

October 12, 2023

#### **New Mexico Oil Conservation Division**

New Mexico Energy, Minerals, and Natural Resources Department 1220 South St. Francis Drive Santa Fe, New Mexico 87505

Re: Closure Request

MCA 301

Incident Number NAPP2307558601

Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of Maverick Permian, LLC (Maverick), has prepared this *Closure Request* to document assessment, excavation, and soil sampling activities performed at the MCA 301 (Site). The purpose of the assessment, excavation, and soil sampling activities was to address impacts to soil resulting from a release of produced water at the Site. Based on the excavation activities and laboratory analytical results for the soil sampling events, Maverick is submitting this *Closure Request*, describing remediation that has occurred and requesting closure for Incident Number NAPP2307558601.

#### SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit J, Section 28, Township 17 South, Range 32 East, in Lea County, New Mexico (32.80370°, -103.76860°) and is associated with oil and gas exploration and production operations on federal land managed by the Bureau of Land Management (BLM).

On February 23, 2023, internal corrosion caused a casing leak on a shut-in injection well, resulting in the release of approximately 6.9 barrels (bbls) of produced water onto the surface of the well pad and into the pasture south of the pad. No released fluids were recovered. Maverick reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on March 16, 2023. The release was assigned Incident Number NAPP2307558601.

#### SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential Site receptors are identified on Figure 1.

There is a network of over 20 monitoring wells within a 0.7-mile radius of the Site indicating depth to groundwater greater than 80 feet below ground surface (bgs). The monitoring wells are used to monitor groundwater impacts from historical releases at the Maljamar Gas Plant (Incident Number NAUTOFGP000196 and AP-115-1) and the MCA 357 (Incident Number NTO1423043689). Monitoring

Ensolum, LLC | Environmental, Engineering & Hydrogeologic Consultants 3122 National Parks Highway | Carlsbad, NM 88220 | ensolum.com

wells/NMOSE wells MW-1/RA-12204 POD1, MW-2/RA-12574 POD1, MW-3/RA-12574 POD2, and MW-8/RA-12721-POD3 are located between 800 feet and 975 feet of the Site; however, they are temporary monitoring wells and are not used for domestic or livestock purposes, but solely to monitor existing groundwater impacts originating from historical releases at the Maljamar Gas Plant and MCA 357 locations. The monitoring wells are being sampled on a quarterly or semi-annual basis and results are reported to the NMOCD in annual reports. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well records are included in Appendix A.

Maverick and Ensolum do not believe the monitoring wells located between 800 feet and 975 feet of the Site are sensitive receptors for the subject release. The monitoring wells are not fresh water wells. Water quality documented in monitoring wells MW-1, MW-2, MW-3, and MW-8 characterize an extensive groundwater plume associated with a historical produced water release down- and cross-gradient of the Site. Monitoring wells MW-1, MW-2, and MW-3 have consistently contained greater than 10,000 milligrams per liter (mg/L) total dissolved solids (TDS), a water quality parameter used to define freshwater in 19.15.2 NMAC. The monitoring wells were installed to investigate subsurface impacts and conduct long-term monitoring of affected groundwater. They are not utilized for any beneficial use and will be plugged and abandoned upon completion of corrective action.

As detailed in the below Closure Request, the impacted soil at the Site was excavated to below the most stringent Table I Closure Criteria in the top four feet of the release extent. Additionally, the release was delineated vertically to below the most stringent Table I Closure Criteria at depths ranging from 4 feet to 11 feet bgs. Depth to water is well documented to be greater than 80 feet bgs near the Site, leaving virtually no pathway for chloride impacts in the shallow soil interval between 4 feet and 11 feet bgs to reach groundwater deeper than 80 feet in monitoring wells located over 800 feet away. Based on the documented water quality, use of the monitoring wells, distance between the wells and the release extent, the delineation and remediation activities completed at the Site, and lack of a pathway for the release to encounter groundwater, the monitoring wells are not being considered a sensitive receptor for this Site.

The closest continuously flowing or significant watercourse to the Site is an emergent wetland, located approximately 2,640 feet west of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet from a spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 10,000 mg/kg

A reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH applies to the top 4 feet of the pasture area that was impacted by the release, per NMAC 19.15.29.13.D (1) for the top 4 feet of areas that will be reclaimed following remediation.



#### SITE ASSESSMENT ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

Site assessment activities were conducted to evaluate the release extent based on information provided on the Form C-141 and visual observations. Four assessment soil samples (SS01 through SS04) were collected around the visible release extent at a depth of 0.5 feet bgs to confirm the lateral extent of the release. The release extent and soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site visit and a photographic log is included in Appendix B.

The assessment soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody procedures to Cardinal Laboratories for analysis of the following constituents of concern (COC): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 4500.

Laboratory analytical results for assessment soil samples SS01 through SS04, collected around the release extent, indicated that all COC concentrations were compliant with the most stringent Table I Closure Criteria and provided lateral definition of the release. Based on visible staining in the release area, delineation and excavation activities were warranted.

#### **EXCAVATION AND DELINEATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS**

Between September 6, 2023 and September 14, 2023, Ensolum personnel were at the Site to oversee excavation of impacted soil resulting from the February 23, 2023 produced water release. To direct excavation activities, soil was field screened for volatile aromatic hydrocarbons (VOCs) utilizing a calibrated photoionization detector (PID) and chloride Hach® chloride QuanTab® test strips. Excavation activities were performed utilizing a track-mounted backhoe and transport vehicles. The excavation was completed to depths ranging from 4 feet to 4.5 feet bgs.

Following removal of impacted soil, 5-point composite soil samples were collected every 200 square feet from the floor and sidewalls of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS36, FS11A, and FS17A were collected from the floor of the excavation at depths ranging from 4-feet to 4.5 feet bgs. Composite soil samples SW01 through SW16 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 4 feet bgs. The excavation soil samples were handled and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations were mapped utilizing a handheld GPS and are presented on Figure 3. Photographic documentation was completed during the Site visits and a photographic log is included in Appendix B.

Five potholes (PH01 through PH05) were advanced within the open excavation to depths ranging from 8 feet to 11 feet bgs. Soil from the potholes was field screened at 1-foot intervals for VOCs and chloride. Final depth of the potholes was determined by field screening results indicating compliance with the most stringent Table I Closure Criteria. Field screening results and observations for the potholes were logged on lithologic soil sampling logs, which are included in Appendix C. Two discrete delineation samples were selected from each pothole for laboratory analysis; the sample with the highest field screening result and the sample from the final pothole depth. The pothole and delineation soil sample locations are presented on Figure 2.

The excavation and delineation soil samples were handled following the same procedures as described above and submitted to Cardinal Laboratories for analysis of BTEX, TPH, and chloride.



Laboratory analytical results for excavation floor samples FS01 through FS10, FS11A, FS12 through FS16, FS17A, FS18 through FS36 and excavation sidewall samples SW01 through SW16, collected from the final excavation extent, indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirements for samples collected in the top four feet. Laboratory analytical results for excavation floor samples FS11 and FS17 initially exceeded the Site Closure Criteria for chloride; additional soil was removed from these areas and subsequent floor samples FS11A and FS17A were compliant.

Laboratory analytical results for the delineation samples collected from potholes PH01 through PH05 indicated all COC concentrations were compliant with the Site Closure Criteria. Additionally, the final depth delineation sample from each pothole, collected at a depth ranging from 8 feet to 11 feet bgs, was compliant with the most stringent Table I Closure Criteria and provided vertical delineation of the release. Laboratory analytical results are summarized on Table 1 and the complete laboratory analytical reports are included as Appendix D.

The excavation measured approximately 6,750 square feet in areal extent. A total of approximately 1,460 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Disposal Facility located in Hobbs, New Mexico. After completion of confirmation sampling, the excavation was secured with fencing.

#### **CLOSURE REQUEST**

Site assessment and excavation activities were conducted at the Site to address the February 23, 2023, release of produced water. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirements, where applicable. Additionally, the release was laterally and vertically delineated to below the most stringent Table I Closure Criteria. Based on the laboratory analytical results, no further remediation is required. Maverick will backfill the excavation with material purchased locally and recontour the Site to match pre-existing conditions.

Excavation of impacted soil has mitigated impacts at this Site. Depth to groundwater is well documented to be greater than 80 feet bgs and no sensitive receptors were identified near the release extent. The impacted soil at the Site was excavated to below the most stringent Table I Closure Criteria in the top four feet of the release extent. Additionally, the release was delineated vertically to below the most stringent Table I Closure Criteria at depths ranging from 4 feet to 11 feet bgs. Although there are four monitoring wells within 1,000 feet of the Site, they do not contain freshwater and are used only to monitor existing groundwater impacts. The groundwater that is present in the monitoring wells is over 70 feet deeper than the vertical extent of this release and over 800 feet away. Based on the documented water quality, use of the monitoring wells, the distance between the wells and the release extent, the delineation and remediation activities completed at the Site, and lack of a pathway for the release to encounter groundwater, the monitoring wells are not being considered a sensitive receptor for this Site.

Maverick believes the remedial actions completed are protective of human health, the environment, and groundwater and respectfully requests closure for Incident Number NAPP2307558601. NMOCD notifications are included in Appendix E and the final Form C-141 is included in Appendix F.



If you have any questions or comments, please contact Ms. Aimee Cole at (720) 384-7365 or acole@ensolum.com.

Sincerely, **Ensolum**, **LLC** 

Ronni Hayes

**Assistant Geologist** 

Aimee Cole

Senior Managing Scientist

cc: Bryce Wagoner, Maverick Natural Resources

Bureau of Land Management

#### Appendices:

Figure 1 Site Receptor Map

Figure 2 Assessment Soil Sample Locations

Figure 3 Excavation and Delineation Soil Sample Locations

Table 1 Soil Sample Analytical Results Appendix A Referenced Well Records

Appendix B Photographic Log

Appendix C Lithologic Soil Sampling Logs

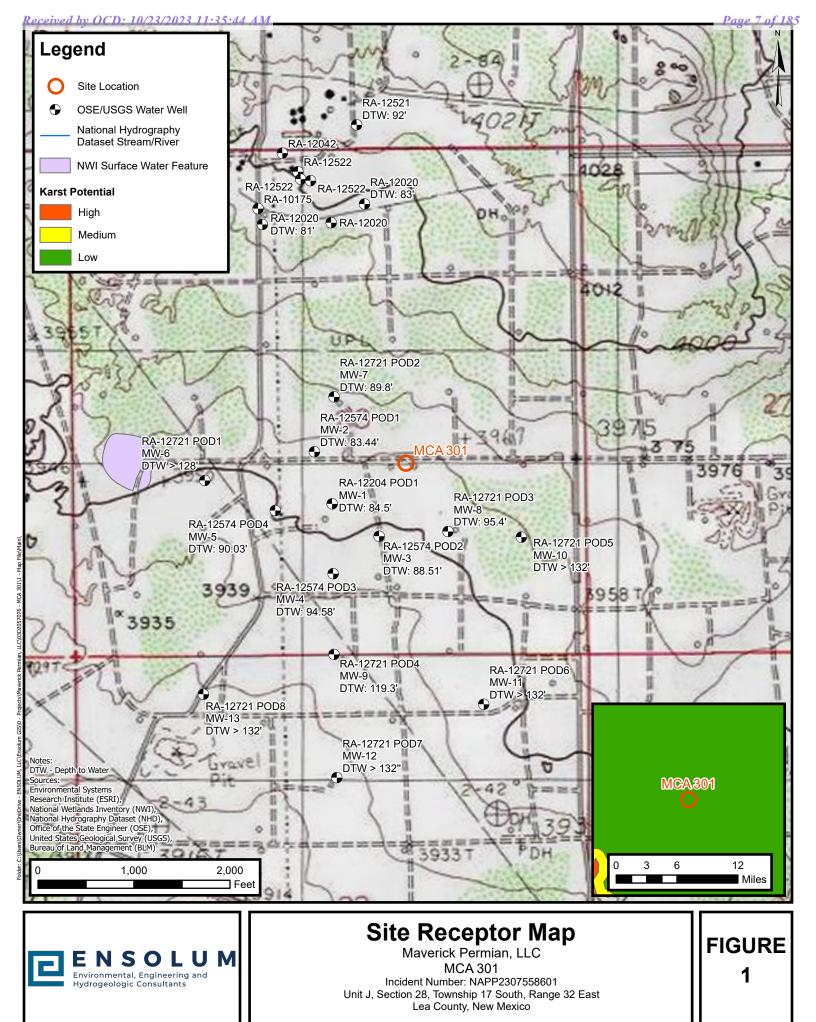
Appendix D Laboratory Analytical Reports & Chain of Custody Documentation

Appendix E NMOCD Notifications

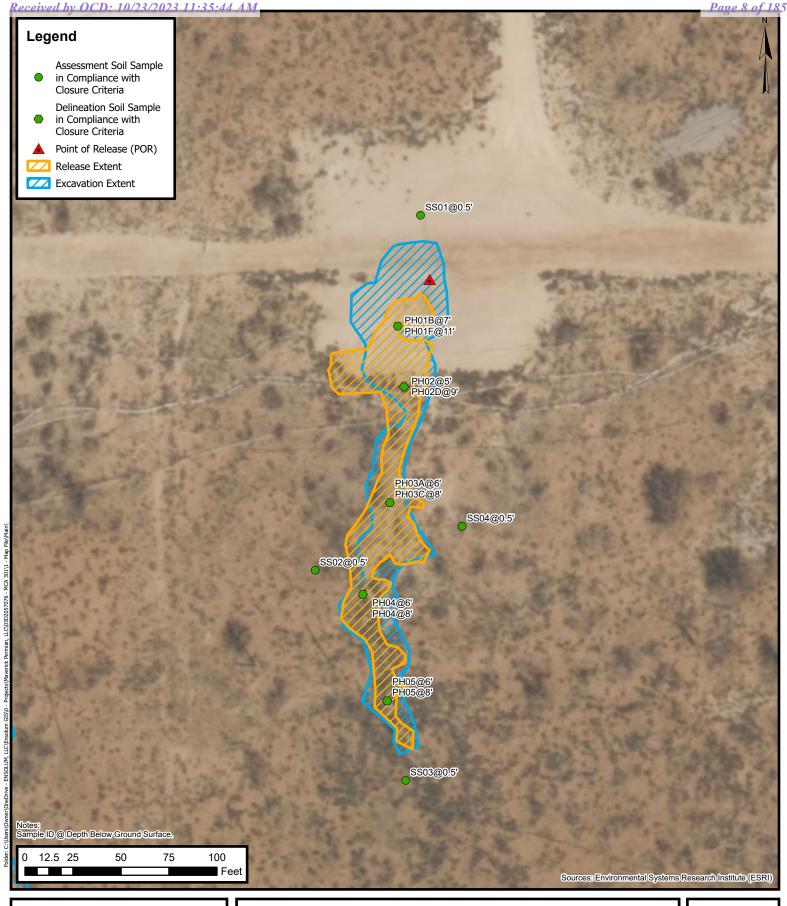
Appendix F Final C-141



**FIGURES** 



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### **Assessment and Delineation Soil Sample Locations**

