130		%Rec	1	3/23/2022 9:32:57 PM	R86690
Surr: 4-Bromofluorobenzene	97.8	70-130		%Rec	1	3/23/2022 9:32:57 PM	R86690
Surr: Dibromofluoromethane	90.1	70-130		%Rec	1	3/23/2022 9:32:57 PM	R86690

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-4

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 9:40:00 AM

Lab ID: 2203A30-012

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Surr: Toluene-d8	101	70-130		%Rec	1	3/23/2022 9:32:57 PM	R86690

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-8S

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 10:30:00 AM

Lab ID: 2203A30-013

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LRN
Chloride	20	5.0		mg/L	10	3/21/2022 6:11:31 PM	R86662
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	570	10		µmhos/c	1	3/22/2022 2:48:50 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	470	200	D	mg/L	1	3/24/2022 10:56:00 AM	66320
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.76		H	pH units	1	3/22/2022 2:48:50 PM	R86681
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Acenaphthylene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Aniline	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Anthracene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Azobenzene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Benz(a)anthracene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Benzo(a)pyrene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Benzo(b)fluoranthene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Benzo(k)fluoranthene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Benzoic acid	ND	20		µg/L	1	3/25/2022 2:58:55 AM	66307
Benzyl alcohol	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/25/2022 2:58:55 AM	66307
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Butyl benzyl phthalate	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Carbazole	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
4-Chloro-3-methylphenol	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
4-Chloroaniline	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
2-Chloronaphthalene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
2-Chlorophenol	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
4-Chlorophenyl phenyl ether	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Chrysene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Di-n-butyl phthalate	ND	10		µg/L	1	3/25/2022 2:58:55 AM	66307
Di-n-octyl phthalate	ND	20		µg/L	1	3/25/2022 2:58:55 AM	66307
Dibenz(a,h)anthracene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Dibenzofuran	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-8S

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 10:30:00 AM

Lab ID: 2203A30-013

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,2-Dichlorobenzene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
1,3-Dichlorobenzene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
1,4-Dichlorobenzene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
3,3'-Dichlorobenzidine	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Diethyl phthalate	ND	10		µg/L	1	3/25/2022 2:58:55 AM	66307
Dimethyl phthalate	ND	10		µg/L	1	3/25/2022 2:58:55 AM	66307
2,4-Dichlorophenol	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
2,4-Dimethylphenol	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
4,6-Dinitro-2-methylphenol	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
2,4-Dinitrophenol	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
2,4-Dinitrotoluene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
2,6-Dinitrotoluene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Fluoranthene	ND	10		µg/L	1	3/25/2022 2:58:55 AM	66307
Fluorene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Hexachlorobenzene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Hexachlorobutadiene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Hexachlorocyclopentadiene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Hexachloroethane	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Indeno(1,2,3-cd)pyrene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Isophorone	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
1-Methylnaphthalene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
2-Methylnaphthalene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
2-Methylphenol	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
3+4-Methylphenol	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
N-Nitrosodi-n-propylamine	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
N-Nitrosodimethylamine	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
N-Nitrosodiphenylamine	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Naphthalene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
2-Nitroaniline	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
3-Nitroaniline	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
4-Nitroaniline	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Nitrobenzene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
2-Nitrophenol	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
4-Nitrophenol	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Pentachlorophenol	ND	20		µg/L	1	3/25/2022 2:58:55 AM	66307
Phenanthrene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Phenol	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Pyrene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Pyridine	ND	10		µg/L	1	3/25/2022 2:58:55 AM	66307

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-8S

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 10:30:00 AM

Lab ID: 2203A30-013

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
2,4,5-Trichlorophenol	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
2,4,6-Trichlorophenol	ND	5.0		µg/L	1	3/25/2022 2:58:55 AM	66307
Surr: 2-Fluorophenol	54.6	29.4-87.7		%Rec	1	3/25/2022 2:58:55 AM	66307
Surr: Phenol-d5	41.7	28.5-64.7		%Rec	1	3/25/2022 2:58:55 AM	66307
Surr: 2,4,6-Tribromophenol	72.3	18.6-129		%Rec	1	3/25/2022 2:58:55 AM	66307
Surr: Nitrobenzene-d5	65.3	36.9-103		%Rec	1	3/25/2022 2:58:55 AM	66307
Surr: 2-Fluorobiphenyl	64.2	38.1-99.9		%Rec	1	3/25/2022 2:58:55 AM	66307
Surr: 4-Terphenyl-d14	98.3	48-155		%Rec	1	3/25/2022 2:58:55 AM	66307
EPA METHOD 8260B: VOLATILES							Analyst: JR
Benzene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
Toluene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
Ethylbenzene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
Methyl tert-butyl ether (MTBE)	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
1,2,4-Trimethylbenzene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
1,3,5-Trimethylbenzene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
Naphthalene	ND	4.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
1-Methylnaphthalene	ND	8.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
2-Methylnaphthalene	ND	8.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
Acetone	ND	20		µg/L	2	3/23/2022 10:01:24 PM	R86690
Bromobenzene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
Bromodichloromethane	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
Bromoform	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
Bromomethane	ND	6.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
2-Butanone	ND	20		µg/L	2	3/23/2022 10:01:24 PM	R86690
Carbon disulfide	ND	20		µg/L	2	3/23/2022 10:01:24 PM	R86690
Carbon Tetrachloride	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
Chlorobenzene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
Chloroethane	ND	4.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
Chloroform	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
Chloromethane	ND	6.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
2-Chlorotoluene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
4-Chlorotoluene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
cis-1,2-DCE	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
Dibromochloromethane	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690

Refer to the QC Summary report and sample login checklist for flagged QC data 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 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-8S

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 10:30:00 AM

Lab ID: 2203A30-013

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Dibromomethane	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
1,2-Dichlorobenzene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
1,3-Dichlorobenzene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
1,4-Dichlorobenzene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
Dichlorodifluoromethane	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
1,1-Dichloroethane	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
1,1-Dichloroethene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
1,2-Dichloropropane	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
1,3-Dichloropropane	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
2,2-Dichloropropane	ND	4.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
1,1-Dichloropropene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
Hexachlorobutadiene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
2-Hexanone	ND	20		µg/L	2	3/23/2022 10:01:24 PM	R86690
Isopropylbenzene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
4-Isopropyltoluene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
4-Methyl-2-pentanone	ND	20		µg/L	2	3/23/2022 10:01:24 PM	R86690
Methylene Chloride	ND	6.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
n-Butylbenzene	ND	6.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
n-Propylbenzene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
sec-Butylbenzene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
Styrene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
tert-Butylbenzene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
1,1,2,2-Tetrachloroethane	ND	4.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
Tetrachloroethene (PCE)	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
trans-1,2-DCE	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
1,2,3-Trichlorobenzene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
1,2,4-Trichlorobenzene	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
1,1,1-Trichloroethane	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
1,1,2-Trichloroethane	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
Trichloroethene (TCE)	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
Trichlorofluoromethane	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
1,2,3-Trichloropropane	ND	4.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
Vinyl chloride	ND	2.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
Xylenes, Total	ND	3.0		µg/L	2	3/23/2022 10:01:24 PM	R86690
Surr: 1,2-Dichloroethane-d4	93.7	70-130		%Rec	2	3/23/2022 10:01:24 PM	R86690
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	2	3/23/2022 10:01:24 PM	R86690
Surr: Dibromofluoromethane	95.8	70-130		%Rec	2	3/23/2022 10:01:24 PM	R86690

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

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2203A30
Date Reported: 4/13/2022

CLIENT: CMB Environmental

Client Sample ID: MW-8S

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 10:30:00 AM

Lab ID: 2203A30-013

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Surr: Toluene-d8	99.5	70-130		%Rec	2	3/23/2022 10:01:24 PM	R86690

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 53 of 100
	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 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-8M

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 11:23:00 AM

Lab ID: 2203A30-014

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LRN
Chloride	46	5.0		mg/L	10	3/21/2022 6:37:15 PM	R86662
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	920	10		µmhos/c	1	3/22/2022 2:57:27 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	610	40.0	*D	mg/L	1	3/24/2022 10:56:00 AM	66320
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.50		H	pH units	1	3/22/2022 2:57:27 PM	R86681
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Acenaphthylene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Aniline	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Anthracene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Azobenzene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Benz(a)anthracene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Benzo(a)pyrene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Benzo(b)fluoranthene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Benzo(k)fluoranthene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Benzoic acid	ND	20		µg/L	1	3/25/2022 3:39:38 AM	66307
Benzyl alcohol	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/25/2022 3:39:38 AM	66307
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Butyl benzyl phthalate	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Carbazole	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
4-Chloro-3-methylphenol	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
4-Chloroaniline	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
2-Chloronaphthalene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
2-Chlorophenol	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
4-Chlorophenyl phenyl ether	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Chrysene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Di-n-butyl phthalate	ND	10		µg/L	1	3/25/2022 3:39:38 AM	66307
Di-n-octyl phthalate	ND	20		µg/L	1	3/25/2022 3:39:38 AM	66307
Dibenz(a,h)anthracene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Dibenzofuran	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307

Refer to the QC Summary report and sample login checklist for flagged QC data 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 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-8M

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 11:23:00 AM

Lab ID: 2203A30-014

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,2-Dichlorobenzene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
1,3-Dichlorobenzene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
1,4-Dichlorobenzene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
3,3'-Dichlorobenzidine	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Diethyl phthalate	ND	10		µg/L	1	3/25/2022 3:39:38 AM	66307
Dimethyl phthalate	ND	10		µg/L	1	3/25/2022 3:39:38 AM	66307
2,4-Dichlorophenol	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
2,4-Dimethylphenol	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
4,6-Dinitro-2-methylphenol	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
2,4-Dinitrophenol	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
2,4-Dinitrotoluene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
2,6-Dinitrotoluene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Fluoranthene	ND	10		µg/L	1	3/25/2022 3:39:38 AM	66307
Fluorene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Hexachlorobenzene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Hexachlorobutadiene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Hexachlorocyclopentadiene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Hexachloroethane	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Indeno(1,2,3-cd)pyrene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Isophorone	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
1-Methylnaphthalene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
2-Methylnaphthalene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
2-Methylphenol	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
3+4-Methylphenol	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
N-Nitrosodi-n-propylamine	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
N-Nitrosodimethylamine	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
N-Nitrosodiphenylamine	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Naphthalene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
2-Nitroaniline	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
3-Nitroaniline	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
4-Nitroaniline	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Nitrobenzene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
2-Nitrophenol	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
4-Nitrophenol	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Pentachlorophenol	ND	20		µg/L	1	3/25/2022 3:39:38 AM	66307
Phenanthrene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Phenol	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Pyrene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Pyridine	ND	10		µg/L	1	3/25/2022 3:39:38 AM	66307

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-8M

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 11:23:00 AM

Lab ID: 2203A30-014

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
2,4,5-Trichlorophenol	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
2,4,6-Trichlorophenol	ND	5.0		µg/L	1	3/25/2022 3:39:38 AM	66307
Surr: 2-Fluorophenol	23.7	29.4-87.7	S	%Rec	1	3/25/2022 3:39:38 AM	66307
Surr: Phenol-d5	26.3	28.5-64.7	S	%Rec	1	3/25/2022 3:39:38 AM	66307
Surr: 2,4,6-Tribromophenol	27.3	18.6-129		%Rec	1	3/25/2022 3:39:38 AM	66307
Surr: Nitrobenzene-d5	28.7	36.9-103	S	%Rec	1	3/25/2022 3:39:38 AM	66307
Surr: 2-Fluorobiphenyl	25.2	38.1-99.9	S	%Rec	1	3/25/2022 3:39:38 AM	66307
Surr: 4-Terphenyl-d14	96.7	48-155		%Rec	1	3/25/2022 3:39:38 AM	66307
EPA METHOD 8260B: VOLATILES							Analyst: JR
Benzene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
Toluene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
Ethylbenzene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
Naphthalene	ND	2.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
1-Methylnaphthalene	ND	4.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
2-Methylnaphthalene	ND	4.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
Acetone	ND	10		µg/L	1	3/28/2022 6:46:22 PM	R86782
Bromobenzene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
Bromodichloromethane	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
Bromoform	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
Bromomethane	ND	3.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
2-Butanone	ND	10		µg/L	1	3/28/2022 6:46:22 PM	R86782
Carbon disulfide	ND	10		µg/L	1	3/28/2022 6:46:22 PM	R86782
Carbon Tetrachloride	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
Chlorobenzene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
Chloroethane	ND	2.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
Chloroform	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
Chloromethane	ND	3.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
2-Chlorotoluene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
4-Chlorotoluene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
cis-1,2-DCE	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
Dibromochloromethane	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-8M