Maverick Permian, LLC
MCA 301
Incident Number: NAPP2307558601
Unit J, Section 28, Township 17 South, Range 32 East
Lea County, New Mexico

FIGURE 2



### **Excavation Soil Sample Locations**

Maverick Permian, LLC
MCA 301
Incident Number: NAPP2307558601
Unit J, Section 28, Township 17 South, Range 32 East
Lea County, New Mexico

FIGURE 3



**TABLES** 



#### TABLE 1 **SOIL SAMPLE ANALYTICAL RESULTS** MCA 301 Maverick Natural Resources, LLC

					latural Resource ounty, New Mexid					
Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table	1 Closure Criteria (	NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	10,000
				Assess	ment Soil Samp	les				
SS01	9/14/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SS02	9/14/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SS03	9/14/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS04	9/14/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	544
				Deline	ation Soil Sampl	es				
PH01B	9/22/2023	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,000
PH01F	9/22/2023	11	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
PH02	9/11/2023	5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,120
PH02D	9/11/2023	9	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
PH03A	9/11/2023	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	6,400
PH03C	9/11/2023	8	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
PH04	10/4/2023	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,200
PH04A	10/4/2023	8	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
PH05	10/4/2023	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,320
PH05A	10/4/2023	8	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
				Excavation	on Floor Soil San	nples				
FS01	9/6/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS02	9/6/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	752
FS03	9/6/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,080
FS04	9/6/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,760
FS05	9/6/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,100
FS06	9/6/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	368
FS07	9/6/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	5,840
FS08	9/8/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	880
FS09	9/8/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,720
FS10	9/8/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,230



# TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS MCA 301

Maverick Natural Resources, LLC Lea County, New Mexico

				Lea Co	ounty, New Mexic	0				
Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1	l Closure Criteria (l	NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	10,000
FS11	9/8/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	18,000
FS11A	9/14/2023	4.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	5,600
FS12	9/8/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,000
FS13	9/8/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,490
FS14	9/8/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,520
FS15	9/8/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	6,960
FS16	9/8/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	768
FS17	9/8/2023	4	<0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	18,400
FS17A	9/14/2023	4.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,120
FS18	9/8/2023	4	<0.050	<0.300	<10.0	173	126	173	299	8,660
FS19	9/8/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	576
FS20	9/8/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,310
FS21	9/8/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,520
FS22	9/8/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,380
FS23	9/8/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,310
FS24	9/11/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,220
FS25	9/12/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,680
FS26	9/12/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,040
FS27	9/12/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,740
FS28	9/12/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	9,120
FS29	9/14/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
FS30	9/14/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	496
FS31	9/14/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	656
FS32	9/14/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	592
FS33	9/14/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	672
FS34	9/14/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	624
FS35	9/14/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	496
FS36	9/14/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128



# TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS MCA 301

Maverick Natural Resources, LLC Lea County, New Mexico

				Lea Ct	builty, New Mexic	,U				
Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table	1 Closure Criteria (	NMAC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	10,000
				Excavation	Sidewall Soil Sa	ımples				
SW01*	9/6/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SW02*	9/6/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW03*	9/6/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW04*	9/6/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW05*	9/6/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SW06*	9/8/2023	0-4	<0.050	<0.300	<10.0	55.8	41.0	55.8	96.8	192
SW07*	9/8/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
SW08*	9/8/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
SW09*	9/8/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	432
SW10*	9/8/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
SW11*	9/8/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
SW12*	9/8/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW13*	9/8/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW14*	9/12/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208
SW15*	9/12/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224
SW16*	9/12/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256

#### Notes:

bgs: below ground surface mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes Concentrations in **bold** exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable. GRO: Gasoline Range Organics
DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

Grey text represents samples that have been excavated

\* indicates sample was collected in area to be reclaimed after remediation is complete; reclamation standard in the top 4 feet is 600 mg/kg for chloride and 100 mg/kg for TPH.



**APPENDIX A** 

Referenced Well Records



# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

 Well Tag
 POD Number
 Q64 Q16 Q4 Sec
 Tws
 Rng
 X
 Y

 NA
 RA 12721 POD3
 2
 3
 4
 28
 17S
 32E
 615417
 3629979

**Driller Name:** JOHN W WHITE

**Drill Start Date:** 04/18/2019 **Drill Finish Date:** 04/19/2019 **Plug Date:** 

Log File Date:05/15/2019PCW Rcv Date:Source:ShallowPump Type:Pipe Discharge Size:Estimated Yield:0 GPM

Casing Size: 2.00 Depth Well: 115 feet Depth Water:

Water Bearing Stratifications: **Bottom Description** Top 88 Sandstone/Gravel/Conglomerate 111 Shale/Mudstone/Siltstone 112 Shale/Mudstone/Siltstone 114 Sandstone/Gravel/Conglomerate **Casing Perforations:** Top **Bottom** 85 115

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

3/13/23 4:07 PM

LOCATION 342 175

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R 32E

Sec 28



### WELL RECORD & LOG

#### OFFICE OF THE STATE ENGINEER

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2019 12 / 5 /27 13 / 25

NA

WELL TAG ID NO.

PAGE 1 OF 2

	OSE POD NO	. (WELL NO.	)		WELL TAG ID NO	).		OSE FILE NO(	S).		
NO.	MW-8		POD3					RA-12721			. !
AND WELL LOCATION	WELL OWNE ConocoPhi		pany				. ,,	PHONE (OPTI- 432-258-34:	-		
TT	WELL OWNE			<del></del>				CITY		STATE	ZII
WE	901 W Wat	Suite	: 100	<del> </del>				Midland		TX	79701
GENERAL AND	WELL LOCATION (FROM GP	s)   L(1)	ITUDE	32 103	48 46	SECO: 6.1	23 <sub>N</sub>	1	REQUIRED: ONE TEN	TH OF A SECOND	
1. GEN	DESCRIPTION MCA 357		G WELL LOCATION TO	STREET ADDE	RESS AND COMMO	N LANDM	IARKS – PLS	S (SECTION, TO	WNSHJIP, RANGE) WI	IERE AVAILABLE	:
	LICENSE NO. WD-1		NAME OF LICENSED		John W. White				NAME OF WELL DR White I	ILLING COMPANY  Orilling Company, Inc.	
	DRILLING ST 04/18/2		DRILLING ENDED 04/19/2019	DEPTH OF CO	MPLETED WELL (F 115.0	T)	BORE HO	LE DEPTH (FT)	DEPTH WATER FIR	ST ENCOUNTERED (FT	) :
Z	COMPLETED	WELL IS:	ARTESIAN	DRY HOL	LE Z SHALLO	OW (UNCO	ONFINED)		STATIC WATER LE	VEL IN COMPLETED W 92.8	ELL (FT)
VII.	DRILLING FI	.UID:	✓ AIR	☐ MUD	ADDITI	VES - SPE	CIFY:				
RM.	DRILLING M	ETHOD:	ROTARY	П наммен	R CABLE	TOOL	OTHE	R-SPECIFY:			
2. DRILLING & CASING INFORMATION	DEPTH (	(feet bgl)	BORE HOLE DIAM	(include	MATERIAL ANI GRADE each casing string	, and	CONN	ASING VECTION YPE	CASING INSIDE DIAM.	CASING WALL THICKNESS (inches)	SLOT SIZE (inches
CAS	-2.7	85.0	(inches)		sections of screen Sch. 40 PVC	)	(add coup	ting diameter)	(inches)	1/4"	(Manao
જુ	85.0	115.0	6.0		Sch. 40 PVC			reads	2.0	1/4"	.010
CLIN					****						
DRII											
<b>~</b> i											
		<del></del>									<del>                                     </del>
											:
:											
	DEPTH (	(feet bgl)	BORE HOLE	LI	ST ANNULAR S	EAL MA	TERIAL A	ND	AMOUNT	МЕТНО	
IAL	FROM	то	DIAM. (inches)		VEL PACK SIZE				(cubic feet)	PLACE	MENT
TER	0.0	10.0	6.0	1	Type 2 Portland C			ite	1.963	Pump Mix w/	<del></del>
MA	10.0	82.0	6.0			nite Chip	08		21 Bags	Hand	
ANNULAR MATERIAL	82.0	115.0	6.0		20/-	40 Sand			16 Bags	Hand	Mix
3. ANN											
	OSE INTER	NAL USE			POD NO	<u></u>	~ ``` ``	WR-20		& LOG (Version 04/3	30/19)

					_					
	DEPTH (:	feet bgl) TO	THICKNESS (feet)	INCLUDE WAT	ND TYPE OF MATERIAL E ER-BEARING CAVITIES O pplemental sheets to fully d	R FRACTURE ZONI	ES	WA' BEAR (YES	ING?	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	0.0	0.5	0.5		Caliche base			Y	√ N	
	0.5	5.5	5.0		Brown sand/clayey sand	d		Y	√ N	
	5.5	22.0	16.5		Caliche			Y	√N	
	22.0	34.0	12.0		Tan brown sand/sandsto	ne		Y	✓ N	
	34.0	35.0	1.0		Tan brown sand/sandstone g	gravel		Y	✓ N	
د.	35.0	44.0	9.0		Brown sand/sandstone			Y	√N	
VEL.	44.0	47.0	3.0		Light brown sand w/grav	rel		Y	√ N	
OF V	47.0	66.0	19.0		Light tan/brown sand/sands			Y	√N	
50	66.0	67.0	1.0		Brown sand/sandstone		•	Y	✓ N	
IC L	67.0	72.0	5.0	-	Light brown sand/sandsto	one		Y	√ N	
4. HYDROGEOLOGIC LOG OF WELL	72.0	83.0	11.0		Green/tan sandstone		<del></del>	Y	√N	·····
EOI	83.0	86.0	3.0	Ye	llow/brown and green/brown	sandstone		Y	√ N	
ROG	86.0	88.0	2.0	Congl	lomerated green/gray sandstor	ne and gravel		Y	✓ N	
(AXP	88.0	111.0	23.0		Green/gray sandstone			✓ Y	N	
4. F	111.0	112.0	1.0		Gray silty shale		,	✓ Y	N	
	112.0	114.0	2.0		Dark reddish brown silty s	hale		✓ Y	N	
	114.0	115.0	1.0		Reddish brown sandstor	ne	·	<b>√</b> Y	N	
	115.0	116.0	1.0		Dark reddish brown silty s	hale		✓ Y	N	
								Y	N	
								Y	N	
								Y	И	
	METHOD U	SED TO ES	TIMATE YIELD	OF WATER-BEARIN	NG STRATA:		TOT	AL ESTIN	1ATED	
	PUM	Р Па	IR LIFT	BAILER O	THER - SPECIFY:		WEI	LL YIELD	(gpm):	0.00
VISION	WELL TES	STAR	RESULTS - ATT I TIME, END TI	ACH A COPY OF DA ME, AND A TABLE S	TA COLLECTED DURING HOWING DISCHARGE AN	WELL TESTING, IN ID DRAWDOWN OV	CLUDI ER TH	NG DISC E TESTIN	HARGE N IG PERIO	ИЕТНОD, D.
TEST; RIG SUPERVISION										
TES	PRINT NAM	Æ(S) OF D	RILL RIG SUPEI	RVISOR(S) THAT PRO	OVIDED ONSITE SUPERVI	SION OF WELL CO	NSTRU	CTION O	THER TH	AN LICENSEE:
5.	William B.	Atkins								
SIGNATURE	RECORD O	F THE ABO	VE DESCRIBED	WELL. I ALSO CER	OF MY KNOWLEDGE AN TIFY THAT THE WELL TA HOLDER WITHIN 30 DAYS	G, IF REQUIRED, H.	AS BEE	N INSTA	LLED AN	ID THAT THIS
6. SIGN		ha						5/7/	2019	
Ī		SIGNAT	URE OF DRILLE	ER / PRINT SIGNEE	NAME				DATE	
TO!	R OSE INTER	NAI IIGE				W/D_20 W/I	ים ווי	ርርያህ ይ	I OG OV~	sion 04/30/2019)
	E NO. $\mathcal{K}$	A-12	771		POD NO. 3	TRN NO.		<u>550</u>	5	SIGII 0-1/30/2017)
LO	CATION	3 42	Sec 2	8 T/75	R32 F	WELL TAG ID NO	<u> </u>			PAGE 2 OF 2

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NA

### New Mexico Office of the State Engineer

# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE)

28

17S

(quarters are smallest to largest)

(NAD83 UTM in meters)

614645

Well Tag **POD Number** Q64 Q16 Q4 Sec Tws Rng RA 12721 POD1

 $\mathbf{X}$ 

3630141

**Driller License:** WHITE DRILLING COMPANY 1456 **Driller Company:** 

**Driller Name:** JOHN W WHITE

**Drill Start Date:** 04/18/2019 **Drill Finish Date:** 04/19/2019 **Plug Date:** 04/19/2019

Log File Date: 05/15/2019 **PCW Rcv Date:** Source:

**Pump Type:** Pipe Discharge Size: **Estimated Yield: Casing Size:** Depth Well: Depth Water: 2.00 125 feet

> **Casing Perforations:** Top **Bottom**

85 125

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

3/13/23 4:06 PM



### WELL RECORD & LOG

### OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

-	OSE POD NO	). (WELL NO			ELL TAG ID NO.			OSE FILE NO	S).		
GENERAL AND WELL LOCATION	MW-6		POD					RA-12721			
CAT	WELL OWN							PHONE (OPTI- 432-258-34:			
Ţ,	WELL OWN							CITY		STATE	ZIP
ELL	901 W Wa							Midland		TX	79701
À			Dr	COPERA	MINUTES	argo Mrs					
AN	WELL			GREES 32	48	SECONDS 11.78	2.7	* ACCURACY	REQUIRED: ONE TEN	TH OF A SECOND	
RAI	LOCATIO (FROM GF	2S) E21	TTUDE	103	46	31.79	N W		QUIRED: WGS 84		
ENE		LO	(GITUDE					C (SECTION TO	THE PARTY OF THE P		
5	MCA 357	ON RELATIN	G WELL LOCATION TO	STREET ADDRES	S AND COMMON L	ANDMARKS -	- PLS	is (SECTION, TO	WNSHJIP, RANGE) WH	ERE AVAILABLE	
	WICA 337									<u> </u>	
	LICENSE NO		NAME OF LICENSED						NAME OF WELL DR		
	WD-1				nn W. White					Prilling Company, Inc	
	DRILLING S' 04/18/		DRILLING ENDED 04/19/2019		LETED WELL (FT) 125.0	BORE	HOI	LE DEPTH (FT)	DEPTH WATER FIR	ST ENCOUNTERED (F1 Dry	T)
	0-1/10/		04/15/2015						STATIC WATER LE	ZEL IN COMPLETED W	TIL (ET)
	COMPLETE	D WELL IS:	ARTESIAN	DRY HOLE	SHALLOW	(UNCONFINE	D)		STATIC WATER LEV	Dry	ELL (FI)
CASING INFORMATION	DRILLING FI	LIMP	✓ AIR	MUD	ADDITIVES	_ SPECIFY:	<del></del>				<del></del>
MAT	DRILLING M		ROTARY	HAMMER	CABLE TOO		THE	R ~ SPECIFY:		_	
for			KOTAKT				1111	K-SILCH I.	T	T	
Z		(feet bgl)	BORE HOLE		ATERIAL AND/C GRADE	i		ASING	CASING	CASING WALL	SLOT
SIING	FROM	ТО	DIAM (inches)		h casing string, an	ıd	T	NECTION TYPE	INSIDE DIAM. (inches)	THICKNESS (inches)	SIZE (inches)
	-2.7	85.0	6.0		tions of screen)	(add	_	ling diameter) hreads	2.0	1/4"	
DRILLING &	85.0	125.0	6.0		1. 40 PVC			reads	2.0	1/4"	.010
LIN											
RIL		<b></b>						·			<del>                                     </del>
2. D								·			<del></del>
									-		
			-								
	<u> </u>			<u> </u>						<u> </u>	<del></del> _
<u>,</u>	DEPTH (feet bgl)  BORE HOLE  LIST ANNULAR SEAL MATE DIAM. (inches)  GRAVEL PACK SIZE-RANGE B								AMOUNT (cubic feet)	METH( PLACE	
RIA	FROM TO DIAM. (menes) GRAVEL PACK SIZE-RANGE B  0.0 10.0 6.0 Type 2 Portland Cement w/5%								1.963	Pump Mix w	
VTE	10.0 82.0 6.0 Bentonite Chips						nton	1116	1.963 25 Bags	Hand	
ANNULAR MATERIAL	82.0 125.0 6.0 20/40 Sand					· <del>-</del>			25 Bags 16 Bags	Hand	
LAI	02.0 123.0 0.0 20/40 Sand								10 0480		
NNC											
3. A											
										_	
FOR	OSE INTER	NAI IISE						137D 20	0 WELL RECORD	& LOG (Version M/	30/19)

645505 FILE NO. RA-12721 POD NO. TRN NO. Se 28 PAGE 1 OF 2 WELL TAG ID NO.

	DEPTH (		THICKNESS	1	ND TYPE OF MATERIAL F ER-BEARING CAVITIES O		i	ATER ARING?	ESTIMATED YIELD FOR WATER-
	FROM	ТО	(feet)	(attach su	pplemental sheets to fully d	lescribe all units)	(YI	ES / NO)	BEARING ZONES (gpm)
	0.0	0.5	0.5		Base caliche		Y	√ N	
	0.5	9.0	8.5		Brown sand/clayey san	d	Y	√ N	
	9.0	13.0	4.0		Light brown/tan sand		Y	√N	
	13.0	19.0	6.0		Brown sand w/gravel		Y	√ N	
	19.0	40.0	21.0		Brown sand/sandstone		Y	√N	
<b>T</b> 7	40.0	42.0	2.0		Brown sand w/gravel		Y	<b>√</b> N	
4. HYDROGEOLOGIC LOG OF WELL	42.0	48.0	6.0		Brown/reddish brown claye	y sand	Y	✓ N	
OF	48.0	53.0	5.0	Bro	own/reddish brown silty sand	/sandstone	Y	✓ N	
507	53.0	60.0	7.0		Brown silty sand w/grav	/el	Y	✓ N	
:IC]	60.0	68.0	8.0		Brown silty sand/sandsto	one	Y	✓ N	
)TO(	68.0	85.0	17.0		Conglomerated sandstone an	d gravel	Y	√ N	
GEO	85.0	95.0	10.0	E	Brown/reddish brown silty sa	ndstone	Y	√ N	
RO	95.0	125.0	20.0	Dark l	brown silty shale w/gray silty	shale mixed	Y	√N	
_ HXI							Y	N	
4.							Y	N	
							Y	N	
							Y	N	
			"				Y	N	
							Y	N	
							Y	N	
							Y	N	
	METHOD U	SED TO ES	TIMATE YIELD	OF WATER-BEARIN	IG STRATA:		TOTAL EST		0.00
	PUM	P A	IR LIFT	BAILER O	THER - SPECIFY:	· · · · · · · · · · · · · · · · · · ·	WELL YIE	LD (gpm):	0.00
ON	WELL TES	TEST STAR	RESULTS - ATT T TIME, END TI	ACH A COPY OF DA ME, AND A TABLE S	TA COLLECTED DURING HOWING DISCHARGE AN	WELL TESTING, INC ND DRAWDOWN OV	CLUDING DIS ER THE TEST	SCHARGE I	METHOD, DD.
TEST; RIG SUPERVISIO	MISCELLA	NEOUS INF	ORMATION:	* #					
PER									
S.									
, RIC									
EST	PRINT NAN	Æ(S) OF D	RILL RIG SUPE	RVISOR(S) THAT PRO	OVIDED ONSITE SUPERV	ISION OF WELL CON	STRUCTION	OTHER TH	IAN LICENSEE:
5. T	William B.	• •			ON THE BOILERY			OTILIAN IZ.	an Diebrose.
RE	RECORD O	F THE ABO	VE DESCRIBED	WELL, I ALSO CERT	OF MY KNOWLEDGE AN FIFY THAT THE WELL TA HOLDER WITHIN 30 DAY	G, IF REQUIRED, HA	S BEEN INS	TALLED AT	ND THAT THIS
ATU	WELLKIN	OKD WILL	ALSO DE JALED	, with the textili	HODDER WITHIN SODAT	S AI TER THE COM	DETION OF V	ELL DIGE	ZING.
SIGNATURE		$\lambda$	( -				5	/7/2019	
9		SIGNAL	URE OF DRILLE	ER / PRINT SIGNEE	NAME			DATE	
		//							
	R OSE INTER E NO.   \( \) \( \)	NAL WSE	7) [		POD NO.	WR-20 WF TRN NO.	LL RECORD 上しとァ	<u>&amp; LOG (Ve</u>	rsion 04/30/2019)
<del> </del>	CATION )	-14/	<u>~ </u> TI:	75 R32F	(4)	WELL TAG ID NO.	1 / A	<u>U.</u>	PAGE 2 OF 2
1_20		<u>- ) [] </u>	( ' (	<u> </u>	<u> </u>	I WELL I AG ID NO.	, v· ,		1

John R. D Antonio, Jr ?.E. State Engineer



Roswell Office 1900 WEST SECOND STREET ROSWELL, NM 88201

#### STATE OF NEW MEXICO OFFICE OF THE STATE ENGINEER

Trn Nbr:

645505

File Nbr:

RA 12721

Well File Mbr: RA 12721 POD1

May. 28, 2019

JULIE EVANS, TETRA TECH AGENT CONOCOPHILLIPS COMPANY 901 W WALL ST SUITE 100 MIDLAND, TX 79701

#### Greetings:

The above numbered permit was issued in your name on 04/16/2019.

The Well Record was received in this office on 05/15/2019, stating that it had been completed on 04/19/2019, and was a dry well. The well is to be plugged according to 19.27.4.30 NMAC.

Please note that another well can be drilled under this permit if the well is completed and the well log filed on or before 04/30/2020.

If you have any questions, please feel free to contact us.

Sincerely,

Andrew Dennis (575) 622 - 6521

drywell



# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

 Well Tag
 POD Number
 Q64 Q16 Q4
 Sec
 Tws
 Rng
 X
 Y

 NA
 RA 12721 POD4
 1
 1
 2
 33
 178
 32E
 615055
 3629589

**Driller Name:** JOHN W WHITE

**Drill Start Date:** 04/18/2019 **Drill Finish Date:** 04/19/2019 **Plug Date:** 04/19/2019

**Log File Date:** 05/15/2019 **PCW Rcv Date: Source:** 

**Pump Type:** Pipe Discharge Size: Estimated Yield: 0 GPM

Casing Size: 6.00 Depth Well: 140 feet Depth Water:

Casing Perforations: Top Bottom

90 130

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

3/13/23 4:07 PM

LOCATION [2] TITS R32E Released to Imaging: 2/13/2024 2:26:32 PM PAGE 1 OF 2

WELL TAG ID NO.



### WELL RECORD & LOG

#### OFFICE OF THE STATE ENGINEER

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	OSE POD NO.	(WELL NO.	)		WELL TAG ID NO.			OSE FILE NO(S	S).		-
Ö	MW-9	-	PODY					RA-12721			1
GENERAL AND WELL LOCATION	WELL OWNER ConocoPhil		pany	<u> </u>				PHONE (OPTIO 432-258-345			
Ľ	WELL OWNER	R MAILING	ADDRESS	<del></del> -				CITY		STATE	ZIP
WEL	901 W Wall	St, Suite	: 100					Midland		TX	79701
Q	WELL		DE	GREES	MINUTES	SECONDS					<del></del>
VL A	LOCATION	LAT	TTUDE	32	47	53.70	N		REQUIRED: ONE TENT	TH OF A SECOND	: - : :
ER/	(FROM GPS	) LON	IGITUDE	103	46	16.27	W	* DATUM REC	QUIRED: WGS 84		
1. GEN	DESCRIPTION MCA 357	N RELATIN	G WELL LOCATION TO	STREET ADDRI	ESS AND COMMON	LANDMARK	S – PLS	S (SECTION, TO	WNSHJIP, RANGE) WH	ERE AVAILABLE	
	LICENSE NO.		NAME OF LICENSED	DRILLER				<u> </u>	NAME OF WELL DRI	LLING COMPANY	
	WD-14	<b>1</b> 56		J	John W. White				White D	rilling Company, Inc	3.
	DRILLING ST. 04/18/2		DRILLING ENDED 04/19/2019	DEPTH OF COM	APLETED WELL (FT) 140.0	) Во	RE HO	LE DEPTH (FT)	DEPTH WATER FIRE	ST ENCOUNTERED (FT Dry	)
z	COMPLETED	WELL IS:	ARTESIAN	Z DRY HOLI	E SHALLOV	W (UNCONFI	NED)		STATIC WATER LEV	EL IN COMPLETED W	ELL (FT)
T10	DRILLING FL	UID:	✓ AIR	MUD	ADDITIVE	ES – SPECIFY	<u> </u>				<del></del> ;
DRMA	DRILLING ME	THOD:	ROTARY	HAMMER	CABLE TO	OOL .	ОТНЕ	R – SPECIFY:			
CASING INFORMATION	DEPTH (I	feet bgl) TO	BORE HOLE DIAM		MATERIAL AND GRADE			ASING NECTION	CASING INSIDE DIAM	CASING WALL THICKNESS	SLOT SIZE
NISI			(inches)		ach casing string, a ections of screen)			YPE ling diameter)	(inches)	(inches)	(inches)
	-2.7	90.0	6.0		Sch. 40 PVC			hreads	2.0	1/4"	
2. DRILLING &	90.0	130.0	6.0	S	Sch. 40 PVC		T	nreads	2.0	1/4"	.010
ITT!											
DR					<del></del>						<u> </u>
7											1
				<u>                                     </u>							
			-								-
								<del></del>		=	
	DEPTH (	feet bgl)	BORE HOLE	LIS	T ANNULAR SE	AL MATE	RIAL A	AND	AMOUNT	METHO	OD OF
ΑΓ	FROM	TO	DIAM. (inches)		VEL PACK SIZE-				(cubic feet)	PLACE	
ERI	0.0	10.0	6.0	T	ype 2 Portland Cer	ment w/5%	Bentor	nite	1.963	Pump Mix w/	Tremie Pipe
IAT	10.0	85.0	6.0	<u> </u>	Benton	ite Chips			23 Bags	Hand	Mix
ARD	85.0	130.0	6.0		20/40	0 Sand			16 Bags	Hand	Mix
ANNULAR MATERIAL											
3. A											
FOT	ORE DITTER	MAT HOP		<u> </u>	<del></del>			W/D 0	0 WELL RECORD	& LOG Wersion 04F	30/19)
	e no R A	NAL USE 1 ~- 17	-77		POD NO.	Ч		TRN 1			55/12)

			1		<del></del>	
	DEPTH (	feet bgl) TO	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)
	0.0	4.5	4.5	Brown sand w/clayey sand	Y √N	
	4.5	10.0	5.5	Light brown sand	Y √N	
	10.0	15.0	5.0	Brown sand w/gravel	Y √N	
	15.0	57.0	42.0	Brown sand/sandstone	Y √N	
	57.0	59.0	2.0	Light brown sand/sandstone	Y <b>√</b> N	
Ţ	59.0	63.0	4.0	Green/brown sandstone	Y √N	
WEI	63.0	67.0	4.0	Conglomerated gray/green sandstone w/gravel	Y ✓N	
OF	67.0	72.0	5.0	Green/gray sandstone	Y ✓N	
OC	72.0	75.0	3.0	Dark brown sandstone	Y ✓N	
ж	75.0	93.0	18.0	Layers of brown, green/gray and dark green/gray sandstone	. Y <b>√</b> N	
LOG	93.0	118.0	25.0	Light gray/green sandstone	Y ✓N	
3EO	118.0	119.0	1.0	Gray silty shale	Y √N	
RO	119.0	136.0	17.0	Red silty shale	Y ✓N	
4. HYDROGEOLOGIC LOG OF WELL	136.0	137.0	1.0	Gray sandstone	Y ✓N	
4	137.0	140.0	3.0	Red/brown silty shale	Y ✓N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
	METHOD U	SED TO ES	TIMATE YIELD	OF WATER-BEARING STRATA:	TOTAL ESTIMATED	
	☐ PUM:	P 🔲A	IR LIFT	BAILER OTHER – SPECIFY:	WELL YIELD (gpm):	0.00
NOI	WELL TES	TEST STAR	RESULTS - ATT I TIME, END TI	ACH A COPY OF DATA COLLECTED DURING WELL TESTING, INC ME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVE	LUDING DISCHARGE ER THE TESTING PERIO	METHOD, DD.
TEST; RIG SUPERVISION	MISCELLA	NEOUS INF	FORMATION: Pl	ugged back from 130-140 w/3 Bags of Bentonite	****	
IG SUF						
T; R						
TES	PRINT NAM	Æ(S) OF DI	RILL RIG SUPEI	RVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CON-	STRUCTION OTHER T	IAN LICENSEE:
ιń	William B.	Atkins				
	DV SIGNIN	G PELOW	I CEPTIEV TU	TAT TO THE BEST OF MY KNOW! FDGE AND BUTTER THE FOR	ECOING IS A TRIE A	ND CODDECT
TURE	RECORD O	F THE ABO	VE DESCRIBED	IAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE FOR WELL. I ALSO CERTIFY THAT THE WELL TAG, IF REQUIRED, HA WITH THE PERMIT HOLDER WITHIN 30 DAYS AFTER THE COMPL	S BEEN INSTALLED A	ND THAT THIS
6. SIGNATURE			W		5/7/2019	·
	-	SIGNAT	URE OF DRILLE	ER / PRINT SIGNEE NAME	DATE	
EO	R OSE INTER	NAT FOR		WD 40 WD	TI DECORD & LOC GI-	raion 04/30/2010
		4 · 12	771	POD NO. 4 TRN NO.	LL RECORD & LOG (Ve	151011 04/50/2019)
<b> </b>	CATION	71	\$178 R	32 F Sec 3 3 WELL TAG ID NO.	NIA CO	PAGE 2 OF 2

John R. D Antonio, Jr., P.E. State Engineer



Roswell Office 1900 WEST SECOND STREET ROSWELL, NM 88201

# STATE OF NEW MEXICO OFFICE OF THE STATE ENGINEER

Trn Nbr:

645505

File Mbr:

RA 12721

Well File Nbr: RA 12721 POD4

May. 28, 2019

JULIE EVANS, TETRA TECH AGENT CONOCOPHILLIPS COMPANY 901 W WALL ST SUITE 100 MIDLAND, TX 79701

#### Greetings:

The above numbered permit was issued in your name on 04/16/2019.

The Well Record was received in this office on 05/15/2019, stating that it had been completed on 04/19/2019, and was a dry well. The well is to be plugged according to 19.27.4.30 NMAC.

Please note that another well can be drilled under this permit if the well is completed and the well log filed on or before 04/30/2020.

If you have any questions, please feel free to contact us.

Sincerely,

Andrew Dennis (575)622-6521

drywell



# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

 Well Tag
 POD Number
 Q64 Q16 Q4 Sec
 Tws
 Rng
 X
 Y

 NA
 RA 12721 POD5
 2 4 4 28 178 32E
 615650 3629961
 3629961

**Driller Name:** WHITE, JOHNNOWN.GENER

**Drill Start Date:** 04/27/2020 **Drill Finish Date:** 04/28/2020 **Plug Date:** 

**Log File Date:** 05/18/2020 **PCW Rcv Date:** Source: Shallow

Pump Type: Pipe Discharge Size: Estimated Yield:

Casing Size: 2.00 Depth Well: 130 feet Depth Water: 124 feet

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability for any particular purpose of the data.

3/13/23 4:07 PM



	T											
z	OSE POD NO	. (WELL NO	PME		WELL TAG ID NO.			OSE FILE NO	S).			
110	WELL OWN	ED NAME(S	<u> 10リン</u>				-	PHONE (OPTION	ONALI			
CA	ConocoPhi		•					432-258-345				
21.0	WELL OWN	ER MAILIN	G ADDRESS					CITY		STATE		ZIP
/EL	901 W Wa							Midland		TX		79701
ē			DE	GREES	MINUTES	SECONI	DS					
LAN	WELL LOCATIO	N TA	ATITUDE	32	48	5.56	5 N	* ACCURACY	REQUIRED: ONE TEN	ГН OF A SECO	ND	
GENERAL AND WELL LOCATION	(FROM GP	PS)		103	45	53.2		* DATUM REG	QUIRED: WGS 84			
EN	DESCRIPTION		NG WELL LOCATION TO	STREET ADDRI	ESS AND COMMON	LANDMA	RKS – PLS	S (SECTION, TO	WNSHJIP, RANGE) WH	ERE AVAILAE	BLE	
1.0	MCA 357											
	L I CENTOR NO		NAME OF LIGHTED	DDHIED					NAME OF WELL DR	II I INC COLM	ANIX	
	LICENSE NO WD-1		NAME OF LICENSED		ohn W. White					rilling Comp		
	DRILLING S	TARTED	DRILLING ENDED	DEPTH OF COM	IPLETED WELL (FT	Γ)	BORE HOI	LE DEPTH (FT)	DEPTH WATER FIR	ST ENCOUNTE	ERED (FT)	
	04/27/	2020	04/28/2020		130.0					124.25		
	COMPLETE	DAMELL IC.	☐ ARTESIAN	DRY HOLE	E SHALLOV	W (UNCON	(ED/ED)		STATIC WATER LEV		ETED WE	LL (FT)
NO.	COMPLETE	WELL IS.	ARTESIAN		SHALLON	w (UNCON	NFINED)			124.25		
ATI	DRILLING F	LUID:	✓ AIR	☐ MUD	ADDITIVI	ES – SPECI	IFY:					
CASING INFORMATION	DRILLING M	IETHOD:	✓ ROTARY	☐ HAMMER	CABLE TO	OOL	OTHE	R – SPECIFY:				
INFC	DEPTH	(feet bgl)	BORE HOLE	CASING N	MATERIAL AND	/OR	CA	SING	CASING	CASING	WALL	SLOT
NG ]	FROM	TO	DIAM	(include e	GRADE ach casing string,	and	CONN	IECTION	INSIDE DIAM.	THICK	NESS	SIZE
'ASI		,	(inches)	note se	ections of screen)		(add coupl	YPE ing diameter)	(inches)	(inche		(inches)
	-2.7	90.0	6.0		Sch. 40 PVC			reads	2.0	1/4'		
2. DRILLING &	90.0	130.0	6.0	S	Sch. 40 PVC		Th	reads	2.0	1/4'	'	.010
III												
D.												
												<u></u>
	DEPTH	(feet bgl)	BORE HOLE	LIS	T ANNULAR SE	EAL MAT	ERIAL A	.ND	AMOUNT		метно	D OF
IAL	FROM	ТО	DIAM. (inches)	GRAV	EL PACK SIZE-	RANGE	BY INTE	RVAL	(cubic feet)	1	PLACEN	MENT
TER	0.0	10.0	6.0	Туре	2 Portland Cemer			Grout	1.963	Pump		remie Pipe
MA.	10.0	87.0	6.0			ite Chips			22 Bags		Hand I	
ANNULAR MATERIAL	87.0	130.0	6.0		20/40	0 Sand			16 Bags		Hand I	Mix
JAN.				-								
હ								-				
	0.05 = :			1								
FOR	OSE INTER	NAL USE	1 / 2 =	2 1	POD NO			WR-20	WELL RECORD	& LOG (Vers	sion 04/3	0/19)

FILE NO. | POD NO. | TRN NO. | C70406 |
LOCATION | 175.32£.26.442 | WELL TAG ID NO. | PAGE 1 OF 2

	DEPTH (	feet bgl)		COLOR AN	ID TYPE OF MATERIAL F	NCOINTERED .		337.4.7	cen	ESTIMATED
	FROM	то	THICKNESS (feet)	INCLUDE WATE	ER-BEARING CAVITIES (  oplemental sheets to fully of	OR FRACTURE ZO	NES	WAT BEAR (YES	ING?	YIELD FOR WATER- BEARING ZONES (gpm)
-	0.0	0.5	0.5		Caliche base			Y	✓ N	(Br)
İ	0.5	2.0	1.5		Brown sand/sandstone	<del></del> Đ		Y	✓ N	
ŀ	2.0	3.0	1.0		Red/brown sand/sandsto	one		Y	✓ N	
ŀ	3.0	17.0	14.0		Caliche			Y	✓N	
-	17.0	28.0	11.0	****	Light brown sand/sandst	one		Y	✓ N	
ار	28.0	37.0	9.0		Red/brown sand/sandsto			Y	✓ N	
4. HYDROGEOLOGIC LOG OF WELL	37.0	42.0	5.0		Light brown sand/sandst	one		Y	✓N	
OF V	42.0	49.0	7.0		Red/brown silty sandsto			Y	✓N	
90	49.0	52.0	3.0		Gray sandstone			Y	√N	
101	52.0	60.0	8.0	Purple,	gray and light brown layers	s of sandstone		Y	✓ N	
50	60.0	80.0	20.0		Purple/brown sandstor			Y	√N	
EOI	80.0	98.0	18.0		Brown and tan sandsto	ne		Y	✓ N	
90g	98.0	109.0	11.0	1.40-77.0	Light gray tan sandtsto			Y	√N	
<u> </u>	109.0	121.0	12.0		Green and brown mixes san			✓ Y	N	
4. H	121.0	125.0	4.0	<u></u>	ellow,brown and gray silty s			✓ Y	N	
	125.0	130.0	5.0		Green brown silty sandst			✓ Y	N	<del>, ,,</del>
ŀ	125.0	130.0	0.0					Y	N	
ł								Y	N	
								Y	N	
								Y	N	
ł								Y	N	
ŀ	METHOD I	ISED TO ES	TIMATE VIELD	OF WATER-BEARIN	G STRATA		тот	AL ESTIN		
					THER - SPECIFY:			LL YIELD		0.00
	PUM	P LA	IK LIF1	JBAILER LJOI	THEK - SPECIF 1.					
72	WELL TES	TEST	RESULTS - ATT	ACH A COPY OF DAT	TA COLLECTED DURING HOWING DISCHARGE AI	WELL TESTING,	INCLUDI	NG DISC	HARGE I	METHOD,
NOIS				IVIL, AND A TABLE OF	TIOWING DISCIENTED AS	TO DICTION IN	O VEIC III	E TEOTII		
	MISCELLA	NEOUS IN	FORMATION:							
UPE										,
IG S										
TEST; RIG SUPERVI						····				···
TES	PRINT NAM	ME(S) OF D	RILL RIG SUPEI	RVISOR(S) THAT PRO	OVIDED ONSITE SUPERV	ISION OF WELL C	ONSTRU	CTION O	THER TH	IAN LICENSEE:
v;	William B.	Atkins								
	DV CICNIN	IC DELOW	I CEDTIEV TE	IAT TO THE BEST O	OF MY KNOWLEDGE AN	ID BELIEF THE	FOREGOI	NG IS A	TRIJE A	ND CORRECT
Œ	RECORD O	F THE ABO	VE DESCRIBED	WELL, I ALSO CERT	TIFY THAT THE WELL TA	AG, IF REQUIRED,	HAS BEI	EN INSTA	LLED A	ND THAT THIS
TUL	WELL REC	ORDWILL	ALSO BE FILED	WITH THE PERMIT I	HOLDER WITHIN 30 DAY	S AFTER THE CO.	MPLETIO	N OF WE	LL DKILI	LING.
SIGNATURE		1,						05/1	1/2020	
6. SI		_N								
		SIGNAT	URE OF DRILLI	ER / PRINT SIGNEE	NAME	10.71.11			DATE	
EOI	R OSE INTER	NAL-HOE				WR-20	WELL RF	CORD &	LOG (Ve	rsion 04/30/2019)
	E NO.	731	7-12	721	POD NO.	TRN NO		704	06	
LOG	CATION					WELL TAG ID	10.	, T		PAGE 2 OF 2



# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

 Well Tag
 POD Number
 Q64 Q16 Q4 Sec
 Tws
 Rng
 X
 Y

 NA
 RA 12721 POD6
 1 2 2 33 178 32E
 615530 3629431

**Driller Name:** WHITE, JOHNNOWN.GENER

**Drill Start Date:** 04/28/2020 **Drill Finish Date:** 04/28/2020 **Plug Date:** 04/28/2020

**Log File Date:** 05/18/2020 **PCW Rcv Date: Source:** 

Pump Type:Pipe Discharge Size:Estimated Yield:Casing Size:Depth Well:130 feetDepth Water:

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

3/13/23 4:07 PM



### WELL RECORD & LOG

#### OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

	OSE POD NO	. (WELL NO		\\\	ELL TAG ID NO			OSE FILE NO(S	S).		
NO	MW-11		ro!	10				RA-12721			
ATI	WELL OWN							PHONE (OPTIO	,		
GENERAL AND WELL LOCATION	ConocoPhi	illips Com	pany					432-258-345	51		
TT	WELL OWN	ER MAILING	ADDRESS					CITY		STATE	ZIP
VEL	901 W Wa	.ll St, Suit	e 100					Midland		TX	79701
É			DE	GREES	MINUTES	SECON	DS				
LAI	WELL LOCATIO	IN TA	TITUDE	32	47	48.4	18 <sub>N</sub>	* ACCURACY	REQUIRED: ONE TENT	TH OF A SECOND	
₹	(FROM GP	PS) 227		103	45	58.2		* DATUM REC	QUIRED: WGS 84		
ENE			NGITUDE						UDIGIUM DANGENIA	TOD ALLAN ADID	
<u>5</u>		ON RELATI	NG WELL LOCATION TO	STREET ADDRES	S AND COMMO!	N LANDMA	ARKS – PLS	S (SECTION, TO	WNSHJIP, KANGE) WH	EKE AVAILABLE	
_	MCA 357										
	LICENSE NO	).	NAME OF LICENSED	DRILLER					NAME OF WELL DRI	LLING COMPANY	
	WD-1	1456		Jo	hn W. White				White D	rilling Company, Inc.	•
	DRILLING S	TARTED	DRILLING ENDED	DEPTH OF COMP	LETED WELL (F	T)	BORE HOI	LE DEPTH (FT)	DEPTH WATER FIRS	ST ENCOUNTERED (FT)	)
	04/28/	2020	04/28/2020		130.0					DRY	
				7					STATIC WATER LEV	EL IN COMPLETED WE	ELL (FT)
z	COMPLETE	D WELL IS:	ARTESIAN (	DRY HOLE	✓ SHALLO	W (UNCO	NFINED)			DRY	
<u>[</u>	DRILLING F	LUID:	✓ AIR	☐ MUD	ADDITIV	ES – SPEC	IFY:				
CASING INFORMATION	DRILLING M		✓ ROTARY	☐ HAMMER	CABLE T	TOOI.	ОТНЕ	R – SPECIFY:			
OR				1						T	
Ž	DEPTH	(feet bgl)	BORE HOLE		ATERIAL ANI GRADE	D/OR	CA	SING	CASING	CASING WALL	SLOT
NG.	FROM	ТО	DIAM		h casing string.	and		NECTION YPE	INSIDE DIAM.	THICKNESS	SIZE (inches)
ISV.			(inches)		tions of screen	)	(add coupl	ing diameter)	(inches)	(inches)	(inches)
	-2.7	90.0	6.0		h. 40 PVC			reads	2.0	1/4"	
S S	90.0	130.0	6.0	Sc	h. 40 PVC		Th	nreads	2.0	1/4"	.010
DRILLING &			·								
DR.											ļ
7											
											ļ
	-										
											-
				<u> </u>						L	
	DEPTH	(feet bgl)	BORE HOLE	LIST	ANNULAR S	EAL MA	ΓERIAL A	ND	AMOUNT	метно	
[AL	FROM	то	DIAM. (inches)	GRAVE	EL PACK SIZE	-RANGE	BY INTE	RVAL	(cubic feet)	PLACEN	MENT
ER.	0.0	10.0	6.0	Type 2	Portland Ceme	ent w/5%	Bentonite	Grout	1.963	Pump Mix w/7	Tremie Pipe
IAT	10.0	86.0	6.0		Bento	nite Chips	 }		22 Bags	Hand I	Mix
X	86.0	130.0	6.0		20/4	10 Sand			16 Bags	Hand I	Mix
]I.A	<del></del>										
ANNULAR MATERIAL											
3. A.											
'											
	007-7-			<u>I</u>							0.410
	OSE INTER NO.	NALUSE	100	<del>)                                     </del>	POD NO	`	10	WR-20		& LOG (Version 04/3	0/19)
		$\Delta \Delta$	-12/2	21	TOD NO	). と <u>フ</u> つ				VYVY	1.052
LOC	CATION		17	5.32	4. うる	200	. /	WELL TAG II	ONO.	PAGE	1 OF 2

									-	ı	
	DEPTH (feet bgl)		THOUSEGO	COLOR AND TYPE OF MATERIAL ENCOUNTERED -					WATER		ESTIMATED YIELD FOR
	FROM	то	THICKNESS (feet)		R-BEARING CAVITIES plemental sheets to fully			5	BEAR (YES		WATER- BEARING ZONES (gpm)
	0.0	0.5	0.5		Base caliche				Y	✓ N	(31 )
İ	0.5	13.0	12.5	.,44	Brown/red brown sand/sa	prown sand/sandstone			Y	✓ N	
Ì	13.0	17.0	4.0		Red brown sand/sandstone				Y	✓N	
	17.0	19.0	2.0		Brown sand/sandstone w	/gravel			Y	✓N	
	19.0	26.0	7.0	- · · · ·	Light brown sand/sand	stone			Y	√N	
	26.0	28.0	2.0		Red/brown sand				Y	✓ N	
4. HYDROGEOLOGIC LOG OF WELL	28.0	35.0	7.0		Light brown sand/sand	stone			Y	✓ N	
OF V	35.0	52.0	17.0		Red/brown/brown silty sa	ndstone			Y	✓N	
900	52.0	68.0	16.0		Brown sand/sandstone				Y	✓ N	
ICT	68.0	78.0	10.0	Gray sand/sandstone w/purple sandstone mixed					Y	✓N	
9	78.0	100.00	22.0	Light gray/brown sand/sandstone					Y	✓N	
[2]	100.00	111.00	11.0	Green brown sandstone					Y	✓N	
806	111.0	115.0	4.0	Brown silty sandstone					Y	✓ N	
Q.	115.0	130.0						Y	✓ N		
4. I					<u> </u>				Y	. N	
									Y	N	
						-			Y	N	
									Y	N	
									Y	N	
		,	.,,,,,						Y	N	
									Y	N	
	METHOD U	ISED TO ES	I TIMATE YIELD	OF WATER-BEARIN	G STRATA:			TOTAI	ESTIN	1ATED	
		PUMP AIR LIFT BAILER OTHER – SPECIFY:						WELL	YIELD	(gpm):	0.00
				JEANEER	THEN DIEDON I.						
NO	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.										
/ISION	MISCELLANEOUS INFORMATION:										
ER											
TEST; RIG SUPERV											
RIG											
ST;											
5. TF	PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:										
	William B.	William B. Atkins									
	BY SIGNIN	IG BELOW	, I CERTIFY TH	IAT TO THE BEST O	F MY KNOWLEDGE A	ND BELI	EF, THE FOR	EGOING	J IS A	TRUE A	ND CORRECT
JRE	RECORD O	E THE ABO ORDWILL	OVE DESCRIBED ALSO BE FILED	) WELL. I ALSO CERT ) WITH THE PERMIT I	IFY THAT THE WELL T HOLDER WITHIN 30 DA	FAG, IF RI YS AFTEI	EQUIRED, HA R THE COMPI	S BEEN ETION	INSTA OF WE	LLED AN LL DRILI	ND THAT THIS LING.
ATL		/									
SIGNATURE	(	1	/-						05/1	1/2020	
9.9	SIGNATURE OF DRILLER / PRINT SIGNEE NAME									DATE	
		SIGNAT	ORE OF DRILLI	A / I KINI SIONEE	147 MAIT					2/11/1	
FOI	OSE INTER	NALAUSE					WR-20 WE	LL RECO	ORD &	LOG (Ve	rsion 04/30/2019)
FIL	ENO. +	5H-	1272		POD NO.	<u> </u>	TRN NO.	U	10	404	
LO	CATION					WELL	TAG ID NO.				PAGE 2 OF 2



# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

 Well Tag
 POD Number
 Q64 Q16 Q4 Sec
 Tws
 Rng
 X
 Y

 NA
 RA 12721 POD7
 1 3 2 33 178 32E
 615064 3629198

**Driller Name:** WHITE, JOHNNOWN.GENER

**Drill Start Date:** 04/28/2020 **Drill Finish Date:** 04/28/2020 **Plug Date:** 04/28/2020

**Log File Date:** 05/18/2020 **PCW Rcv Date: Source:** 

Pump Type:Pipe Discharge Size:Estimated Yield:Casing Size:Depth Well:130 feetDepth Water:

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

3/13/23 4:08 PM



z	OSE POD NO MW-12	. (WELL NO	)-DOD-	-7 WELL TA	.G ID NO.		OSE FILE NO(	S).				
GENERAL AND WELL LOCATION	WELL OWNER NAME(S)							PHONE (OPTIONAL)				
OCA	ConocoPhillips Company							432-258-3451				
LL	WELL OWNE	ER MAILING	ADDRESS		CITY		STATE	ZIP 79701				
WEI	901 W Wall St, Suite 100							Midland TX				
E	WELL		DE	GREES MINU								
ALA	LOCATIO	N LAT	TTUDE	32 47	40.	82 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND					
VER.	(FROM GP	S) LON	NGITUDE	103 46	15.	93 W	* DATUM REG	QUIRED: WGS 84				
GE	DESCRIPTIO	ON RELATIN	G WELL LOCATION TO	STREET ADDRESS AND O	COMMON LANDM	ARKS – PLS	S (SECTION, TO	WNSHJIP, RANGE) WH	ERE AVAILABLE			
-	MCA 357											
	LICENSE NO		NAME OF LICENSED	DRILLER				NAME OF WELL DR	ILLING COMPANY			
	WD-1	456		John W.	White			White Drilling Company, Inc.				
	DRILLING STARTED DRILLING ENDED					LE DEPTH (FT) DEPTH WATER FIRST E			* *			
	04/28/2020 04/28/2020		130.0					DRY				
	COMPLETED WELL IS: ARTESIAN			DRY HOLE	SHALLOW (UNCO	NFINED)		STATIC WATER LEV	VEL IN COMPLETED WI DRY	ELL (FT)		
CASING INFORMATION	DDWIDGE	LIID										
MAT		DRILLING FLUID:										
OR									T	<del></del>		
Ž	DEPTH (feet bgl)  BORE HOLE			CASING MATERIAL AND/OR GRADE			ASING NECTION	CASING	CASING WALL	SLOT		
SING	FROM	TO	DIAM (inches)	(include each casing	(include each casing string, and			INSIDE DIAM. (inches)	THICKNESS (inches)	SIZE (inches)		
CAS	-2.7	90.0	6.0	note sections of Sch. 40 P		ling diameter) hreads	2.0	1/4"	<u> </u>			
2. DRILLING &	90.0	130.0	6.0	Sch. 40 PVC			hreads	2.0	1/4"	.010		
I,									<del>                                     </del>			
7.												
			_									
	DEPTH (feet bgl) BORE HOLE LIST ANNULAR SEAL MATERIAL						ND	AMOUNT	) AIDTHO	)D OF		
AL.	FROM	DIAM (inches)		GRAVEL PACK SIZE-RANGE BY INTER				(cubic feet)	1	METHOD OF PLACEMENT		
ERL	0.0	10.0	6.0	Type 2 Portlar	Type 2 Portland Cement w/5% Bentonite			1.963	Pump Mix w/	Pump Mix w/Tremie Pipe		
(AT	10.0	86.0	6.0		Bentonite Chips			22 Bags		Hand Mix		
KR.N	86.0	130.0	6.0	•			16 Bags		Hand 1	Hand Mix		
TOL.												
ANNULAR MATERIAL												
ર્છ												
				<u> </u>				, <del>, , , , , , , , , , , , , , , , , , </del>				
FOR OSE INTERNAL USE  WR-20 WELL RECORD & LOG (Version 04/30/19)												
FILE NO. 7 - 72   POD NO. 7 TRN NO. 670906  LOCATION 175 3 2 5 3 WELL TAG ID NO. PAGE 1 OF 2										1.05.2		
LTOC	CATION		1/5	5.32 C.3	$\mathbf{P}(\mathcal{O})$	<i>I</i> 1	WELL TAG II	NO.	PAGE	TOF 2		