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 11:23:00 AM

Lab ID: 2203A30-014

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Dibromomethane	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
1,1-Dichloroethane	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
1,1-Dichloroethene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
1,2-Dichloropropane	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
1,3-Dichloropropane	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
2,2-Dichloropropane	ND	2.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
1,1-Dichloropropene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
Hexachlorobutadiene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
2-Hexanone	ND	10		µg/L	1	3/28/2022 6:46:22 PM	R86782
Isopropylbenzene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
4-Isopropyltoluene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
4-Methyl-2-pentanone	ND	10		µg/L	1	3/28/2022 6:46:22 PM	R86782
Methylene Chloride	ND	3.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
n-Butylbenzene	ND	3.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
n-Propylbenzene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
sec-Butylbenzene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
Styrene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
tert-Butylbenzene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
trans-1,2-DCE	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
Trichlorofluoromethane	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
Vinyl chloride	ND	1.0		µg/L	1	3/28/2022 6:46:22 PM	R86782
Xylenes, Total	ND	1.5		µg/L	1	3/28/2022 6:46:22 PM	R86782
Surr: 1,2-Dichloroethane-d4	88.7	70-130		%Rec	1	3/28/2022 6:46:22 PM	R86782
Surr: 4-Bromofluorobenzene	94.4	70-130		%Rec	1	3/28/2022 6:46:22 PM	R86782
Surr: Dibromofluoromethane	93.9	70-130		%Rec	1	3/28/2022 6:46:22 PM	R86782

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

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

CLIENT: CMB Environmental Client Sample ID: MW-8M
Project: Energy Resources Corp West Lovington Collection Date: 3/16/2022 11:23:00 AM
Lab ID: 2203A30-014 Matrix: AQUEOUS Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Surr: Toluene-d8	101	70-130		%Rec	1	3/28/2022 6:46:22 PM	R86782

Refer to the QC Summary report and sample login checklist for flagged QC data 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 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-8D

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 2:05:00 PM

Lab ID: 2203A30-015

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LRN
Chloride	40	5.0		mg/L	10	3/21/2022 7:02:58 PM	R86662
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	780	10		µmhos/c	1	3/22/2022 3:01:58 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	488	40.0	D	mg/L	1	3/24/2022 10:56:00 AM	66320
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.80		H	pH units	1	3/22/2022 3:01:58 PM	R86681
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
Acenaphthene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Acenaphthylene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Aniline	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Anthracene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Azobenzene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Benz(a)anthracene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Benzo(a)pyrene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Benzo(b)fluoranthene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Benzo(k)fluoranthene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Benzoic acid	ND	20		µg/L	1	3/25/2022 4:20:49 AM	66307
Benzyl alcohol	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/25/2022 4:20:49 AM	66307
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Butyl benzyl phthalate	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Carbazole	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
4-Chloro-3-methylphenol	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
4-Chloroaniline	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
2-Chloronaphthalene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
2-Chlorophenol	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
4-Chlorophenyl phenyl ether	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Chrysene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Di-n-butyl phthalate	ND	10		µg/L	1	3/25/2022 4:20:49 AM	66307
Di-n-octyl phthalate	ND	20		µg/L	1	3/25/2022 4:20:49 AM	66307
Dibenz(a,h)anthracene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Dibenzofuran	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-8D

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 2:05:00 PM

Lab ID: 2203A30-015

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,2-Dichlorobenzene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
1,3-Dichlorobenzene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
1,4-Dichlorobenzene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
3,3'-Dichlorobenzidine	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Diethyl phthalate	ND	10		µg/L	1	3/25/2022 4:20:49 AM	66307
Dimethyl phthalate	ND	10		µg/L	1	3/25/2022 4:20:49 AM	66307
2,4-Dichlorophenol	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
2,4-Dimethylphenol	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
4,6-Dinitro-2-methylphenol	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
2,4-Dinitrophenol	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
2,4-Dinitrotoluene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
2,6-Dinitrotoluene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Fluoranthene	ND	10		µg/L	1	3/25/2022 4:20:49 AM	66307
Fluorene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Hexachlorobenzene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Hexachlorobutadiene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Hexachlorocyclopentadiene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Hexachloroethane	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Indeno(1,2,3-cd)pyrene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Isophorone	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
1-Methylnaphthalene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
2-Methylnaphthalene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
2-Methylphenol	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
3+4-Methylphenol	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
N-Nitrosodi-n-propylamine	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
N-Nitrosodimethylamine	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
N-Nitrosodiphenylamine	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Naphthalene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
2-Nitroaniline	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
3-Nitroaniline	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
4-Nitroaniline	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Nitrobenzene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
2-Nitrophenol	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
4-Nitrophenol	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Pentachlorophenol	ND	20		µg/L	1	3/25/2022 4:20:49 AM	66307
Phenanthrene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Phenol	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Pyrene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Pyridine	ND	10		µg/L	1	3/25/2022 4:20:49 AM	66307

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-8D

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 2:05:00 PM

Lab ID: 2203A30-015

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: DAM
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
2,4,5-Trichlorophenol	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
2,4,6-Trichlorophenol	ND	5.0		µg/L	1	3/25/2022 4:20:49 AM	66307
Surr: 2-Fluorophenol	36.6	29.4-87.7		%Rec	1	3/25/2022 4:20:49 AM	66307
Surr: Phenol-d5	30.1	28.5-64.7		%Rec	1	3/25/2022 4:20:49 AM	66307
Surr: 2,4,6-Tribromophenol	74.8	18.6-129		%Rec	1	3/25/2022 4:20:49 AM	66307
Surr: Nitrobenzene-d5	43.5	36.9-103		%Rec	1	3/25/2022 4:20:49 AM	66307
Surr: 2-Fluorobiphenyl	40.5	38.1-99.9		%Rec	1	3/25/2022 4:20:49 AM	66307
Surr: 4-Terphenyl-d14	96.8	48-155		%Rec	1	3/25/2022 4:20:49 AM	66307
EPA METHOD 8260B: VOLATILES							Analyst: JR
Benzene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
Toluene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
Ethylbenzene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
Naphthalene	ND	2.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
1-Methylnaphthalene	ND	4.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
2-Methylnaphthalene	ND	4.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
Acetone	ND	10		µg/L	1	3/28/2022 8:11:54 PM	R86782
Bromobenzene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
Bromodichloromethane	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
Bromoform	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
Bromomethane	ND	3.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
2-Butanone	ND	10		µg/L	1	3/28/2022 8:11:54 PM	R86782
Carbon disulfide	ND	10		µg/L	1	3/28/2022 8:11:54 PM	R86782
Carbon Tetrachloride	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
Chlorobenzene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
Chloroethane	ND	2.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
Chloroform	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
Chloromethane	ND	3.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
2-Chlorotoluene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
4-Chlorotoluene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
cis-1,2-DCE	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
Dibromochloromethane	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-8D

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 2:05:00 PM

Lab ID: 2203A30-015

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Dibromomethane	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
1,1-Dichloroethane	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
1,1-Dichloroethene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
1,2-Dichloropropane	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
1,3-Dichloropropane	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
2,2-Dichloropropane	ND	2.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
1,1-Dichloropropene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
Hexachlorobutadiene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
2-Hexanone	ND	10		µg/L	1	3/28/2022 8:11:54 PM	R86782
Isopropylbenzene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
4-Isopropyltoluene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
4-Methyl-2-pentanone	ND	10		µg/L	1	3/28/2022 8:11:54 PM	R86782
Methylene Chloride	ND	3.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
n-Butylbenzene	ND	3.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
n-Propylbenzene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
sec-Butylbenzene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
Styrene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
tert-Butylbenzene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
trans-1,2-DCE	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
Trichlorofluoromethane	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
Vinyl chloride	ND	1.0		µg/L	1	3/28/2022 8:11:54 PM	R86782
Xylenes, Total	ND	1.5		µg/L	1	3/28/2022 8:11:54 PM	R86782
Surr: 1,2-Dichloroethane-d4	88.7	70-130		%Rec	1	3/28/2022 8:11:54 PM	R86782
Surr: 4-Bromofluorobenzene	98.5	70-130		%Rec	1	3/28/2022 8:11:54 PM	R86782
Surr: Dibromofluoromethane	95.8	70-130		%Rec	1	3/28/2022 8:11:54 PM	R86782

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

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

CLIENT: CMB Environmental Client Sample ID: MW-8D
Project: Energy Resources Corp West Lovington Collection Date: 3/16/2022 2:05:00 PM
Lab ID: 2203A30-015 Matrix: AQUEOUS Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Surr: Toluene-d8	99.1	70-130		%Rec	1	3/28/2022 8:11:54 PM	R86782

Refer to the QC Summary report and sample login checklist for flagged QC data 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 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-7S

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 3:05:00 PM

Lab ID: 2203A30-016

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LRN
Chloride	38	5.0		mg/L	10	3/21/2022 7:28:40 PM	R86662
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	700	10		µmhos/c	1	3/22/2022 3:06:33 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	550	200	*D	mg/L	1	3/24/2022 10:56:00 AM	66320
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.61		H	pH units	1	3/22/2022 3:06:33 PM	R86681
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JME
Acenaphthene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Acenaphthylene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Aniline	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Anthracene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Azobenzene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Benz(a)anthracene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Benzo(a)pyrene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Benzo(b)fluoranthene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Benzo(k)fluoranthene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Benzoic acid	ND	20		µg/L	1	4/1/2022 6:17:41 PM	66325
Benzyl alcohol	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	4/1/2022 6:17:41 PM	66325
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Butyl benzyl phthalate	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Carbazole	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
4-Chloro-3-methylphenol	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
4-Chloroaniline	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
2-Chloronaphthalene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
2-Chlorophenol	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
4-Chlorophenyl phenyl ether	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Chrysene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Di-n-butyl phthalate	ND	10		µg/L	1	4/1/2022 6:17:41 PM	66325
Di-n-octyl phthalate	ND	20		µg/L	1	4/1/2022 6:17:41 PM	66325
Dibenz(a,h)anthracene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Dibenzofuran	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-7S

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 3:05:00 PM

Lab ID: 2203A30-016

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JME
1,2-Dichlorobenzene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
1,3-Dichlorobenzene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
1,4-Dichlorobenzene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
3,3'-Dichlorobenzidine	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Diethyl phthalate	ND	10		µg/L	1	4/1/2022 6:17:41 PM	66325
Dimethyl phthalate	ND	10		µg/L	1	4/1/2022 6:17:41 PM	66325
2,4-Dichlorophenol	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
2,4-Dimethylphenol	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	4/1/2022 6:17:41 PM	66325
2,4-Dinitrophenol	ND	20		µg/L	1	4/1/2022 6:17:41 PM	66325
2,4-Dinitrotoluene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
2,6-Dinitrotoluene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Fluoranthene	ND	10		µg/L	1	4/1/2022 6:17:41 PM	66325
Fluorene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Hexachlorobenzene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Hexachlorobutadiene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Hexachlorocyclopentadiene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Hexachloroethane	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Indeno(1,2,3-cd)pyrene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Isophorone	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
1-Methylnaphthalene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
2-Methylnaphthalene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
2-Methylphenol	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
3+4-Methylphenol	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
N-Nitrosodi-n-propylamine	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
N-Nitrosodimethylamine	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
N-Nitrosodiphenylamine	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Naphthalene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
2-Nitroaniline	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
3-Nitroaniline	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
4-Nitroaniline	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Nitrobenzene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
2-Nitrophenol	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
4-Nitrophenol	ND	10		µg/L	1	4/1/2022 6:17:41 PM	66325
Pentachlorophenol	ND	20		µg/L	1	4/1/2022 6:17:41 PM	66325
Phenanthrene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Phenol	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Pyrene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Pyridine	ND	10		µg/L	1	4/1/2022 6:17:41 PM	66325