			<del></del>		<del> </del>						
	DEPTH (feet bgl)			COLOR AN	COLOR AND TYPE OF MATERIAL ENCOUNTERED -				ΓER	ESTIMATED YIELD FOR	
	FROM	то	THICKNESS (feet)		ER-BEARING CAVIT pplemental sheets to			BEAR (YES	ING?	WATER- BEARING ZONES (gpm)	
	0.0	6.0	6.0	***************************************	Brown sar	nd		Y	✓ N		
	6.0	15.0	9.0		Caliche w/brow	n sand		Y	✓ N		
	15.0	45.0	30.0		Red brown sand/s	andstone		Y	✓ N		
	45.0	68.0	23.0	-	Red brown silty s	andstone		Y	<b>√</b> N		
	68.0	71.0	3.0		Brown sand/sandsto	ne w/gravel		Y	<b>√</b> N		
4. HYDROGEOLOGIC LOG OF WELL	71.0	74.0	3.0		Green sand/san	dstone		Y	✓ N		
	74.0	78.0	4.0		Gray sand/sand	istone		Y	<b>√</b> N		
OF	78.0	81.0	3.0		Green brown sand/	sandstone		Y	√N		
507	81.0	84.0	3.0	Strea	aks of gray, green and	brown sandstone	•	Y	✓ N		
];[C]	84.0	88.0	4.0	Firm gray silty limestone				Y	√N		
707	88.0	90.0	2.0	Green brown sandstone				Y	<b>√</b> N		
GEO	90.0	96.0	6.0	Dark green gray sandstone				Y	<b>√</b> N		
RO.	96.0	115.0	19.0		Light green gray s	andstone		Y	√N		
HYL	115.0	117.0	2.0		Dark gray sand	ray sandstone			✓ N		
4	117.0	119.0	2.0	Light gray/green sandstone				Y	✓ N		
	119.0	130.0	11.0	Green brown sandstone				Y	√ N		
									N		
								Y	N		
								Y	N		
		-			·			Y	N		
								Y	N		
ļ	METHOD U	SED TO ES	TIMATE YIELD	OF WATER-BEARING	G STRATA:			TAL ESTIN			
	PUMI	PUMP AIR LIFT BAILER OTHER - SPECIFY: WE						ELL YIELD	(gpm):	0.00	
NOIS	WELL TES			ACH A COPY OF DAT ME, AND A TABLE SH							
	MISCELLANEOUS INFORMATION:										
TEST; RIG SUPERV											
IG SI											
F; R											
res	PRINT NAM	ME(S) OF DI	RILL RIG SUPER	VISOR(S) THAT PRO	VIDED ONSITE SU	PERVISION OF	WELL CONSTRI	JCTION O	THER TH	IAN LICENSEE:	
5.	William B.	William B. Atkins									
rure	BY SIGNING BELOW, I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED WELL. I ALSO CERTIFY THAT THE WELL TAG, IF REQUIRED, HAS BEEN INSTALLED AND THAT THIS WELL RECORD WILL ALSO BE FILED WITH THE PERMIT HOLDER WITHIN 30 DAYS AFTER THE COMPLETION OF WELL DRILLING.										
. SIGNATURE		h						05/11/2020			
.9	SIGNATURE OF DRILLER / PRINT SIGNEE NAME							DATE			
		/	***							. 04/02/22/2	
	R OSE INTER E NO.	MALLUSE KA-	127	21	POD NO.		WR-20 WELL R TRN NO.	ECORD &		rsion 04/30/2019)	
	CATION	/ <u> </u>	100 10		1 - 02 110.	·	TAG ID NO.	<del>ر ، ا</del>	<u>~ / (</u>	PAGE 2 OF 2	
						WELL	IAGID NO.			1	



# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

 Well Tag
 POD Number
 Q64 Q16 Q4
 Sec
 Tws
 Rng
 X
 Y

 NA
 RA 12721 POD8
 1
 2
 1
 33
 178
 32E
 614640
 3629463

**Driller Name:** JOHN W WHITE

**Drill Start Date:** 09/28/2020 **Drill Finish Date:** 09/28/2020 **Plug Date:** 

Log File Date:10/14/2020PCW Rcv Date:Source:ShallowPump Type:Pipe Discharge Size:Estimated Yield:0 GPMCasing Size:2.00Depth Well:130 feetDepth Water:108 feet

Water Bearing Stratifications: **Bottom Description** Top 106 115 Sandstone/Gravel/Conglomerate Sandstone/Gravel/Conglomerate 115 Sandstone/Gravel/Conglomerate 117 118 Sandstone/Gravel/Conglomerate **Casing Perforations:** Top **Bottom** 90 130

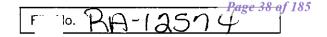
The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

3/13/23 4:08 PM



NO	OSE POD NO. (WELL NO.)  RA-12721-POD8 (PMW-13)  WELL TAG ID NO.							OSE FILE NO(S). RA-12721				
GENERAL AND WELL LOCATION	WELL OWN				PHONE (OPTIONAL) 432-258-3451							
	WELL OWN 1500 City				CITY STATE ZIP Houston TX 77042							
1 63	WELL		DE	GREES MINUTES SECON 32 47 49.7						<del></del>		
RAL /	LOCATIO	PS)	TITUDE	103 46 32		49.	N		' REQUIRED: ONE TEN' QUIRED: WGS 84	QUIRED: ONE TENTH OF A SECOND RED: WGS 84		
ENE	LON		NGITUDE									
1.6	DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIIP, RANGE) WHERE AVAILABLE MCA 357											
LICENSE NO. NAME OF LICENSED DRILLER NAME OF WELL DRILLING COMPANY WD-1456 John W. White White Drilling Company, Inc.												
			DRILLING ENDED		John W. White					rilling Company, Inc.		
	DRILLING S 09/28/		09/28/2020	DEPTH OF COMPLETED WELL (FT) 130.0			BUKE HUI	LE DEPTH (FT)	DEPIH WATER FIRE	ST ENCOUNTERED (FT) 108		
z	COMPLETED WELL IS:		ARTESIAN	DRY HOLE SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) 116				
TIOI	DRILLING FLUID:		MUD ADDITIVES – SPECIFY:			-						
& CASING INFORMATION	DRILLING METHOD:											
NFO	DEPTH (feet bgl) BORE HOLE		BORE HOLE	CASING MATERIAL AND/OR			CASING		CASING CASING WAL		SLOT	
ING.	FROM	ТО	DIAM	GRADE (include each casing string, and		, and	CONNECTION TYPE		INSIDE DIAM.	THICKNESS	SIZE (inches)	
CAS	-2.7	90.0	(inches)	note sections of screen) Sch. 40 PVC		)	(add coup	ling diameter)	(inches)	(inches)	(Illenes)	
ঞ	90.0			Sch. 40 PVC				reads	2.0	1/4"	.010	
DRILLING												
		"										
2.												
				<del>                                     </del>			<del></del>					
_	DEPTH	(feet bgl)	BORE HOLE	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL				AMOUNT METHOI				
3. ANNULAR MATERIAL	FROM	TO	DIAM. (inches)					(cubic feet)		PLACEMENT		
TE	0.0	10.0	6.0	Турс	2 Portland Ceme					Pump Mix w/Tremie		
W.	10.0 86.0	86.0	6.0	6.0 Bentonite C 6.0 20/40 San					26 Bags 16 Bags		Hand Mix Hand Mix	
LAB	80.0	130.0	0.0		20/4	- Sand			10 Bags	Tianu P	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
N	_											
¥.												
``			1									
EUD	OSE INTER	NAI HEE		<del></del>			·	WD 2	WELL DECORD	R I OG (Version 04/2)	7/19)	
	FOR OSE INTERNAL USE WR-20 WELL RECORD & LOG (Version 04/30/19)  FILE NO. 12-721 POD NO. 8 TRN NO. 677686											
LOC	CATION 2	<del> /</del>	7170	R3		υ3.	<b>&gt;</b>	WELL TAG II	1//	PAGE	1 OF 2	

DEPTH (f	-	THICKNESS	COLOR AND TYPE OF MATERIAL ENCOUNTERED -	WATER	<b>ESTIMATED</b>		
	ТО	(feet)	INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	BEARING? (YES / NO)	YIELD FOR WATER- BEARING ZONES (gpm)		
0.0	1.0	1.0	Caliche base	Y ✓N			
1.0	9.0	8.0	Brown sand	Y ✓N			
9.0	13.0	4.0	Light brown sand/sandstone w/gravel "Caliche"	Y V			
13.0	48.0	35.0	Brown and light brown sandstone	Y ✓N			
48.0	59.0	9.0	Brown and red brown sand/sandstone	Y ✓N			
59.0	60.0	1.0	Firm brown sandstone	Y ✓N			
60.0	62.0	2.0	Brown sandstone	Y ✓N			
62.0	73.0	11.0	Gray and green brown sandstone	Y ✓N			
73.0	76.0	3.0	Mixed brown, green, and light brown sandstone	Y <b>√</b> N			
76.0	84.0	8.0	Light gray sandstone	Y ✓N			
84.0	92.0	8.0	Light gray sandstone w/brown sandstone mixed	Y ✓N			
92.0	98.0	7.0	Firm brown and gray sandstone	Y ✓N			
98.0	101.0	3.0	Brown sandstone	Y ✓N			
101.0	104.0	3.0	Gray and light brown mixed sandstone	Y ✓N			
104.0	106.0	2.0	Dark gray silty sandstone	Y ✓N			
106.0	115.0	9.0	Green and gray silty sandstone	✓ Y N			
115.0	117.0	2.0		✓Y N			
117.0	118.0	1.0		✓Y N			
118.0	130.0	12.0	Dark red/brown siltstone/shale w/molded gray silty sandstone	✓ Y N			
				Y N			
				Y N			
METHOD U	SED TO ES	TIMATE YIELD	OF WATER-BEARING STRATA:	TOTAL ESTIMATED			
PUME	• <b>\</b>	IR LIFT	BAILER OTHER - SPECIFY:	WELL YIELD (gpm):	0.00		
	STAR	T TIME, END TIN					
	• /	RILL RIG SUPER	VISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONS	TRUCTION OTHER TH	AN LICENSEE:		
BY SIGNING BELOW, I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED WELL. I ALSO CERTIFY THAT THE WELL TAG, IF REQUIRED, HAS BEEN INSTALLED AND THAT THIS WELL RECORD WILL ALSO BE FILED WITH THE PERMIT HOLDER WITHIN 30 DAYS AFTER THE COMPLETION OF WELL DRILLING.  10/6/2020							
	ANDIG	UKE OF DRILLE	R / FAINT SIGNEE NAME	DATE			
73	NAL USE	701		, <u> </u>	sion 04/30/2019)		
	<u> </u>	-121_	=	<u>6//686</u>	PAGE 2 OF 2		
	48.0 59.0 60.0 62.0 73.0 76.0 84.0 92.0 98.0 101.0 104.0 115.0 117.0 118.0  METHOD U PUMB WELL TES' MISCELLAT  PRINT NAM William B. A  BY SIGNIN RECORD OI WELL RECORD OOSE INTERN NO.	48.0 59.0 59.0 60.0 60.0 62.0 62.0 73.0 73.0 76.0 76.0 84.0 84.0 92.0 92.0 98.0 98.0 101.0 101.0 104.0 104.0 106.0 115.0 117.0 117.0 118.0 118.0 130.0  METHOD USED TO ES PUMP A WELL TEST TEST STAR MISCELLANEOUS INF William B. Atkins  BY SIGNING BELOW, RECORD OF THE ABOWELL RECORD WILL  SIGNATOR OSE INTERNAL USE NO. A 12	48.0   59.0   9.0     59.0   60.0   1.0     60.0   62.0   2.0     62.0   73.0   11.0     73.0   76.0   3.0     76.0   84.0   8.0     84.0   92.0   8.0     92.0   98.0   7.0     98.0   101.0   3.0     101.0   104.0   3.0     104.0   106.0   2.0     106.0   115.0   9.0     115.0   117.0   2.0     117.0   118.0   1.0     118.0   130.0   12.0     METHOD USED TO ESTIMATE YIELD	13.0	13.0		



### **NEW MEXICO OFFICE OF THE STATE ENGINEER**



### APPLICATION FOR PERMIT TO DRILL A WELL WITH NO CONSUMPTIVE USE OF WATER



(check applicable box):

	For fees, see State Engineer web	osite: http://www.ose.state.nm.us/		
Purpose:	☐ Pollution Control And / Or Recovery	☐ Geo-Thermal		
☐ Exploratory	☐ Construction Site De-Watering	Other (Describe):		
	☐ Mineral De-Watering			1000 1000 1000 1000 1000 1000 1000 100
A separate permit will	I be required to apply water to beneficial use.			B T B B C C C C C C C C C C C C C C C C
☐ Temporary Reque	est - Requested Start Date:	Requested End Date:	-76	
Plugging Plan of Ope	erations Submitted?  Yes No			
			5.73 15.3	<u> </u>
1. APPLICANT(S)  Name: ConocoPhilli		Name:		
Contact or Agent: Todd Wells with Tet	check here if Agent 🔯	Contact or Agent: check	here if Agent	
Mailing Address: 400	0 N. Big Spring St., Suite 401	Mailing Address:		
City: Midland		City:		
State: TX	Zip Code: <b>79705</b>	State: Zip Coo	de:	
Phone: <b>(432) 682-455</b> Phone (Work): <b>(432)</b>		Phone: Hor	me 🗌 Cell	
E-mail (optional): <b>Toc</b>	dd.Wells@tetratech.com	E-mail (optional):		

FOR OSE INTERNAL USE	Application for Permit, Form wr-07, Rev 4/12/12
File Number: RA-125	) 4 Trn Number: 617940
Trans Description (optional):	2- DODS1-4-monitor
Sub-Basin: NA	
PCW/LOG Due Date:  -3	1-19
	Page 1 of 3

2. WELL(S) Describe the well(s) applicabl nis application.

(Lat/Long - WGS84).		•	tate Plane (NAD 83), UTM (NAD 83), <u>or</u> La a PLSS location in addition to above.	atitude/Lo	ngitude		
☐ NM State Plane (NAD83) ☐ NM West Zone ☐ NM East Zone ☐ NM Central Zone		JTM (NAD83) (Mete ]Zone 12N ]Zone 13N	rs) 🔀 Lat/Long (WGS8- 1/10 <sup>th</sup> of second)	4) (to the n	earest		
Well Number (if known):	X or Easting or Longitude:	Y or Northing or Latitude:	Provide if known: -Public Land Survey System (PLSS) (Quarters or Halves, Section, Township, Range) OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name				
MW-2 RA- 12574 POD1 MW-3	w. 103.77177° 103.46.18.272	n. 32.80406° 32,48,14.616	Sec. 28, T-17S, R-32E NENESW				
MW-3	w. 103.76961°	n. 32.80162°	, Sec. 28, T-17S, R-32E				
RA-12574- PODZ MW-4	103,46 15. C9L	32.48 5.822	NWSWSE				
MW-4	w. 103.77118°	n. 32.80056°	Sec. 28, T-17S, R-32E				
RA-12574-POD3 MW-5	162.46 16.240	32.48 7.016	NWSWSE	7~3	, m , m , m		
MW-5	w. 103.77312°	n. 32.80239°	Sec. 28, T-17\$, R-32E		25 <u>25 </u>		
RA-12574-POOY							
				73 23	E. T. T. T. C. B. C. T. C.		
NOTE: If more well location Additional well descriptions			WR-08 (Attachment 1 – POD Descriptio	ns) 🚃			
Other description relating well			you, now many	7.7	8		
			·				
Well is on land owned by: Fed	<del></del>						
Well Information: NOTE; If n	nore than one (1) we 	ell needs to be desc	cribed, provide attachment. Attached?	☐ Yes	⊠ No		
Approximate depth of well (fee	et): 120.00	0	utside diameter of well casing (inches): 2.0	00			
Driller Name: White Drilling		D	riller License Number: 1456				
2017, Shelly Tucker with the	MW-2, MW-3, MW-4 BLM was notified vi via email at her requ	and MW-5 are on F a telephone of the uest. The monitor	ederal Bureau of Land Management land proposed activities. On September 15, 2 wells will be used for sampling to asses	2017, a Su	ndry		
	· <del>- · · · · · · · - · · · · · · · · · ·</del>						

FOR OSE INTERNAL USE

Application for Permit, Form wr-07

File Number: COMPUTE

Page 2 of 3

Trn Number:

Page 3 of 3

	QUIREMENTS: The applic ust include the information has been included and/or a	the following, as applicable to ea attached to this application:	əll type. Please check the appropriate
Exploratory: ☐ Include a description of any proposed pump test, if applicable.  Monitoring: ☑ Include the reason for the monitoring well, and, ☐ The duration of the planned monitoring.	Pollution Control and/or Recovery:  ☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for the pollution control or recovery operation. ☐ The estimated maximum period of time for completion of the operation. ☐ The annual diversion amount. ☐ The annual consumptive use amount. ☐ The maximum amount of water to be diverted and injected for the duration of the operation. ☐ The method and place of discharge. ☐ The method of measurement of water produced and discharged. ☐ The source of water to be injected. ☐ The method of measurement of water injected. ☐ The characteristics of the aquifer. ☐ The method of determining the resulting annual consumptive use of water and depletion from any related stream system. ☐ Proof of any permit required from the New Mexico Environment Department. ☐ An access agreement if the applicant is not the owner of the land on which the pollution plume control or recovery well is to be located.	Construction De-Watering:  Include a description of the proposed dewatering operation, The estimated duration of the operation, The maximum amount of water to be diverted, A description of the need for the dewatering operation, and, A description of how the diverted water will be disposed of.  Geo-Thermal: Include a description of the geothermal heat exchange project, The amount of water to be diverted and re-injected for the project, The time frame for constructing the geothermal heat exchange project, and, The duration of the project. Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.	Mine De-Watering:  Include a plan for pollution control/recovery, that includes the following A description of the need for mine dewatering. The estimated maximum period of time for completion of the operation. The source(s) of the water to be diverted The geohydrologic characteristics of the aquifer(s). The maximum amount of water to be diverted per annum. The maximum amount of water to be diverted for the duration of the operation. The quality of the water. The method of measurement of water diverted. The recharge of water to the aquifer. Description of the estimated area of hydrologic effect of the project. The method and place of discharge. An estimation of the effects on surface water rights and underground water rights from the mine dewatering project. A description of the methods employed to estimate effects on surface water rights and underground water rights. Information on existing wells, rivers, springs, and wetlands within the area of
	AC	CKNOWLEDGEMENT	
I, We (name of a	applicant(s)), Todd Wells, Agent for Cond	ocoPhillips Company int Name(s)	
affirm that the fo	regoing statements are true to the best of (	• •	
Applicant Signat	Wall.		52 OH 8
Applicant Signal	ture	Applicant Signature	3
		OF THE STATE ENGINEER	
Mexico nor det	rimental to the public welfare and further su	having existing rights, and is not cubject to the attached conditions of 20 18	for the State Engineer,
By: Signature	Ly Worley	Andy Mor	ı ey
Title: Distr	ict II Manager		
1 11111	FOR OS	E INTERNAL USE	Application for Permit, Form wr-07

File Number:

# NEW MEXICO STATE ENGINEER OFFICE PERMIT TO EXPLORE

#### SPECIFIC CONDITIONS OF APPROVAL

- 17-1A Depth of the well shall not exceed the thickness of the valley fill.
- 17-4 No water shall be appropriated and beneficially used under this permit.
- 17-7 The Permittee shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.
- 17-B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with 72-12-12 NMSA 1978. A licensed driller shall not be required for the construction of a well driven without the use of a drill rig, provided that the casing shall not exceed two and three-eighths (2 3/8) inches outside diameter.
- 17-C The well driller must file the well record with the State Engineer and the applicant within 30 days after the well is drilled or driven. It is the well owner's responsibility to ensure that the well driller files the well record.

  The well driller may obtain the well record form from any District Office or the Office of the State Engineer website.
- 17-P The well shall be constructed, maintained, and operated to prevent inter-aquifer exchange of water and to prevent loss of hydraulic head between hydrogeologic zones.
- 17-Q The State Engineer retains jurisdiction over this permit.

Trn Desc: RA 12574 PODS1-4 File Number: RA 12574

Trn Number: 617940

page: 1

#### NEW MEXICO STATE ENGINEER OFFICE PERMIT TO EXPLORE

#### SPECIFIC CONDITIONS OF APPROVAL (Continued)

LOG	The Point	: of	Diversion	RA	12574	POD1	must	be	completed	and	the
	Well Log	file	ed on or b	efor	re 01/3	31/20:	19.				

- LOG The Point of Diversion RA 12574 POD2 must be completed and the Well Log filed on or before 01/31/2019.
- LOG The Point of Diversion RA 12574 POD3 must be completed and the Well Log filed on or before 01/31/2019.
- LOG The Point of Diversion RA 12574 POD4 must be completed and the Well Log filed on or before 01/31/2019.

IT IS THE PERMITTEE'S RESPONSIBILITY TO OBTAIN ALL AUTHORIZATIONS AND PERMISSIONS TO DRILL ON PROPERTY OF OTHER OWNERSHIP BEFORE COMMENCING ACTIVITIES UNDER THIS PERMIT.

#### ACTION OF STATE ENGINEER

Notice of Intention Rcvd: Date Rcvd. Corrected: Formal Application Rcvd: 10/12/2017 Pub. of Notice Ordered: Date Returned - Correction: Affidavit of Pub. Filed:

This application is approved provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state; and further subject to the specific conditions listed previously.

Witness my hand and seal this 54 day of Jan A.D., 2018

Dar.

Engineer

File Number: RA 12574

Trn Number: 617940

page: 2

Trn Desc: RA 12574 PODS1-4

Tom Blaine, P.E. State Engineer



Roswell Office 1900 WEST SECOND STREET ROSWELL, NM 88201

# STATE OF NEW MEXICO OFFICE OF THE STATE ENGINEER

Trn Nbr: 617940 File Nbr: RA 12574

Jan. 05, 2018

TODD WELLS TETRA TECH CONOCOPHILLIPS COMPANY 4000 NORTH BIG SPRING STREET SUITE 401 MIDLAND, TX 79705

#### Greetings:

Enclosed is your copy of the above numbered permit that has been approved subject to the conditions set forth on the approval page. In accordance with the conditions of approval, the well(s) are for monitoring purposes and will be monitored for the duration of the project.

A Well Record & Log (OSE Form wr-20) shall be filed in this office within twenty (20) days after completion of drilling, but no later than 01/31/2019.

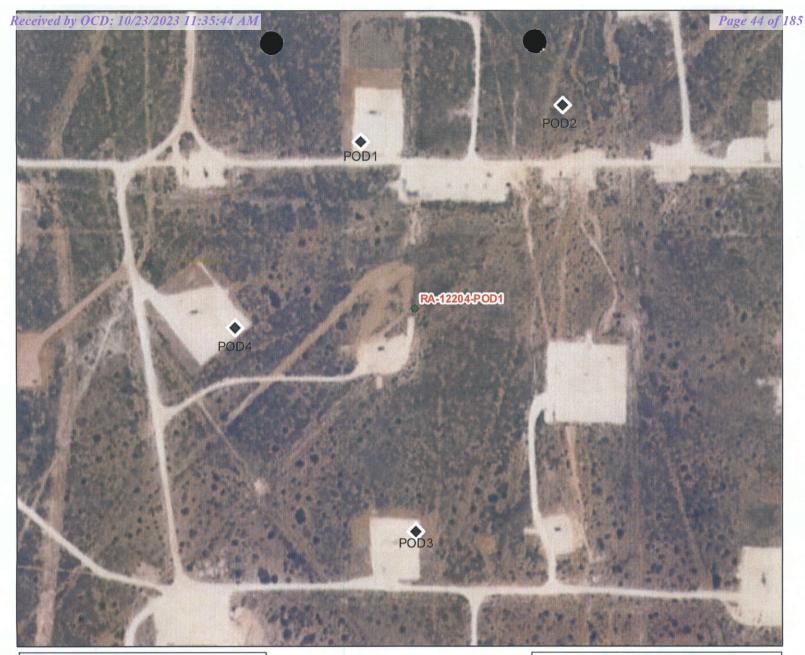
Appropriate forms can be downloaded from the OSE website www.ose.state.nm.us or will be mailed upon request.

Sincerely,

Deborah Dunaway (575)622-6521

Enclosure

explore



Coordinates

State Plane - NAD 83 (f) - Zone E

Easting 713883.172

Northing 656705.671

UTM - NAD 83 (m) - Zone 13

Easting 614993.601

Northing 3630232.573

Degrees Minutes Seconds

Latitude 32:48:14.616000

Longitude -103:46:18.372000

NEW MEXICO OFFICE OF THE STATE ENGINEER

1:4.514

ft 0 90 180 360

Image Info

Source: USDA FSA Date: 5/11/2016

Resolution (m):1

Accuracy (m): 6

Selected POD

GIS WATERS PODs

PEN

OSE District Boundary Spatial Information County: Lea

Groundwater Basin: Roswell

Sub-Basin:

Land Grant: Not in Land Grant

Restrictions:

NA

**PLSS Description** 

SENENESW Qtr of Sec 28 of 017S 032E

Derived from CADNSDI- Qtr Sec. locations are calculated and are only approximations

POD Information
Owner: CONOCOPHILLIPS COMPANY

File Number: RA-12574 PODS 1-4

POD Status: NoData Permit Status: NoData Permit Use: NoData Purpose: NEW PERMIT

D Dunaway

1/4/2018

Fix asonal life efforcs have been made by the New Missos Office of the 3t at Engine or (OSIS) to verify that the en made accounties, in they retail the source data use of in the ingress after, it owerer, a daigness encors in the ret in all maps, and there maps may contain in measures and entry is invade, reading exceedingly, provided the provided on the containing and accounting the containing and other containing accounting, development me thodology, interpretation of source data, and other containing accounting the containing accounting accounting the containing accounting the cont



File No. RA -12204

# SHE SHOP

### **NEW MEXICO OFFICE OF THE STATE ENGINEER**

# APPLICATION FOR PERMIT TO DRILL A WELL WITH NO CONSUMPTIVE USE OF WATER



(check applicable box):

		2	-35312
	For fees, see State Engineer we	ebsite: http://www.ose.state.nm.us	7701
Purpose:	☐ Pollution Control And / Or Recovery		SWEET SWEET
☐ Exploratory	☐ Construction Site De-Watering	Other (Describe):	NGINE
	☐ Mineral De-Watering		<b>₹</b>
A separate permit will	be required to apply water to beneficial use.		OFFICE MEXICO
☐ Temporary Reques	t - Requested Start Date:	Requested E	nd Date:
Plugging Plan of Opera	ations Submitted?  Yes  No		
A CONTRACTOR OF THE CONTRACTOR			
1. APPLICANT(S)			
Name: White Drilling	/ Conoco Phillips	Name:	
Contact or Agent:	check here if Agent   Thite Osilling Co.	Contact or Agent:	check here if Agent
Mailing Address: PO B	ox 906	Mailing Address:	
City: Clyde		City:	
State: TX	Zip Code: <b>79510</b>	State:	Zip Code:
Phone: <b>325-370-0713</b> Phone (Work): <b>325-893</b>	☐ Home ☐ Cell	Phone: Phone (Work):	☐ Home ☐ Cell
E-mail (optional): office	@whitedrilling.com	E-mail (optional):	

FOR OSE INTERNAL USE	Application for Permit, Form wr-07, Rev 4/12/12
File Number: RA-12204	Trn Number: 55903
Trans Description (optional):	monitaring
Sub-Basin: NA	
PCW/LOG Due Date: 12-31	-2015
	D1-10



2. WELL(S) Describe the well(s) applicable to this application.

Location Required: Coord (Lat/Long - WGS84). District II (Roswell) and Dis NM State Plane (NAD83	strict VII (Cimarron) ) (Feet)	customers, provid UTM (NAD83) (Met	State Plane (NAD 83), UTM (NAD 83), or Latitue a PLSS location in addition to above.	
☐ NM East Zone ☐ NM Central Zone		Zone 12N Zone 13N	Lat/Long (WGS84) (to 1/10 <sup>th</sup> of second)	the nearest
Well Number (if known):	X or Easting or Longitude:	Y or Northing or Latitude:	Provide if known: -Public Land Survey System (PLSS) (Quarters or Halves, Section, Township, F - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name	Range) OR
MW-1	32°48'9.222"n	103°46'16.288"	Section 28, T17S, R32E	
		w		
				ST. 20
				D SE
NOTE: If more well locations	mond to be deadly			DEC -
		69 11110	WR-08 (Attachment 1 – POD Descriptions) If yes, how many	W
Other description relating well to	o common landmarks	, streets, or other:	yes, assumany	₹ <del>S</del>
				· 京空
Well is on land owned by: BIm				S 55
Well Information: NOTE: If mo If yes, how many 1	ore than one (1) well	needs to be descr	ibed, provide attachment. Attached?	No
Approximate depth of well (feet)				
Driller Name: John White		Dril	tside diameter of well casing (inches): 2" ler License Number: WD-1456	
		1011	to Electise Number: WD-1456	
ADDITIONAL STATEMENTS O	R EXPLANATIONS			
stallation of a near-source mo	onitor well (MW/ 1) fo			
			ses.	
ee attached NMOCD and BLM	approved Corrective	e Action Plan.		
	FOR	OSE INTERNAL USE	Application for Permi	t, Form wr-07