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-7S

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 3:05:00 PM

Lab ID: 2203A30-016

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JME
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
2,4,5-Trichlorophenol	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
2,4,6-Trichlorophenol	ND	5.0		µg/L	1	4/1/2022 6:17:41 PM	66325
Surr: 2-Fluorophenol	48.7	29.4-87.7		%Rec	1	4/1/2022 6:17:41 PM	66325
Surr: Phenol-d5	37.1	28.5-64.7		%Rec	1	4/1/2022 6:17:41 PM	66325
Surr: 2,4,6-Tribromophenol	57.1	18.6-129		%Rec	1	4/1/2022 6:17:41 PM	66325
Surr: Nitrobenzene-d5	58.3	36.9-103		%Rec	1	4/1/2022 6:17:41 PM	66325
Surr: 2-Fluorobiphenyl	58.6	38.1-99.9		%Rec	1	4/1/2022 6:17:41 PM	66325
Surr: 4-Terphenyl-d14	78.3	48-155		%Rec	1	4/1/2022 6:17:41 PM	66325
EPA METHOD 8260B: VOLATILES							Analyst: JR
Benzene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
Toluene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
Ethylbenzene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
Naphthalene	ND	2.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
1-Methylnaphthalene	ND	4.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
2-Methylnaphthalene	ND	4.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
Acetone	ND	10		µg/L	1	3/28/2022 8:40:33 PM	R86782
Bromobenzene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
Bromodichloromethane	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
Bromoform	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
Bromomethane	ND	3.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
2-Butanone	ND	10		µg/L	1	3/28/2022 8:40:33 PM	R86782
Carbon disulfide	ND	10		µg/L	1	3/28/2022 8:40:33 PM	R86782
Carbon Tetrachloride	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
Chlorobenzene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
Chloroethane	ND	2.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
Chloroform	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
Chloromethane	ND	3.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
2-Chlorotoluene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
4-Chlorotoluene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
cis-1,2-DCE	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
Dibromochloromethane	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-7S

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 3:05:00 PM

Lab ID: 2203A30-016

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Dibromomethane	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
1,1-Dichloroethane	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
1,1-Dichloroethene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
1,2-Dichloropropane	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
1,3-Dichloropropane	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
2,2-Dichloropropane	ND	2.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
1,1-Dichloropropene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
Hexachlorobutadiene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
2-Hexanone	ND	10		µg/L	1	3/28/2022 8:40:33 PM	R86782
Isopropylbenzene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
4-Isopropyltoluene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
4-Methyl-2-pentanone	ND	10		µg/L	1	3/28/2022 8:40:33 PM	R86782
Methylene Chloride	ND	3.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
n-Butylbenzene	ND	3.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
n-Propylbenzene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
sec-Butylbenzene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
Styrene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
tert-Butylbenzene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
trans-1,2-DCE	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
Trichlorofluoromethane	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
Vinyl chloride	ND	1.0		µg/L	1	3/28/2022 8:40:33 PM	R86782
Xylenes, Total	ND	1.5		µg/L	1	3/28/2022 8:40:33 PM	R86782
Surr: 1,2-Dichloroethane-d4	88.2	70-130		%Rec	1	3/28/2022 8:40:33 PM	R86782
Surr: 4-Bromofluorobenzene	93.9	70-130		%Rec	1	3/28/2022 8:40:33 PM	R86782
Surr: Dibromofluoromethane	94.4	70-130		%Rec	1	3/28/2022 8:40:33 PM	R86782

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

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CLIENT: CMB Environmental

Client Sample ID: MW-7S

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 3:05:00 PM

Lab ID: 2203A30-016

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Surr: Toluene-d8	99.7	70-130		%Rec	1	3/28/2022 8:40:33 PM	R86782

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 68 of 100
	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 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-7D

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 4:25:00 PM

Lab ID: 2203A30-017

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LRN
Chloride	34	5.0		mg/L	10	3/21/2022 7:54:23 PM	R86662
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MRA
Conductivity	640	10		µmhos/c	1	3/22/2022 3:11:07 PM	R86681
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	400	100	D	mg/L	1	3/24/2022 10:56:00 AM	66320
SM4500-H+B / 9040C: PH							Analyst: MRA
pH	7.71		H	pH units	1	3/22/2022 3:11:07 PM	R86681
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JME
Acenaphthene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Acenaphthylene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Aniline	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Anthracene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Azobenzene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Benz(a)anthracene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Benzo(a)pyrene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Benzo(b)fluoranthene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Benzo(g,h,i)perylene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Benzo(k)fluoranthene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Benzoic acid	ND	20		µg/L	1	4/1/2022 6:59:25 PM	66325
Benzyl alcohol	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Bis(2-chloroethoxy)methane	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Bis(2-chloroethyl)ether	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Bis(2-chloroisopropyl)ether	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	4/1/2022 6:59:25 PM	66325
4-Bromophenyl phenyl ether	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Butyl benzyl phthalate	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Carbazole	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
4-Chloro-3-methylphenol	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
4-Chloroaniline	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
2-Chloronaphthalene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
2-Chlorophenol	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
4-Chlorophenyl phenyl ether	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Chrysene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Di-n-butyl phthalate	ND	10		µg/L	1	4/1/2022 6:59:25 PM	66325
Di-n-octyl phthalate	ND	20		µg/L	1	4/1/2022 6:59:25 PM	66325
Dibenz(a,h)anthracene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Dibenzofuran	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-7D

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 4:25:00 PM

Lab ID: 2203A30-017

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JME
1,2-Dichlorobenzene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
1,3-Dichlorobenzene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
1,4-Dichlorobenzene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
3,3'-Dichlorobenzidine	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Diethyl phthalate	ND	10		µg/L	1	4/1/2022 6:59:25 PM	66325
Dimethyl phthalate	ND	10		µg/L	1	4/1/2022 6:59:25 PM	66325
2,4-Dichlorophenol	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
2,4-Dimethylphenol	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	4/1/2022 6:59:25 PM	66325
2,4-Dinitrophenol	ND	20		µg/L	1	4/1/2022 6:59:25 PM	66325
2,4-Dinitrotoluene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
2,6-Dinitrotoluene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Fluoranthene	ND	10		µg/L	1	4/1/2022 6:59:25 PM	66325
Fluorene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Hexachlorobenzene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Hexachlorobutadiene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Hexachlorocyclopentadiene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Hexachloroethane	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Indeno(1,2,3-cd)pyrene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Isophorone	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
1-Methylnaphthalene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
2-Methylnaphthalene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
2-Methylphenol	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
3+4-Methylphenol	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
N-Nitrosodi-n-propylamine	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
N-Nitrosodimethylamine	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
N-Nitrosodiphenylamine	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Naphthalene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
2-Nitroaniline	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
3-Nitroaniline	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
4-Nitroaniline	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Nitrobenzene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
2-Nitrophenol	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
4-Nitrophenol	ND	10		µg/L	1	4/1/2022 6:59:25 PM	66325
Pentachlorophenol	ND	20		µg/L	1	4/1/2022 6:59:25 PM	66325
Phenanthrene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Phenol	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Pyrene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Pyridine	ND	10		µg/L	1	4/1/2022 6:59:25 PM	66325

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-7D

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 4:25:00 PM

Lab ID: 2203A30-017

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES							Analyst: JME
1,2,4-Trichlorobenzene	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
2,4,5-Trichlorophenol	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
2,4,6-Trichlorophenol	ND	5.0		µg/L	1	4/1/2022 6:59:25 PM	66325
Surr: 2-Fluorophenol	59.3	29.4-87.7		%Rec	1	4/1/2022 6:59:25 PM	66325
Surr: Phenol-d5	43.4	28.5-64.7		%Rec	1	4/1/2022 6:59:25 PM	66325
Surr: 2,4,6-Tribromophenol	74.9	18.6-129		%Rec	1	4/1/2022 6:59:25 PM	66325
Surr: Nitrobenzene-d5	68.0	36.9-103		%Rec	1	4/1/2022 6:59:25 PM	66325
Surr: 2-Fluorobiphenyl	64.9	38.1-99.9		%Rec	1	4/1/2022 6:59:25 PM	66325
Surr: 4-Terphenyl-d14	99.6	48-155		%Rec	1	4/1/2022 6:59:25 PM	66325
EPA METHOD 8260B: VOLATILES							Analyst: JR
Benzene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
Toluene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
Ethylbenzene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
Naphthalene	ND	2.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
1-Methylnaphthalene	ND	4.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
2-Methylnaphthalene	ND	4.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
Acetone	ND	10		µg/L	1	3/28/2022 9:09:01 PM	R86782
Bromobenzene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
Bromodichloromethane	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
Bromoform	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
Bromomethane	ND	3.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
2-Butanone	ND	10		µg/L	1	3/28/2022 9:09:01 PM	R86782
Carbon disulfide	ND	10		µg/L	1	3/28/2022 9:09:01 PM	R86782
Carbon Tetrachloride	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
Chlorobenzene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
Chloroethane	ND	2.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
Chloroform	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
Chloromethane	ND	3.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
2-Chlorotoluene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
4-Chlorotoluene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
cis-1,2-DCE	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
Dibromochloromethane	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: MW-7D

Project: Energy Resources Corp West Lovington

Collection Date: 3/16/2022 4:25:00 PM

Lab ID: 2203A30-017

Matrix: AQUEOUS

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Dibromomethane	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
1,1-Dichloroethane	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
1,1-Dichloroethene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
1,2-Dichloropropane	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
1,3-Dichloropropane	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
2,2-Dichloropropane	ND	2.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
1,1-Dichloropropene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
Hexachlorobutadiene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
2-Hexanone	ND	10		µg/L	1	3/28/2022 9:09:01 PM	R86782
Isopropylbenzene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
4-Isopropyltoluene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
4-Methyl-2-pentanone	ND	10		µg/L	1	3/28/2022 9:09:01 PM	R86782
Methylene Chloride	ND	3.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
n-Butylbenzene	ND	3.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
n-Propylbenzene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
sec-Butylbenzene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
Styrene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
tert-Butylbenzene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
trans-1,2-DCE	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
Trichlorofluoromethane	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
Vinyl chloride	ND	1.0		µg/L	1	3/28/2022 9:09:01 PM	R86782
Xylenes, Total	ND	1.5		µg/L	1	3/28/2022 9:09:01 PM	R86782
Surr: 1,2-Dichloroethane-d4	86.6	70-130		%Rec	1	3/28/2022 9:09:01 PM	R86782
Surr: 4-Bromofluorobenzene	96.5	70-130		%Rec	1	3/28/2022 9:09:01 PM	R86782
Surr: Dibromofluoromethane	96.0	70-130		%Rec	1	3/28/2022 9:09:01 PM	R86782

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: Trip Blank

Project: Energy Resources Corp West Lovington

Collection Date:

Lab ID: 2203A30-018

Matrix: TRIP BLANK

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Benzene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
Toluene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
Ethylbenzene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
Naphthalene	ND	2.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
1-Methylnaphthalene	ND	4.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
2-Methylnaphthalene	ND	4.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
Acetone	ND	10		µg/L	1	3/28/2022 9:37:34 PM	R86782
Bromobenzene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
Bromodichloromethane	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
Bromoform	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
Bromomethane	ND	3.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
2-Butanone	ND	10		µg/L	1	3/28/2022 9:37:34 PM	R86782
Carbon disulfide	ND	10		µg/L	1	3/28/2022 9:37:34 PM	R86782
Carbon Tetrachloride	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
Chlorobenzene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
Chloroethane	ND	2.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
Chloroform	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
Chloromethane	ND	3.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
2-Chlorotoluene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
4-Chlorotoluene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
cis-1,2-DCE	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
Dibromochloromethane	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
Dibromomethane	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
1,1-Dichloroethane	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
1,1-Dichloroethene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
1,2-Dichloropropane	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
1,3-Dichloropropane	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
2,2-Dichloropropane	ND	2.0		µg/L	1	3/28/2022 9:37:34 PM	R86782

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: Trip Blank

Project: Energy Resources Corp West Lovington

Collection Date:

Lab ID: 2203A30-018

Matrix: TRIP BLANK

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
1,1-Dichloropropene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
Hexachlorobutadiene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
2-Hexanone	ND	10		µg/L	1	3/28/2022 9:37:34 PM	R86782
Isopropylbenzene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
4-Isopropyltoluene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
4-Methyl-2-pentanone	ND	10		µg/L	1	3/28/2022 9:37:34 PM	R86782
Methylene Chloride	ND	3.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
n-Butylbenzene	ND	3.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
n-Propylbenzene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
sec-Butylbenzene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
Styrene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
tert-Butylbenzene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
trans-1,2-DCE	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
Trichlorofluoromethane	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
Vinyl chloride	ND	1.0		µg/L	1	3/28/2022 9:37:34 PM	R86782
Xylenes, Total	ND	1.5		µg/L	1	3/28/2022 9:37:34 PM	R86782
Surr: 1,2-Dichloroethane-d4	92.3	70-130		%Rec	1	3/28/2022 9:37:34 PM	R86782
Surr: 4-Bromofluorobenzene	98.4	70-130		%Rec	1	3/28/2022 9:37:34 PM	R86782
Surr: Dibromofluoromethane	99.5	70-130		%Rec	1	3/28/2022 9:37:34 PM	R86782
Surr: Toluene-d8	98.8	70-130		%Rec	1	3/28/2022 9:37:34 PM	R86782

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: Trip Blank 2

Project: Energy Resources Corp West Lovington

Collection Date:

Lab ID: 2203A30-019

Matrix: TRIP BLANK

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
Benzene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
Toluene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
Ethylbenzene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
Naphthalene	ND	2.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
1-Methylnaphthalene	ND	4.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
2-Methylnaphthalene	ND	4.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
Acetone	ND	10		µg/L	1	3/28/2022 10:06:12 PM	R86782
Bromobenzene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
Bromodichloromethane	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
Bromoform	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
Bromomethane	ND	3.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
2-Butanone	ND	10		µg/L	1	3/28/2022 10:06:12 PM	R86782
Carbon disulfide	ND	10		µg/L	1	3/28/2022 10:06:12 PM	R86782
Carbon Tetrachloride	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
Chlorobenzene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
Chloroethane	ND	2.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
Chloroform	3.0	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
Chloromethane	ND	3.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
2-Chlorotoluene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
4-Chlorotoluene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
cis-1,2-DCE	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
Dibromochloromethane	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
Dibromomethane	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
1,1-Dichloroethane	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
1,1-Dichloroethene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
1,2-Dichloropropane	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
1,3-Dichloropropane	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
2,2-Dichloropropane	ND	2.0		µg/L	1	3/28/2022 10:06:12 PM	R86782

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

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Analytical Report

Lab Order 2203A30

Date Reported: 4/13/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CMB Environmental

Client Sample ID: Trip Blank 2

Project: Energy Resources Corp West Lovington

Collection Date:

Lab ID: 2203A30-019

Matrix: TRIP BLANK

Received Date: 3/18/2022 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JR
1,1-Dichloropropene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
Hexachlorobutadiene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
2-Hexanone	ND	10		µg/L	1	3/28/2022 10:06:12 PM	R86782
Isopropylbenzene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
4-Isopropyltoluene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
4-Methyl-2-pentanone	ND	10		µg/L	1	3/28/2022 10:06:12 PM	R86782
Methylene Chloride	ND	3.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
n-Butylbenzene	ND	3.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
n-Propylbenzene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
sec-Butylbenzene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
Styrene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
tert-Butylbenzene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
trans-1,2-DCE	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
Trichlorofluoromethane	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
Vinyl chloride	ND	1.0		µg/L	1	3/28/2022 10:06:12 PM	R86782
Xylenes, Total	ND	1.5		µg/L	1	3/28/2022 10:06:12 PM	R86782
Surr: 1,2-Dichloroethane-d4	83.8	70-130		%Rec	1	3/28/2022 10:06:12 PM	R86782
Surr: 4-Bromofluorobenzene	99.0	70-130		%Rec	1	3/28/2022 10:06:12 PM	R86782
Surr: Dibromofluoromethane	96.7	70-130		%Rec	1	3/28/2022 10:06:12 PM	R86782
Surr: Toluene-d8	102	70-130		%Rec	1	3/28/2022 10:06:12 PM	R86782

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

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203A30
13-Apr-22

Client: CMB Environmental

Project: Energy Resources Corp West Lovington

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 200.7: Metals								
Client ID: PBW	Batch ID: A86739	RunNo: 86739								
Prep Date:	Analysis Date: 3/24/2022	SeqNo: 3062599 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0030								
Chromium	ND	0.0060								
Nickel	ND	0.010								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID: LLLCS	SampType: LCSLL	TestCode: EPA Method 200.7: Metals								
Client ID: BatchQC	Batch ID: A86739	RunNo: 86739								
Prep Date:	Analysis Date: 3/24/2022	SeqNo: 3062600 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0030	0.002000	0	86.2	50	150			
Chromium	ND	0.0060	0.006000	0	97.6	50	150			
Nickel	ND	0.010	0.005000	0	99.3	50	150			
Sodium	ND	1.0	0.5000	0	97.5	50	150			
Zinc	ND	0.010	0.01000	0	98.4	50	150			

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 200.7: Metals								
Client ID: LCSW	Batch ID: A86739	RunNo: 86739								
Prep Date:	Analysis Date: 3/24/2022	SeqNo: 3062601 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0030	0.5000	0	96.0	85	115			
Chromium	0.48	0.0060	0.5000	0	96.2	85	115			
Nickel	0.47	0.010	0.5000	0	93.3	85	115			
Sodium	51	1.0	50.00	0	102	85	115			
Zinc	0.48	0.010	0.5000	0	95.2	85	115			

Qualifiers:

- *

Value exceeds Maximum Contaminant Level.
- D

Sample Diluted Due to Matrix
- H

Holding times for preparation or analysis exceeded
- ND

Not Detected at the Reporting Limit
- PQL

Practical Quantitative Limit
- S

% Recovery outside of range due to dilution or matrix 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#: 2203A30

13-Apr-22

Client: CMB Environmental
Project: Energy Resources Corp West Lovington

Sample ID: MB	SampType: MBLK		TestCode: EPA 200.8: Metals							
Client ID: PBW	Batch ID: A86914		RunNo: 86914							
Prep Date:	Analysis Date: 4/1/2022		SeqNo: 3070726		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010								
Arsenic	ND	0.0010								
Beryllium	ND	0.0010								
Cadmium	ND	0.00050								
Selenium	ND	0.0010								
Thallium	ND	0.00025								

Sample ID: LLCS-TL	SampType: LCSLL		TestCode: EPA 200.8: Metals							
Client ID: BatchQC	Batch ID: A86914		RunNo: 86914							
Prep Date:	Analysis Date: 4/1/2022		SeqNo: 3070727		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Thallium	0.00025	0.00025	0.0002500	0	100	50	150			

Sample ID: LLCS	SampType: LCSLL		TestCode: EPA 200.8: Metals							
Client ID: BatchQC	Batch ID: A86914		RunNo: 86914							
Prep Date:	Analysis Date: 4/1/2022		SeqNo: 3070728		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	0.0010	0.001000	0	97.5	50	150			
Arsenic	ND	0.0010	0.001000	0	100	50	150			
Beryllium	ND	0.0010	0.001000	0	100	50	150			
Cadmium	0.00051	0.00050	0.0005000	0	101	50	150			
Selenium	0.0011	0.0010	0.001000	0	112	50	150			

Sample ID: LCS	SampType: LCS		TestCode: EPA 200.8: Metals							
Client ID: LCSW	Batch ID: A86914		RunNo: 86914							
Prep Date:	Analysis Date: 4/1/2022		SeqNo: 3070729		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.024	0.0010	0.02500	0	96.0	85	115			
Arsenic	0.027	0.0010	0.02500	0	108	85	115			
Beryllium	0.025	0.0010	0.02500	0	98.8	85	115			
Cadmium	0.013	0.00050	0.01250	0	101	85	115			
Selenium	0.027	0.0010	0.02500	0	107	85	115			
Thallium	0.012	0.00025	0.01250	0	99.9	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical 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#: 2203A30

13-Apr-22

Client: CMB Environmental
Project: Energy Resources Corp West Lovington

Sample ID: MB-66425	SampType: MBLK	TestCode: EPA Method 245.1: Mercury								
Client ID: PBW	Batch ID: 66425	RunNo: 86790								
Prep Date: 3/28/2022	Analysis Date: 3/28/2022	SeqNo: 3064662	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: LCSLL-66425	SampType: LCSLL	TestCode: EPA Method 245.1: Mercury								
Client ID: BatchQC	Batch ID: 66425	RunNo: 86790								
Prep Date: 3/28/2022	Analysis Date: 3/28/2022	SeqNo: 3064663	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020	0.0001500	0	107	50	150			

Sample ID: LCS-66425	SampType: LCS	TestCode: EPA Method 245.1: Mercury								
Client ID: LCSW	Batch ID: 66425	RunNo: 86790								
Prep Date: 3/28/2022	Analysis Date: 3/28/2022	SeqNo: 3064664	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.0	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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#: 2203A30

13-Apr-22

Client: CMB Environmental
Project: Energy Resources Corp West Lovington

Sample ID: MB	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBW	Batch ID: R86662		RunNo: 86662							
Prep Date:	Analysis Date: 3/21/2022		SeqNo: 3059554		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: R86662		RunNo: 86662							
Prep Date:	Analysis Date: 3/21/2022		SeqNo: 3059555		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	95.1	90	110			

Sample ID: 2203A30-001AMS	SampType: ms		TestCode: EPA Method 300.0: Anions							
Client ID: W. Windmill Water	Batch ID: R86662		RunNo: 86662							
Prep Date:	Analysis Date: 3/21/2022		SeqNo: 3059557		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	71	5.0	50.00	23.62	95.3	86.3	114			

Sample ID: 2203A30-001AMSD	SampType: msd		TestCode: EPA Method 300.0: Anions							
Client ID: W. Windmill Water	Batch ID: R86662		RunNo: 86662							
Prep Date:	Analysis Date: 3/21/2022		SeqNo: 3059558		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	71	5.0	50.00	23.62	95.1	86.3	114	0.107	20	

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#: 2203A30

13-Apr-22

Client: CMB Environmental
Project: Energy Resources Corp West Lovington

Sample ID: 100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW	Batch ID: R86690			RunNo: 86690						
Prep Date:	Analysis Date: 3/23/2022			SeqNo: 3061080		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	91.2	70	130			
Toluene	21	1.0	20.00	0	104	70	130			
Chlorobenzene	22	1.0	20.00	0	110	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	91.0	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	79.2	70	130			
Surr: 1,2-Dichloroethane-d4	8.9		10.00		88.9	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.2	70	130			
Surr: Dibromofluoromethane	9.0		10.00		89.8	70	130			
Surr: Toluene-d8	9.8		10.00		97.7	70	130			

Sample ID: mb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R86690			RunNo: 86690						
Prep Date:	Analysis Date: 3/23/2022			SeqNo: 3061105		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	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#: 2203A30

13-Apr-22

Client: CMB Environmental**Project:** Energy Resources Corp West Lovington

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R86690	RunNo: 86690								
Prep Date:	Analysis Date: 3/23/2022	SeqNo: 3061105	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

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

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203A30
13-Apr-22

Client: CMB Environmental

Project: Energy Resources Corp West Lovington

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R86690	RunNo: 86690								
Prep Date:	Analysis Date: 3/23/2022	SeqNo: 3061105	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.1	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		93.9	70	130			
Surr: Dibromofluoromethane	9.3		10.00		92.6	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R86782	RunNo: 86782								
Prep Date:	Analysis Date: 3/28/2022	SeqNo: 3065298	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

Qualifiers:

*

Value exceeds Maximum Contaminant Level.

D

Sample Diluted Due to Matrix

H

Holding times for preparation or analysis exceeded

ND

Not Detected at the Reporting Limit

PQL

Practical Quantitative Limit

S

% Recovery outside of range due to dilution or matrix 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#: 2203A30

13-Apr-22

Client: CMB Environmental

Project: Energy Resources Corp West Lovington

Sample ID: mb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R86782			RunNo: 86782						
Prep Date:	Analysis Date: 3/28/2022			SeqNo: 3065298		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.4		10.00		84.5	70	130			

Qualifiers:

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

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A30

13-Apr-22

Client: CMB Environmental
Project: Energy Resources Corp West Lovington

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R86782	RunNo: 86782								
Prep Date:	Analysis Date: 3/28/2022	SeqNo: 3065298	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	9.9		10.00		99.5	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.5	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID: 100ng lcs4	SampType: LCS4	TestCode: EPA Method 8260B: VOLATILES								
Client ID: BatchQC	Batch ID: R86782	RunNo: 86782								
Prep Date:	Analysis Date: 3/28/2022	SeqNo: 3065317	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	88.4	70	130			
Toluene	20	1.0	20.00	0	99.1	70	130			
Ethylbenzene	20	1.0	20.00	0	100	70	130			
Methyl tert-butyl ether (MTBE)	37	1.0	40.00	0	92.3	70	130			
1,2,4-Trimethylbenzene	20	1.0	20.00	0	102	70	130			
1,3,5-Trimethylbenzene	20	1.0	20.00	0	98.7	70	130			
1,2-Dichloroethane (EDC)	18	1.0	20.00	0	90.3	70	130			
1,2-Dibromoethane (EDB)	20	1.0	20.00	0	97.9	70	130			
Naphthalene	19	2.0	20.00	0	96.3	70	130			
1-Methylnaphthalene	20	4.0	20.00	0	100	60.3	126			
2-Methylnaphthalene	20	4.0	20.00	0	98.7	59	127			
Acetone	30	10	40.00	0	74.8	53.2	126			
Bromobenzene	19	1.0	20.00	0	93.4	70	130			
Bromodichloromethane	19	1.0	20.00	0	96.8	70	130			
Bromoform	18	1.0	20.00	0	88.7	70	130			
Bromomethane	15	3.0	20.00	0	74.0	15	213			
2-Butanone	32	10	40.00	0	80.8	59.4	136			
Carbon disulfide	36	10	40.00	0	89.5	70	130			
Carbon Tetrachloride	18	1.0	20.00	0	90.5	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
Chloroethane	19	2.0	20.00	0	92.7	69.5	131			
Chloroform	17	1.0	20.00	0	86.7	70	130			
Chloromethane	21	3.0	20.00	0	106	56.9	143			
2-Chlorotoluene	20	1.0	20.00	0	97.8	70	130			
4-Chlorotoluene	18	1.0	20.00	0	92.4	70	130			
cis-1,2-DCE	18	1.0	20.00	0	90.9	70	130			
cis-1,3-Dichloropropene	20	1.0	20.00	0	100	70	130			
1,2-Dibromo-3-chloropropane	17	2.0	20.00	0	84.4	62.3	135			
Dibromochloromethane	19	1.0	20.00	0	92.6	70	130			
Dibromomethane	20	1.0	20.00	0	102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	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#: 2203A30

13-Apr-22

Client: CMB Environmental

Project: Energy Resources Corp West Lovington

Sample ID: 100ng lcs4	SampType: LCS4			TestCode: EPA Method 8260B: VOLATILES						
Client ID: BatchQC	Batch ID: R86782			RunNo: 86782						
Prep Date:	Analysis Date: 3/28/2022			SeqNo: 3065317		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dichlorobenzene	19	1.0	20.00	0	93.3	70	130			
1,3-Dichlorobenzene	19	1.0	20.00	0	93.8	70	130			
1,4-Dichlorobenzene	19	1.0	20.00	0	94.3	70	130			
Dichlorodifluoromethane	22	1.0	20.00	0	110	41	159			
1,1-Dichloroethane	17	1.0	20.00	0	87.4	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	91.2	70	130			
1,2-Dichloropropane	17	1.0	20.00	0	85.7	70	130			
1,3-Dichloropropane	20	1.0	20.00	0	98.2	70	130			
2,2-Dichloropropane	19	2.0	20.00	0	94.5	70	130			
1,1-Dichloropropene	18	1.0	20.00	0	90.7	70	130			
Hexachlorobutadiene	19	1.0	20.00	0	96.8	63.6	129			
2-Hexanone	36	10	40.00	0	90.1	63.2	130			
Isopropylbenzene	21	1.0	20.00	0	107	70	130			
4-Isopropyltoluene	19	1.0	20.00	0	97.0	70	130			
4-Methyl-2-pentanone	38	10	40.00	0	95.2	64.7	132			
Methylene Chloride	18	3.0	20.00	0	88.5	70	130			
n-Butylbenzene	20	3.0	20.00	0	98.6	70	130			
n-Propylbenzene	20	1.0	20.00	0	97.9	70	130			
sec-Butylbenzene	20	1.0	20.00	0	99.8	70	130			
Styrene	19	1.0	20.00	0	97.4	70	130			
tert-Butylbenzene	20	1.0	20.00	0	99.8	70	130			
1,1,1,2-Tetrachloroethane	21	1.0	20.00	0	104	70	130			
1,1,2,2-Tetrachloroethane	19	2.0	20.00	0	93.3	65.8	138			
Tetrachloroethene (PCE)	21	1.0	20.00	0	103	70	130			
trans-1,2-DCE	18	1.0	20.00	0	89.4	70	130			
trans-1,3-Dichloropropene	21	1.0	20.00	0	105	70	130			
1,2,3-Trichlorobenzene	19	1.0	20.00	0	95.7	70	130			
1,2,4-Trichlorobenzene	20	1.0	20.00	0	100	70	130			
1,1,1-Trichloroethane	17	1.0	20.00	0	86.1	70	130			
1,1,2-Trichloroethane	20	1.0	20.00	0	99.5	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	83.0	70	130			
Trichlorofluoromethane	19	1.0	20.00	0	95.5	70	130			
1,2,3-Trichloropropane	19	2.0	20.00	0	97.3	70	130			
Vinyl chloride	21	1.0	20.00	0	103	70	130			
Xylenes, Total	60	1.5	60.00	0	99.3	70	130			
Surr: 1,2-Dichloroethane-d4	8.8		10.00		87.6	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		91.9	70	130			
Surr: Dibromofluoromethane	9.0		10.00		89.7	70	130			
Surr: Toluene-d8	9.7		10.00		96.6	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix 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#: 2203A30
13-Apr-22

Client: CMB Environmental

Project: Energy Resources Corp West Lovington

Sample ID: mb-66307	SampType: MBLK	TestCode: EPA Method 8270C: Semivolatiles								
Client ID: PBW	Batch ID: 66307	RunNo: 86737								
Prep Date: 3/22/2022	Analysis Date: 3/24/2022	SeqNo: 3062572	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	5.0								
Acenaphthylene	ND	5.0								
Aniline	ND	5.0								
Anthracene	ND	5.0								
Azobenzene	ND	5.0								
Benz(a)anthracene	ND	5.0								
Benzo(a)pyrene	ND	5.0								
Benzo(b)fluoranthene	ND	5.0								
Benzo(g,h,i)perylene	ND	5.0								
Benzo(k)fluoranthene	ND	5.0								
Benzoic acid	ND	20								
Benzyl alcohol	ND	5.0								
Bis(2-chloroethoxy)methane	ND	5.0								
Bis(2-chloroethyl)ether	ND	5.0								
Bis(2-chloroisopropyl)ether	ND	5.0								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	5.0								
Butyl benzyl phthalate	ND	5.0								
Carbazole	ND	5.0								
4-Chloro-3-methylphenol	ND	5.0								
4-Chloroaniline	ND	5.0								
2-Chloronaphthalene	ND	5.0								
2-Chlorophenol	ND	5.0								
4-Chlorophenyl phenyl ether	ND	5.0								
Chrysene	ND	5.0								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	5.0								
Dibenzofuran	ND	5.0								
1,2-Dichlorobenzene	ND	5.0								
1,3-Dichlorobenzene	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
3,3'-Dichlorobenzidine	ND	5.0								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	5.0								
2,4-Dimethylphenol	ND	5.0								
4,6-Dinitro-2-methylphenol	ND	5.0								
2,4-Dinitrophenol	ND	5.0								

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#: 2203A30

13-Apr-22

Client: CMB Environmental

Project: Energy Resources Corp West Lovington

Sample ID: mb-66307	SampType: MBLK	TestCode: EPA Method 8270C: Semivolatiles								
Client ID: PBW	Batch ID: 66307	RunNo: 86737								
Prep Date: 3/22/2022	Analysis Date: 3/24/2022	SeqNo: 3062572 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	5.0								
2,6-Dinitrotoluene	ND	5.0								
Fluoranthene	ND	10								
Fluorene	ND	5.0								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachlorocyclopentadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Indeno(1,2,3-cd)pyrene	ND	5.0								
Isophorone	ND	5.0								
1-Methylnaphthalene	ND	5.0								
2-Methylnaphthalene	ND	5.0								
2-Methylphenol	ND	5.0								
3+4-Methylphenol	ND	5.0								
N-Nitrosodi-n-propylamine	ND	5.0								
N-Nitrosodimethylamine	ND	5.0								
N-Nitrosodiphenylamine	ND	5.0								
Naphthalene	ND	5.0								
2-Nitroaniline	ND	5.0								
3-Nitroaniline	ND	5.0								
4-Nitroaniline	ND	5.0								
Nitrobenzene	ND	5.0								
2-Nitrophenol	ND	5.0								
4-Nitrophenol	ND	5.0								
Pentachlorophenol	ND	20								
Phenanthrene	ND	5.0								
Phenol	ND	5.0								
Pyrene	ND	5.0								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	5.0								
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
Surr: 2-Fluorophenol	110		200.0		56.7	29.4	87.7			
Surr: Phenol-d5	86		200.0		43.0	28.5	64.7			
Surr: 2,4,6-Tribromophenol	160		200.0		79.5	18.6	129			
Surr: Nitrobenzene-d5	64		100.0		64.3	36.9	103			
Surr: 2-Fluorobiphenyl	65		100.0		65.2	38.1	99.9			
Surr: 4-Terphenyl-d14	97		100.0		96.7	48	155			

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

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A30

13-Apr-22

Client: CMB Environmental**Project:** Energy Resources Corp West Lovington

Sample ID: Ics-66307	SampType: LCS				TestCode: EPA Method 8270C: Semivolatiles					
Client ID: LCSW	Batch ID: 66307				RunNo: 86737					
Prep Date: 3/22/2022	Analysis Date: 3/24/2022				SeqNo: 3062573	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	75	5.0	100.0	0	75.5	28	101			
4-Chloro-3-methylphenol	150	5.0	200.0	0	75.8	28.3	103			
2-Chlorophenol	140	5.0	200.0	0	69.5	29.3	105			
1,4-Dichlorobenzene	60	5.0	100.0	0	60.1	15	87.6			
2,4-Dinitrotoluene	60	5.0	100.0	0	59.5	23.6	90.9			
N-Nitrosodi-n-propylamine	75	5.0	100.0	0	74.5	23.1	94.6			
4-Nitrophenol	92	5.0	200.0	0	46.1	15	77			
Pentachlorophenol	140	20	200.0	0	70.1	21	111			
Phenol	82	5.0	200.0	0	40.9	16.8	70.5			
Pyrene	91	5.0	100.0	0	90.7	30.5	129			
1,2,4-Trichlorobenzene	63	5.0	100.0	0	62.8	15	88.2			
Surr: 2-Fluorophenol	110		200.0		53.8	29.4	87.7			
Surr: Phenol-d5	81		200.0		40.5	28.5	64.7			
Surr: 2,4,6-Tribromophenol	170		200.0		85.8	18.6	129			
Surr: Nitrobenzene-d5	66		100.0		65.9	36.9	103			
Surr: 2-Fluorobiphenyl	67		100.0		66.7	38.1	99.9			
Surr: 4-Terphenyl-d14	99		100.0		99.0	48	155			

Sample ID: Icsd-66307	SampType: LCSD				TestCode: EPA Method 8270C: Semivolatiles					
Client ID: LCSS02	Batch ID: 66307				RunNo: 86737					
Prep Date: 3/22/2022	Analysis Date: 3/24/2022				SeqNo: 3062574	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	59	5.0	100.0	0	59.3	28	101	24.0	41.2	
4-Chloro-3-methylphenol	120	5.0	200.0	0	60.5	28.3	103	22.4	44.7	
2-Chlorophenol	110	5.0	200.0	0	57.5	29.3	105	19.0	35.6	
1,4-Dichlorobenzene	51	5.0	100.0	0	51.3	15	87.6	15.7	30.4	
2,4-Dinitrotoluene	54	5.0	100.0	0	53.8	23.6	90.9	10.1	53.1	
N-Nitrosodi-n-propylamine	61	5.0	100.0	0	60.6	23.1	94.6	20.6	31.1	
4-Nitrophenol	90	5.0	200.0	0	45.2	15	77	1.93	52.4	
Pentachlorophenol	140	20	200.0	0	70.5	21	111	0.603	71.6	
Phenol	67	5.0	200.0	0	33.4	16.8	70.5	20.2	37.2	
Pyrene	93	5.0	100.0	0	92.9	30.5	129	2.44	51.3	
1,2,4-Trichlorobenzene	50	5.0	100.0	0	50.0	15	88.2	22.7	31.8	
Surr: 2-Fluorophenol	88		200.0		44.1	29.4	87.7	0	0	
Surr: Phenol-d5	69		200.0		34.5	28.5	64.7	0	0	
Surr: 2,4,6-Tribromophenol	140		200.0		71.4	18.6	129	0	0	
Surr: Nitrobenzene-d5	54		100.0		54.5	36.9	103	0	0	
Surr: 2-Fluorobiphenyl	54		100.0		53.9	38.1	99.9	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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#: 2203A30

13-Apr-22

Client: CMB Environmental**Project:** Energy Resources Corp West Lovington

Sample ID: lcsd-66307	SampType: LCSD	TestCode: EPA Method 8270C: Semivolatiles								
Client ID: LCSS02	Batch ID: 66307	RunNo: 86737								
Prep Date: 3/22/2022	Analysis Date: 3/24/2022	SeqNo: 3062574	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	100		100.0		102	48	155	0	0	

Sample ID: mb-66325	SampType: MBLK	TestCode: EPA Method 8270C: Semivolatiles								
Client ID: PBW	Batch ID: 66325	RunNo: 86930								
Prep Date: 3/22/2022	Analysis Date: 4/1/2022	SeqNo: 3071396	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	5.0								
Acenaphthylene	ND	5.0								
Aniline	ND	5.0								
Anthracene	ND	5.0								
Azobenzene	ND	5.0								
Benz(a)anthracene	ND	5.0								
Benzo(a)pyrene	ND	5.0								
Benzo(b)fluoranthene	ND	5.0								
Benzo(g,h,i)perylene	ND	5.0								
Benzo(k)fluoranthene	ND	5.0								
Benzoic acid	ND	20								
Benzyl alcohol	ND	5.0								
Bis(2-chloroethoxy)methane	ND	5.0								
Bis(2-chloroethyl)ether	ND	5.0								
Bis(2-chloroisopropyl)ether	ND	5.0								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	5.0								
Butyl benzyl phthalate	ND	5.0								
Carbazole	ND	5.0								
4-Chloro-3-methylphenol	ND	5.0								
4-Chloroaniline	ND	5.0								
2-Chloronaphthalene	ND	5.0								
2-Chlorophenol	ND	5.0								
4-Chlorophenyl phenyl ether	ND	5.0								
Chrysene	ND	5.0								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	5.0								
Dibenzofuran	ND	5.0								
1,2-Dichlorobenzene	ND	5.0								
1,3-Dichlorobenzene	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								

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

Page 91 of 100

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203A30

13-Apr-22

Client: CMB Environmental

Project: Energy Resources Corp West Lovington

Sample ID: mb-66325	SampType: MBLK			TestCode: EPA Method 8270C: Semivolatiles						
Client ID: PBW	Batch ID: 66325			RunNo: 86930						
Prep Date: 3/22/2022	Analysis Date: 4/1/2022			SeqNo: 3071396	Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3'-Dichlorobenzidine	ND	5.0								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	5.0								
2,4-Dimethylphenol	ND	5.0								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	5.0								
2,6-Dinitrotoluene	ND	5.0								
Fluoranthene	ND	10								
Fluorene	ND	5.0								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachlorocyclopentadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Indeno(1,2,3-cd)pyrene	ND	5.0								
Isophorone	ND	5.0								
1-Methylnaphthalene	ND	5.0								
2-Methylnaphthalene	ND	5.0								
2-Methylphenol	ND	5.0								
3+4-Methylphenol	ND	5.0								
N-Nitrosodi-n-propylamine	ND	5.0								
N-Nitrosodimethylamine	ND	5.0								
N-Nitrosodiphenylamine	ND	5.0								
Naphthalene	ND	5.0								
2-Nitroaniline	ND	5.0								
3-Nitroaniline	ND	5.0								
4-Nitroaniline	ND	5.0								
Nitrobenzene	ND	5.0								
2-Nitrophenol	ND	5.0								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	5.0								
Phenol	ND	5.0								
Pyrene	ND	5.0								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	5.0								
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								

Qualifiers:

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

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A30

13-Apr-22

Client: CMB Environmental**Project:** Energy Resources Corp West Lovington

Sample ID: mb-66325	SampType: MBLK	TestCode: EPA Method 8270C: Semivolatiles								
Client ID: PBW	Batch ID: 66325	RunNo: 86930								
Prep Date: 3/22/2022	Analysis Date: 4/1/2022	SeqNo: 3071396 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	120		200.0		61.7	29.4	87.7			
Surr: Phenol-d5	95		200.0		47.4	28.5	64.7			
Surr: 2,4,6-Tribromophenol	120		200.0		61.6	18.6	129			
Surr: Nitrobenzene-d5	65		100.0		64.8	36.9	103			
Surr: 2-Fluorobiphenyl	60		100.0		60.1	38.1	99.9			
Surr: 4-Terphenyl-d14	98		100.0		97.6	48	155			

Sample ID: lcs-66325	SampType: LCS	TestCode: EPA Method 8270C: Semivolatiles								
Client ID: LCSW	Batch ID: 66325	RunNo: 86930								
Prep Date: 3/22/2022	Analysis Date: 4/1/2022	SeqNo: 3071397 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	48	5.0	100.0	0	47.5	28	101			
4-Chloro-3-methylphenol	62	5.0	100.0	0	62.1	28.3	103			
2-Chlorophenol	56	5.0	100.0	0	56.4	29.3	105			
1,4-Dichlorobenzene	22	5.0	100.0	0	22.0	15	87.6			
2,4-Dinitrotoluene	69	5.0	100.0	0	68.9	23.6	90.9			
N-Nitrosodi-n-propylamine	62	5.0	100.0	0	62.2	23.1	94.6			
4-Nitrophenol	47	10	100.0	0	46.9	15	77			
Pentachlorophenol	55	20	100.0	0	54.8	21	111			
Phenol	38	5.0	100.0	0	37.6	16.8	70.5			
Pyrene	88	5.0	100.0	0	87.9	30.5	129			
1,2,4-Trichlorobenzene	20	5.0	100.0	0	20.2	15	88.2			
Surr: 2-Fluorophenol	150		300.0		49.4	29.4	87.7			
Surr: Phenol-d5	120		300.0		40.1	28.5	64.7			
Surr: 2,4,6-Tribromophenol	230		300.0		75.8	18.6	129			
Surr: Nitrobenzene-d5	110		200.0		56.8	36.9	103			
Surr: 2-Fluorobiphenyl	89		200.0		44.4	38.1	99.9			
Surr: 4-Terphenyl-d14	170		200.0		86.3	48	155			

Sample ID: lcsr-66325	SampType: LCSD	TestCode: EPA Method 8270C: Semivolatiles								
Client ID: LCSS02	Batch ID: 66325	RunNo: 86930								
Prep Date:	Analysis Date: 4/1/2022	SeqNo: 3071398 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	47	5.0	100.0	0	47.3	28	101	0.519	41.2	
4-Chloro-3-methylphenol	63	5.0	100.0	0	62.5	28.3	103	0.721	44.7	
2-Chlorophenol	57	5.0	100.0	0	56.9	29.3	105	0.771	35.6	
1,4-Dichlorobenzene	23	5.0	100.0	0	23.4	15	87.6	6.30	30.4	
2,4-Dinitrotoluene	70	5.0	100.0	0	69.7	23.6	90.9	1.29	53.1	

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#: 2203A30

13-Apr-22

Client: CMB Environmental**Project:** Energy Resources Corp West Lovington

Sample ID: Icsr-66325	SampType: LCSD			TestCode: EPA Method 8270C: Semivolatiles						
Client ID: LCSS02	Batch ID: 66325			RunNo: 86930						
Prep Date:	Analysis Date: 4/1/2022			SeqNo: 3071398			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodi-n-propylamine	64	5.0	100.0	0	63.7	23.1	94.6	2.52	31.1	
4-Nitrophenol	47	10	100.0	0	47.5	15	77	1.13	52.4	
Pentachlorophenol	55	20	100.0	0	54.7	21	111	0.187	71.6	
Phenol	36	5.0	100.0	0	36.0	16.8	70.5	4.33	37.2	
Pyrene	90	5.0	100.0	0	89.5	30.5	129	1.84	51.3	
1,2,4-Trichlorobenzene	20	5.0	100.0	0	20.4	15	88.2	0.904	31.8	
Surr: 2-Fluorophenol	150		300.0		50.6	29.4	87.7	0	0	
Surr: Phenol-d5	120		300.0		39.6	28.5	64.7	0	0	
Surr: 2,4,6-Tribromophenol	230		300.0		77.0	18.6	129	0	0	
Surr: Nitrobenzene-d5	120		200.0		58.1	36.9	103	0	0	
Surr: 2-Fluorobiphenyl	85		200.0		42.3	38.1	99.9	0	0	
Surr: 4-Terphenyl-d14	170		200.0		83.2	48	155	0	0	

Sample ID: Ics-66355	SampType: LCS			TestCode: EPA Method 8270C: Semivolatiles						
Client ID: LCSW	Batch ID: 66355			RunNo: 86930						
Prep Date: 3/23/2022	Analysis Date: 4/1/2022			SeqNo: 3071399			Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	110		200.0		52.9	29.4	87.7			
Surr: Phenol-d5	82		200.0		41.1	28.5	64.7			
Surr: 2,4,6-Tribromophenol	110		200.0		57.4	18.6	129			
Surr: Nitrobenzene-d5	65		100.0		65.2	36.9	103			
Surr: 2-Fluorobiphenyl	61		100.0		60.7	38.1	99.9			
Surr: 4-Terphenyl-d14	88		100.0		88.5	48	155			

Sample ID: Icsd-66355	SampType: LCSD			TestCode: EPA Method 8270C: Semivolatiles						
Client ID: LCSS02	Batch ID: 66355			RunNo: 86930						
Prep Date: 3/23/2022	Analysis Date: 4/1/2022			SeqNo: 3071400			Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	81		200.0		40.3	29.4	87.7	0	0	
Surr: Phenol-d5	67		200.0		33.7	28.5	64.7	0	0	
Surr: 2,4,6-Tribromophenol	120		200.0		59.1	18.6	129	0	0	
Surr: Nitrobenzene-d5	55		100.0		55.4	36.9	103	0	0	
Surr: 2-Fluorobiphenyl	50		100.0		50.0	38.1	99.9	0	0	
Surr: 4-Terphenyl-d14	90		100.0		89.7	48	155	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical 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#: 2203A30
13-Apr-22

Client: CMB Environmental

Project: Energy Resources Corp West Lovington

Sample ID: Ics-66325	SampType: LCS4				TestCode: EPA Method 8270C: Semivolatiles					
Client ID: BatchQC	Batch ID: 66325				RunNo: 86930					
Prep Date: 3/22/2022	Analysis Date: 4/1/2022				SeqNo: 3071466	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	48	5.0	100.0	0	47.5	35.1	135			
Acenaphthylene	49	5.0	100.0	0	49.0	36.1	131			
Aniline	55	5.0	100.0	0	54.7	15	128			
Anthracene	79	5.0	100.0	0	79.2	59.2	129			
Azobenzene	70	5.0	100.0	0	69.5	54.7	134			
Benz(a)anthracene	90	5.0	100.0	0	89.6	60.3	130			
Benzo(a)pyrene	87	5.0	100.0	0	86.9	60.6	145			
Benzo(b)fluoranthene	88	5.0	100.0	0	87.6	59.3	146			
Benzo(g,h,i)perylene	86	5.0	100.0	0	86.2	57.6	146			
Benzo(k)fluoranthene	86	5.0	100.0	0	86.3	55	151			
Benzoic acid	45	20	100.0	0	44.6	21.8	98.2			
Benzyl alcohol	63	5.0	100.0	0	63.0	22.7	145			
Bis(2-chloroethoxy)methane	57	5.0	100.0	0	56.9	25.2	134			
Bis(2-chloroethyl)ether	61	5.0	100.0	0	61.1	19.8	141			
Bis(2-chloroisopropyl)ether	56	5.0	100.0	0	56.1	16.1	137			
Bis(2-ethylhexyl)phthalate	90	10	100.0	0	90.2	69	132			
4-Bromophenyl phenyl ether	71	5.0	100.0	0	71.0	52.1	138			
Butyl benzyl phthalate	90	5.0	100.0	0	90.0	70.1	128			
Carbazole	75	5.0	100.0	0	75.4	63.9	128			
4-Chloro-3-methylphenol	62	5.0	100.0	0	62.1	53.9	129			
4-Chloroaniline	59	5.0	100.0	0	59.0	19.4	143			
2-Chloronaphthalene	38	5.0	100.0	0	38.1	25.6	133			
2-Chlorophenol	56	5.0	100.0	0	56.4	16.1	144			
4-Chlorophenyl phenyl ether	61	5.0	100.0	0	60.6	49	131			
Chrysene	90	5.0	100.0	0	89.6	60.9	135			
Di-n-butyl phthalate	83	10	100.0	0	82.9	63.2	136			
Di-n-octyl phthalate	92	20	100.0	0	91.6	67.9	132			
Dibenz(a,h)anthracene	84	5.0	100.0	0	84.1	59.5	145			
Dibenzofuran	58	5.0	100.0	0	58.0	40.2	136			
1,2-Dichlorobenzene	23	5.0	100.0	0	23.3	15	106			
1,3-Dichlorobenzene	21	5.0	100.0	0	21.4	15	100			
1,4-Dichlorobenzene	22	5.0	100.0	0	22.0	15	99.1			
3,3'-Dichlorobenzidine	ND	5.0	100.0	0	4.28	72.3	127			S
Diethyl phthalate	77	10	100.0	0	77.3	55.9	140			
Dimethyl phthalate	68	10	100.0	0	67.8	57.1	133			
2,4-Dichlorophenol	59	5.0	100.0	0	58.7	24.2	138			
2,4-Dimethylphenol	47	5.0	100.0	0	47.1	23.3	135			
4,6-Dinitro-2-methylphenol	77	20	100.0	0	77.1	45.4	138			
2,4-Dinitrophenol	59	20	100.0	0	59.2	44.4	126			

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

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A30

13-Apr-22

Client: CMB Environmental**Project:** Energy Resources Corp West Lovington

Sample ID: Ics-66325	SampType: LCS4			TestCode: EPA Method 8270C: Semivolatiles						
Client ID: BatchQC	Batch ID: 66325			RunNo: 86930						
Prep Date: 3/22/2022	Analysis Date: 4/1/2022			SeqNo: 3071466		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	69	5.0	100.0	0	68.9	63.8	136			
2,6-Dinitrotoluene	59	5.0	100.0	0	59.1	55.8	135			
Fluoranthene	83	10	100.0	0	83.3	63.9	137			
Fluorene	62	5.0	100.0	0	61.9	51.8	131			
Hexachlorobenzene	68	5.0	100.0	0	68.0	43.7	146			
Hexachlorobutadiene	13	5.0	100.0	0	12.9	15	109			S
Hexachlorocyclopentadiene	21	5.0	100.0	0	20.8	15	112			
Hexachloroethane	16	5.0	100.0	0	16.0	15	89.4			
Indeno(1,2,3-cd)pyrene	83	5.0	100.0	0	83.1	61.6	140			
Isophorone	62	5.0	100.0	0	61.5	24.8	121			
1-Methylnaphthalene	31	5.0	100.0	0	31.0	32.9	124			S
2-Methylnaphthalene	30	5.0	100.0	0	29.6	20.4	129			
2-Methylphenol	57	5.0	100.0	0	56.6	18.7	143			
3+4-Methylphenol	58	5.0	100.0	0	57.8	19.4	138			
N-Nitrosodi-n-propylamine	62	5.0	100.0	0	62.2	22.3	137			
N-Nitrosodimethylamine	58	5.0	100.0	0	58.0	15	124			
N-Nitrosodiphenylamine	65	5.0	100.0	0	64.5	54.5	131			
Naphthalene	31	5.0	100.0	0	31.0	15	124			
2-Nitroaniline	64	5.0	100.0	0	64.3	55.1	134			
3-Nitroaniline	69	5.0	100.0	0	68.5	15	229			
4-Nitroaniline	75	5.0	100.0	0	74.8	63.3	136			
Nitrobenzene	60	5.0	100.0	0	59.5	21.8	134			
2-Nitrophenol	54	5.0	100.0	0	54.1	21.4	140			
4-Nitrophenol	47	10	100.0	0	46.9	39.7	84.3			
Pentachlorophenol	55	20	100.0	0	54.8	52.6	146			
Phenanthrene	80	5.0	100.0	0	79.9	63.1	130			
Phenol	38	5.0	100.0	0	37.6	15	88.4			
Pyrene	88	5.0	100.0	0	87.9	59.5	135			
Pyridine	36	10	100.0	0	36.0	15	116			
1,2,4-Trichlorobenzene	20	5.0	100.0	0	20.2	15	115			
2,4,5-Trichlorophenol	53	5.0	100.0	0	53.4	47.2	132			
2,4,6-Trichlorophenol	53	5.0	100.0	0	52.5	41.7	134			
Surr: 2-Fluorophenol	150		300.0		49.4	29.4	87.7			
Surr: Phenol-d5	120		300.0		40.1	28.5	64.7			
Surr: 2,4,6-Tribromophenol	230		300.0		75.8	18.6	129			
Surr: Nitrobenzene-d5	110		200.0		56.8	36.9	103			
Surr: 2-Fluorobiphenyl	89		200.0		44.4	38.1	99.9			
Surr: 4-Terphenyl-d14	170		200.0		86.3	48	155			

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#: 2203A30

13-Apr-22

Client: CMB Environmental

Project: Energy Resources Corp West Lovington

Sample ID: Icsr-66325	SampType: LCSD4				TestCode: EPA Method 8270C: Semivolatiles					
Client ID: BatchQC	Batch ID: 66325				RunNo: 86930					
Prep Date:	Analysis Date: 4/1/2022				SeqNo: 3071467	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	47	5.0	100.0	0	47.3	35.1	135	0.519	20	
Acenaphthylene	47	5.0	100.0	0	47.2	36.1	131	3.56	20	
Aniline	53	5.0	100.0	0	53.3	15	128	2.51	20	
Anthracene	81	5.0	100.0	0	81.3	59.2	129	2.65	20	
Azobenzene	73	5.0	100.0	0	72.8	54.7	134	4.57	20	
Benz(a)anthracene	88	5.0	100.0	0	87.6	60.3	130	2.25	20	
Benzo(a)pyrene	88	5.0	100.0	0	88.3	60.6	145	1.56	20	
Benzo(b)fluoranthene	87	5.0	100.0	0	87.2	59.3	146	0.415	20	
Benzo(g,h,i)perylene	87	5.0	100.0	0	87.2	57.6	146	1.09	20	
Benzo(k)fluoranthene	90	5.0	100.0	0	89.6	55	151	3.75	20	
Benzoic acid	45	20	100.0	0	44.9	21.8	98.2	0.822	20	
Benzyl alcohol	65	5.0	100.0	0	64.8	22.7	145	2.78	20	
Bis(2-chloroethoxy)methane	58	5.0	100.0	0	57.8	25.2	134	1.62	20	
Bis(2-chloroethyl)ether	60	5.0	100.0	0	60.3	19.8	141	1.25	20	
Bis(2-chloroisopropyl)ether	54	5.0	100.0	0	54.5	16.1	137	2.95	20	
Bis(2-ethylhexyl)phthalate	92	10	100.0	0	92.0	69	132	2.00	20	
4-Bromophenyl phenyl ether	73	5.0	100.0	0	73.4	52.1	138	3.32	20	
Butyl benzyl phthalate	90	5.0	100.0	0	90.2	70.1	128	0.204	20	
Carbazole	79	5.0	100.0	0	79.2	63.9	128	4.91	20	
4-Chloro-3-methylphenol	63	5.0	100.0	0	62.5	53.9	129	0.721	20	
4-Chloroaniline	58	5.0	100.0	0	57.7	19.4	143	2.20	20	
2-Chloronaphthalene	39	5.0	100.0	0	38.9	25.6	133	2.02	20	
2-Chlorophenol	57	5.0	100.0	0	56.9	16.1	144	0.771	20	
4-Chlorophenyl phenyl ether	60	5.0	100.0	0	60.1	49	131	0.848	20	
Chrysene	86	5.0	100.0	0	86.4	60.9	135	3.68	20	
Di-n-butyl phthalate	85	10	100.0	0	85.2	63.2	136	2.66	20	
Di-n-octyl phthalate	93	20	100.0	0	92.7	67.9	132	1.16	20	
Dibenz(a,h)anthracene	82	5.0	100.0	0	82.0	59.5	145	2.56	20	
Dibenzofuran	58	5.0	100.0	0	57.7	40.2	136	0.477	20	
1,2-Dichlorobenzene	24	5.0	100.0	0	23.6	15	106	1.55	20	
1,3-Dichlorobenzene	21	5.0	100.0	0	21.3	15	100	0.366	20	
1,4-Dichlorobenzene	23	5.0	100.0	0	23.4	15	99.1	6.30	20	
3,3'-Dichlorobenzidine	ND	5.0	100.0	0	4.25	72.3	127	0	20	S
Diethyl phthalate	77	10	100.0	0	77.3	55.9	140	0.0661	20	
Dimethyl phthalate	74	10	100.0	0	73.6	57.1	133	8.26	20	
2,4-Dichlorophenol	60	5.0	100.0	0	60.4	24.2	138	2.94	20	
2,4-Dimethylphenol	48	5.0	100.0	0	47.5	23.3	135	0.958	20	
4,6-Dinitro-2-methylphenol	80	20	100.0	0	80.5	45.4	138	4.29	20	
2,4-Dinitrophenol	65	20	100.0	0	64.8	44.4	126	9.01	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix 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

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203A30

13-Apr-22

Client: CMB Environmental

Project: Energy Resources Corp West Lovington

Sample ID: Icsr-66325	SampType: LCSD4			TestCode: EPA Method 8270C: Semivolatiles						
Client ID: BatchQC	Batch ID: 66325			RunNo: 86930						
Prep Date:	Analysis Date: 4/1/2022			SeqNo: 3071467		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	70	5.0	100.0	0	69.7	63.8	136	1.29	20	
2,6-Dinitrotoluene	64	5.0	100.0	0	63.9	55.8	135	7.82	20	
Fluoranthene	87	10	100.0	0	86.5	63.9	137	3.79	20	
Fluorene	63	5.0	100.0	0	62.6	51.8	131	1.16	20	
Hexachlorobenzene	73	5.0	100.0	0	73.3	43.7	146	7.51	20	
Hexachlorobutadiene	13	5.0	100.0	0	12.8	15	109	0.954	20	S
Hexachlorocyclopentadiene	19	5.0	100.0	0	19.4	15	112	7.09	20	
Hexachloroethane	17	5.0	100.0	0	16.6	15	89.4	3.82	20	
Indeno(1,2,3-cd)pyrene	84	5.0	100.0	0	83.6	61.6	140	0.647	20	
Isophorone	62	5.0	100.0	0	62.5	24.8	121	1.54	20	
1-Methylnaphthalene	32	5.0	100.0	0	31.7	32.9	124	2.27	20	S
2-Methylnaphthalene	29	5.0	100.0	0	29.1	20.4	129	1.94	20	
2-Methylphenol	57	5.0	100.0	0	56.8	18.7	143	0.292	20	
3+4-Methylphenol	58	5.0	100.0	0	58.1	19.4	138	0.515	20	
N-Nitrosodi-n-propylamine	64	5.0	100.0	0	63.7	22.3	137	2.52	20	
N-Nitrosodimethylamine	58	5.0	100.0	0	58.4	15	124	0.715	20	
N-Nitrosodiphenylamine	64	5.0	100.0	0	64.3	54.5	131	0.318	20	
Naphthalene	31	5.0	100.0	0	30.8	15	124	0.425	20	
2-Nitroaniline	67	5.0	100.0	0	66.8	55.1	134	3.69	20	
3-Nitroaniline	73	5.0	100.0	0	73.1	15	229	6.49	20	
4-Nitroaniline	77	5.0	100.0	0	77.1	63.3	136	2.93	20	
Nitrobenzene	61	5.0	100.0	0	61.4	21.8	134	3.09	20	
2-Nitrophenol	60	5.0	100.0	0	60.2	21.4	140	10.7	20	
4-Nitrophenol	47	10	100.0	0	47.5	39.7	84.3	1.13	20	
Pentachlorophenol	55	20	100.0	0	54.7	52.6	146	0.187	20	
Phenanthrene	80	5.0	100.0	0	79.9	63.1	130	0.0348	20	
Phenol	36	5.0	100.0	0	36.0	15	88.4	4.33	20	
Pyrene	90	5.0	100.0	0	89.5	59.5	135	1.84	20	
Pyridine	38	10	100.0	0	37.7	15	116	4.43	20	
1,2,4-Trichlorobenzene	20	5.0	100.0	0	20.4	15	115	0.904	20	
2,4,5-Trichlorophenol	57	5.0	100.0	0	57.0	47.2	132	6.59	20	
2,4,6-Trichlorophenol	54	5.0	100.0	0	54.1	41.7	134	2.84	20	
Surr: 2-Fluorophenol	150		300.0		50.6	29.4	87.7	0		
Surr: Phenol-d5	120		300.0		39.6	28.5	64.7	0		
Surr: 2,4,6-Tribromophenol	230		300.0		77.0	18.6	129	0		
Surr: Nitrobenzene-d5	120		200.0		58.1	36.9	103	0		
Surr: 2-Fluorobiphenyl	85		200.0		42.3	38.1	99.9	0		
Surr: 4-Terphenyl-d14	170		200.0		83.2	48	155	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

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203A30
13-Apr-22

Client: CMB Environmental

Project: Energy Resources Corp West Lovington

Sample ID: Ics-1 100.2uS eC	SampType: Ics	TestCode: SM2510B: Specific Conductance								
Client ID: LCSW	Batch ID: R86681	RunNo: 86681								
Prep Date:	Analysis Date: 3/22/2022	SeqNo: 3060544	Units: µmhos/cm							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	110	10	100.0	0	108	85	115			

Sample ID: Ics-2 100.2uS eC	SampType: Ics	TestCode: SM2510B: Specific Conductance								
Client ID: LCSW	Batch ID: R86681	RunNo: 86681								
Prep Date:	Analysis Date: 3/22/2022	SeqNo: 3060570	Units: µmhos/cm							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10	100.2	0	104	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix 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

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A30

13-Apr-22

Client: CMB Environmental**Project:** Energy Resources Corp West Lovington

Sample ID: MB-66320	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 66320	RunNo: 86707								
Prep Date: 3/22/2022	Analysis Date: 3/24/2022	SeqNo: 3061447 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-66320	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 66320	RunNo: 86707								
Prep Date: 3/22/2022	Analysis Date: 3/24/2022	SeqNo: 3061448 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1000	20.0	1000	0	100	80	120			

Sample ID: 2203A30-014CDUP	SampType: DUP	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: MW-8M	Batch ID: 66320	RunNo: 86707								
Prep Date: 3/22/2022	Analysis Date: 3/24/2022	SeqNo: 3061467 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	610	40.0						10000763	10	*D

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		


**ENVIRONMENTAL
ANALYSIS
LABORATORY**

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

Sample Log-In Check List

Client Name: CMB Environmental

Work Order Number: 2203A30

RcptNo: 1

Received By: Kasandra Payan 3/18/2022 10:10:00 AM

Completed By: Sean Livingston 3/18/2022 10:48:15 AM

Reviewed By: JR 3/18/22

[Signature]
[Signature]

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? UPS

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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 ☐ *see 2/18/22*
8. Was preservative added to bottles? Yes ☒ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: 3
(≤ 2 or >12 unless noted)

Adjusted? yesChecked by: see 3/18/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks: parted off ~150mL from 0014, 0021, 0034 for 001-003B

17. Cooler Information adding ~0.5mL HNO₃ for metals analysis, checked for proper pH <2 see 3/18/22

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.4	Good				
2	1.4	Good				
3	3.1	Good				

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Client: Richard E. Olson, Esq.
HINKLE SHANOR LLP
Mailing Address: PO Box 10
Roswell, NM 88202-0010
Phone #: 575. 622-6510
Email or Fax#: ralson@hinklelawfirm.com
QA/QC Package: ambenviro@gmail.com

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

☒ ~~Standard~~ ☐ **Rush**

Project Name: *Emergen Resources Corp*
West Livingston Strawn Unit 8
Unit L Sec. 34, T15 S.R. 35 E
Project #: *Ground Water Monitoring*
2022
NMOC Case # IRP-2457

Project Manager:

Sampler: *CM Barnhill, PE*

On Ice: ☒ Yes ☐ No

of Coolers: 3

Cooler Temp (including CF): See Remarks (°C)

Date	Time	Matrix	Sample Name	# of Coolers: 3 Cooler Temp (including CF): See Remarks °C			HEAL No. 2203A30	BTEx / MTBB	TPH:8015D(G)	8081 Pesticide	EDB (Method)	PAHs by 8310	RCRA 8 Metal	Cl, F, Br, NO ₃	8260 (VOA)	8270 (Semi-VOA)	Total Coliform	EPA Print	Standard	TDS, E
				Container Type and #	Preservative Type															
03/15/22	11:00	H ₂ O	W. Windmill Water Well	1x 500mL HDPE	None	001									X			X		
03/15/22	11:25	H ₂ O	House Water Well	1x 500mL HDPE	None	002									X			X		
03/15/22	11:30	H ₂ O	POND Water Well	1x 500mL HDPE	None	003									X			X		
03/15/22	0941	H ₂ O	MW-9S	2x 500mL HDPE 3x 40mL VOA	None HCL	004									X	X	X			
03/15/22	10:38	H ₂ O	MW-9M	1x 1L HDPE Amak/19		005									X	X	X			
03/15/22	11:45	H ₂ O	MW-9D			006									X	X	X			
03/15/22	14:10	H ₂ O	MW-1			007									X	X	X			
03/15/22	1446	H ₂ O	MW-5			008									X	X	X			
03/15/22	1533	H ₂ O	MW-6			009									X	X	X			
03/15/22	1630	H ₂ O	MW-3			010									X	X	X			
03/16/22	0900	H ₂ O	MW-2			011									X	X	X			
03/16/22	0940	H ₂ O	MW-4			012									X	X	X			
Date: 03/17/22 Time: 12:00 Relinquished by: [Signature]				Received by: [Signature] Via: UPS Date: 3/18/22 Time: 10:10			Remarks: Any Questions? Please Call CMB @ 575.626.1615 Sent. Copy of Results To cmbenr110@gmail.com													

Remarks: Any Questions? Please Call CMB
@ 575. 626. 1615
Sent. Copy of Results
To cmbenrro@gmail.com

Appendix E

Historical Data

Well ID	Water Level Elevation (feet msl)											
	2016 Q1	2016 Q2	2016 Q3	2016 Q4	2012 Q4	2022 Q1	2021 Q3	2017 Q1	2017 Q2	2017 Q3	2017 Q4	
MW-1	3,919.17	3,919.15	3,919.16	3,919.05	3,922.16	3,918.44	-	3,919.10	3,919.04	3,919.05	3,919.16	
MW-2	3,917.22	3,917.22	3,917.22	3,917.42	3,917.72	3,916.57	-	3,917.17	3,917.39	3,917.42	3,917.39	
MW-3	3,917.54	3,917.54	3,917.53	3,917.43	3,920.93	3,916.91	-	3,917.48	3,917.38	3,917.43	3,917.53	
MW-4	3,917.13	3,917.13	3,917.13	3,917.00	3,919.79	3,916.57	-	3,917.08	3,916.99	3,917.00	3,916.99	
MW-5	3,918.83	3,918.83	3,918.83	3,918.83	3,919.29	3,918.30	-	3,918.77	3,918.70	3,918.83	3,918.70	
MW-6	3,917.56	3,917.52	3,917.54	3,917.45	-	3,916.99	-	3,917.52	3,917.40	3,917.45	3,917.54	
MW-7S	-	-	-	-	-	3,914.70	3,914.60	-	-	-	-	
MW-7M	-	-	-	-	-	3,914.73	3,914.73	-	-	-	-	
MW-7D	-	-	-	-	-	3,914.81	3,914.61	-	-	-	-	
MW-8S	-	-	-	-	-	3,915.26	3,915.27	-	-	-	-	
MW-8M	-	-	-	-	-	3,915.30	3,915.10	-	-	-	-	
MW-8D	-	-	-	-	-	3,915.29	3,915.09	-	-	-	-	
MW-9S	-	-	-	-	-	3,919.08	3,919.12	-	-	-	-	
MW-9M	-	-	-	-	-	3,919.08	3,919.15	-	-	-	-	
MW-9D	-	-	-	-	-	3,918.97	3,919.69	-	-	-	-	

Well ID	Chloride Concentration (ppm)																				
	2002 Q4	2009 Q1	2009 Q4	2009 Q3	2010 Q2	2010 Q1	2012 Q4	2015 Q4	2016 Q4	2016 Q3	2016 Q2	2016 Q1	2017 Q4	2017 Q3	2017 Q2	2017 Q1	2018 Q4	2018 Q3	2018 Q2	2018 Q1	2022 Q1
MW-1	-	-	-	-	-	-	27	27.6	27.7	29.8	19.5	24.5	30.5	28.8	26.4	26.7	26.4	29.1	28.2	29.6	26
MW-2	-	-	-	-	-	-	130	821	869	1450	674	493	836	526	2500	980	1240	1500	1260	1320	1200
MW-3	-	-	-	-	-	-	28	28.5	28	29.7	21.4	24.6	29.7	27.1	26.9	27.4	26.5	27	27.3	-	25
MW-4	-	-	-	-	-	-	390	193	227	255	123	136	217	187	153	154	187	181	180	-	230
MW-5	-	-	-	-	-	-	23	25.1	28.2	26.9	20.2	24	29.1	40.8	25.6	26.2	25.9	25.7	26.6	-	25
MW-6	-	-	-	-	-	-	-	544	1420	1410	1570	1360	1220	1070	2570	1370	983	1120	1200	1250	1000
MW-7D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34
MW-7S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38
MW-8D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40
MW-8M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46
MW-8S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
MW-9D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29
MW-9M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46
MW-9S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27
Pond Water Well	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32
WLSU #11 windmill	-	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WLSU #20 water well	-	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WLSU #8 water well	99	298	2485	4331	440	1101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WLSU #8 Windmill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24
Battery A water Well	-	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
House Water Well	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32

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

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/oed/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 392842

CONDITIONS

Operator: ENERGEN RESOURCES CORPORATION 3510 N A St Midland, TX 79705	OGRID: 162928
	Action Number: 392842
	Action Type: [REPORT] Alternative Remediation Report (C-141AR)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Review of the 2023 Annual Groundwater Monitoring Report for WLSU #8, content satisfactory 1. Continue groundwater monitoring at the site for chloride plume stability in all 9 wells as proposed. 2. Confirm if chloride remains confined to the east of WLSU 8. 3. Continue conduct groundwater monitoring on schedule as prescribed until all eight (8) consecutive quarterly sample results demonstrate below WQCC standards. 4. Submit the 2024 annual report to OCD, on or before October 2, 2025.	2/21/2025