Released to Imaging: 2/13/2024 2:26:32 PM

Page 3 of 3

4. SPECIFIC REQUIREMENTS: The applicant must include the following, as applicable to each well type. Please check the appropriate boxes, to indicate the information has been included and/or attached to this application:

[ E	en and/o	or attached to this application:	ypor rougo check the appropriate
Exploratory: ☐ Include a description of any proposed pump test, if applicable.  Monitoring: ☐ Include the reason for the monitoring well, and, ☐ The duration of the planned monitoring.	Include a plan for pollution control/recovery, that includes the	☐ A description of how the diverted water will be disposed of.  Geo-Thermal: ☐ Include a description of the geothermal heat exchange project, ☐ The amount of water to be diverted and re-injected for the project, ☐ The time frame for constructing the geothermal heat exchange project, and, ☐ The duration of the project. ☐ Preliminary surveys, design data, and additional information shall be included to	Mine De-Watering:  Include a plan for pollution control/recovery, that includes the following A description of the need for mine dewatering.  The estimated maximum period of time for completion of the operation.  The source(s) of the water to be diverted.  The geohydrologic characteristics of the aquifer(s).  The maximum amount of water to be diverted per annum.  The maximum amount of water to be diverted for the duration of the operation.  The quality of the water.  The method of measurement of water diverted.  The recharge of water to the aquifer.  Description of the estimated area of hydrologic effect of the project.  The method and place of discharge.  An estimation of the effects on surface water rights and underground water rights from the mine dewatering project.  A description of the methods employed to estimate effects on surface water rights and underground water rights.  Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.
	AC	KNOWLEDGEMENT	
I, We (name of a			
affirm that the for	Prir	nt Name(s)	
	egoing statements are true to the best of (n	ny, our) knowledge and belief.	
Applicant Signatu	the second		2014
Applicant Signatu	le•	Applicant Signature	
	ACTION O	F THE STATE ENGINEER	T 200
		his application is:	
provided it is not	approved		denied
Mexico nor detrir	exercised to the detriment of any others ha nental to the public welfare and further subj	oving existing rights, and is not cont ect to the attached conditions of ar	rary to the conservation of water in New
Witness my hand a	nod 111 * O	1.4	the State Engineer,
To B	P.E.	<b>-</b> 1.11 (20.11)	
		, State Engineer	
y: Signature	mel	Andy Morle	21/
		Print	
tle: Distra	MI Manager		
M. News			
		ITERNAL USE	Application for Permit, Form wr-07
	File Number:	1KA-12204	Trn Number: 5500102

# NEW MEXICO STATE ENGINEER OFFICE PERMIT TO EXPLORE

#### SPECIFIC CONDITIONS OF APPROVAL

- 1A Depth of the well shall not exceed the thickness of the valley fill.
- 4 No water shall be appropriated and beneficially used under this permit.
- 7 The Permittee shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.
- B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with Section 72-12-12 New Mexico Statutes Annotated.
- C Driller's well record must be filed with the State Engineer within 20 days after the well is drilled or driven. Well record forms will be provided by the State Engineer upon request.
- C2 No water shall be diverted from this well except for testing purposes which shall not exceed ten (10) cumulative days, and well shall be plugged or capped on or before, unless a permit to use water from this well is acquired from the Office of the State Engineer.
- The well shall be constructed, maintained, and operated to prevent inter-aquifer exchange of water and to prevent loss of hydraulic head between geologic zones.
- LOG The Point of Diversion RA 12204 POD1 must be completed and the Well Log filed on or before 12/31/2015.

Trn Desc: RA 12204 POD1 File Number: RA 12204

Trn Number: <u>559063</u>

page: 1

# NEW MEXICO STATE ENGINEER OFFICE PERMIT TO EXPLORE

#### **ACTION OF STATE ENGINEER**

Notice of Intention Rcvd: Date Rcvd. Corrected: Formal Application Rcvd: 12/09/2014 Pub. of Notice Ordered: Date Returned - Correction: Affidavit of Pub. Filed:

This application is approved provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state; and further subject to the specific conditions listed previously.

Witness my hand and seal this <u>09</u> day of <u>Dec</u> A.D., <u>2014</u>

Tom Blaine, PAE. , State Engineer

By:

File Number: RA 12204

Trn Number: <u>559063</u>

Trn Desc: RA 12204 POD1

Tom Blaine, P.E. State Engineer



Roswell Office 1900 WEST SECOND STREET ROSWELL, NM 88201

# STATE OF NEW MEXICO OFFICE OF THE STATE ENGINEER

Trn Nbr: 559063 File Nbr: RA 12204

Dec. 09, 2014

IRENE WHITE WHITE DRILLING COMPANY CONOCO PHILLIPS
PO BOX 906
CLYDE, TX 79510

#### Greetings:

Enclosed is your copy of the above numbered permit that has been approved subject to the conditions set forth on the approval page. In accordance with the conditions of approval, the well can only be tested for 10 cumulative days, and the well is to be plugged on or before 12/31/2015, unless a permit to use the water is acquired from this office.

A Well Record & Log (OSE Form wr-20) shall be filed in this office within twenty (20) days after completion of drilling, but no later than 12/31/2015.

Appropriate forms can be downloaded from the OSE website www.ose.state.nm.us or will be mailed upon request.

Sincerely,

Lisa Fresquez (575)622-6521

Enclosure

explore

### **Locator Tool Report**

#### **General Information:**

Application ID: 29

Date: 12-09-2014

Time: 09:45:42

WR File Number: RA-12204-POD1

Purpose: POINT OF DIVERSION

Applicant First Name: WHITE DRILLING Applicant Last Name: IRENE M WHITE

GW Basin: ROSWELL ARTESIAN

County: LEA

Critical Management Area Name(s): NONE Special Condition Area Name(s): NONE

Land Grant Name: NON GRANT

#### PLSS Description (New Mexico Principal Meridian):

SW 1/4 of SW 1/4 of NW 1/4 of SE 1/4 of Section 28, Township 17S, Range 32E.

#### **Coordinate System Details:**

#### Geographic Coordinates:

Latitude:

32 Degrees 48 Minutes 9.2 Seconds N

Longitude:

103 Degrees 46 Minutes 16.3 Seconds W

#### Universal Transverse Mercator Zone: 13N

NAD 1983(92) (Meters) NAD 1983(92) (Survey Feet) NAD 1927 (Meters)

N: 3,630,068 E: 615,049 N: 11,909,647 E: 2,017,874

N: 3,629,864 E: 615,099

NAD 1927 (Survey Feet)

N: 11,908,980 E: 2,018,037

#### State Plane Coordinate System Zone: New Mexico East

NAD 1983(92) (Meters) NAD 1983(92) (Survey Feet) NAD 1927 (Meters)

N: 199,999 N: 656,163

E: 217,646 E: 714,062

NAD 1927 (Survey Feet)

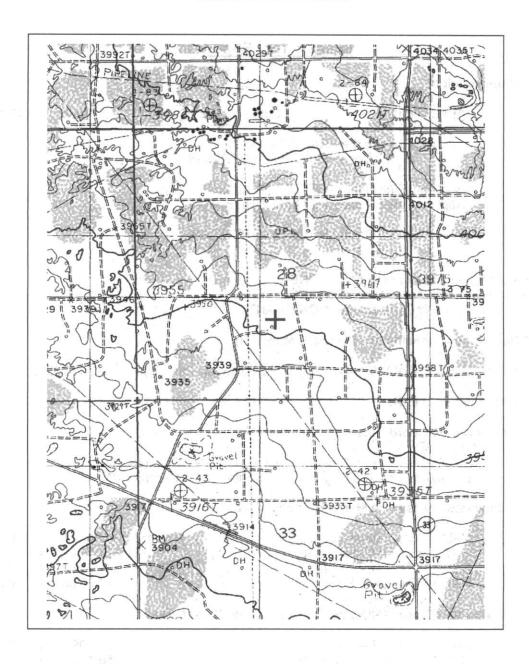
N: 199,979 N: 656,099

E: 205,095 E: 672,883

Print Date: 12/09/2014

### **NEW MEXICO OFFICE OF STATE ENGINEER**

### **Locator Tool Report**





WR File Number: RA-12204-POD1 Scale: 1:22,396

Northing/Easting: SPCS83(92) (Feet): N: 656,163 E: 714,062

GW Basin: Roswell Artesian

Page 2 of 2 Print Date: 12/09/2014



CONSULTING & SAFETY

PO Box 2948 | Hobbs, NM 88241 | Phone 575.393.2967

October 30th, 2014

#### Dr. Tomáš Oberding, PhD

Environmental Specialist – New Mexico Oil Conservation Division Energy, Minerals and Natural Resources Department 1625 N. French Dr. Hobbs, NM 88240

> RE: Corrective Action Plan ConocoPhillips MCA Well #357 (1RP-3025) UL/M sec. 28 T17S R32E API No. 3002525849

Dr. Oberding:

ConocoPhillips (CoP) has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the above-referenced site.

#### **Background and Previous Work**

The site is located approximately 3.7 miles south of Maljamar, New Mexico. The initial C-141 states that the release is located in UL/M; however, GPS mapping shows that the release is located in UL/J&K sec. 28 T17S R32E. NM OSE and USGS records indicate that groundwater will likely be encountered at a depth of approximately 65 +/- feet.

On December 17<sup>th</sup>, 2013, CoP discovered a release from a 2 inch flow line. The line degraded due to corrosion and released 24 barrels of produced water over 5,602 square feet of pasture land. None of this fluid was recovered. NMOCD and BLM were notified of the release on December 10<sup>th</sup>, 2013, and an initial C-141 was approved by NMOCD on August 18<sup>th</sup>, 2014 (Appendix A).

RECS personnel were on site beginning on January 7<sup>th</sup>, 2014. The wet material from the release, for a total of 324 cubic yards, was scraped up and sent to a NMOCD approved facility for disposal. The release area was sampled, first by hand augur and then by backhoe. Based on the sampling data from these events, it was evident that the release had moved deeper through the vadose zone than these two sampling techniques could assess. Therefore, three soil bores were installed at the site on June 18<sup>th</sup> and 19<sup>th</sup>, 2014 (Figure 1). The soil bores were advanced to the depth of 65 ft bgs, and soil samples from each bore were taken at regular intervals. The samples were field tested for chlorides and organic vapors, and representative samples were taken to a commercial laboratory for analysis (Appendix B). At 65 ft bgs, all three bores showed elevated laboratory chloride readings, Gasoline Range Organics (GRO), Diesel Range Organics (DRO) and BTEX readings of non-detect, except in SB-3, where there DRO reading was 11.4 mg/kg.

2014 DEC -3 AM II. DS

### Corrective Action Plan

Based on the soil bore installation data, it is evident that chlorides may have infiltrated the vadose zone to groundwater. Therefore, the site will need a vadose zone remediation phase and a groundwater remedy phase. In order to remediate the vadose zone, the release area will be excavated to 4 ft bgs. At the base of the excavation, a 20-mil reinforced poly liner will be installed and properly seated.

All excavated soil will be taken to a NMOCD approved facility for disposal, and clean soil will be imported to the site to serve as backfill. A sample of this imported soil will be taken to a commercial laboratory to confirm that the chloride value is below regulatory standards. The site will be backfilled with the imported soil and contoured to the surrounding location. The site will then be seeded with a blend of native vegetation.

Once the excavation is completed, a near-source monitor well (MW-1) will be installed down-gradient from the site (Figure 2). The monitor well will be installed per EPA and NMOCD standards. The monitor well will be sampled quarterly and once appropriate groundwater analysis data has been obtained, a remedy for groundwater will be proposed to NMOCD. Additional monitoring wells may be required to fully delineate groundwater quality.

RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 393-2967 or me if you have any questions or wish to discuss the site.

Sincerely,

Lara Weinheimer

Project Scientist

**RECS** 

(575) 441-0431

Attachments:

Figure 1 – Soil Bore Installation

Figure 2 – Proposed MW Installation

Appendix A – Initial C-141

Appendix B - Soil Bore Installation Documentation

Appendix C – Photo Documentation

ROSWELL, NEW MEXICO

From:

Hughes, Solomon

To:

Kyle Norman

Cc:

Oberding, Tomas, EMNRD; Wright, Justin K; Hack Conder; Lara Weinheimer; Laura Flores; Sarah Edwards;

Subject: Date:

Re: COP MCA Well #357 (2) CAP

Thursday, October 30, 2014 4:23:31 PM

Mr. Norman,

This plan is approved as written.

Bests, Sol

Sol Hughes

Environmental Protection Division Bureau of Land Management 620 E. Greene St Carlsbad, NM

Office: 575.234.5951 Cell: 575.499.3378

On Thu, Oct 30, 2014 at 3:45 PM, Hughes, Solomon < shughes@blm.gov > wrote: Message received.

Thanks, Sol

Sol Hughes

Environmental Protection Division Bureau of Land Management 620 E. Greene St Carlsbad, NM

Office: 575.234.5951 Cell: 575.499.3378

On Thu, Oct 30, 2014 at 1:57 PM, Kyle Norman < knorman@rice-ecs.com > wrote:

Gentlemen, attached is the Corrective Action Plan for the CoP MCA Well 357 (2). If you have any questions, please let us know. Otherwise, we await your approval.

Thanks!

Kyle Norman

Project Lead

419 W. Cain

2014 DEC -3 AN II. O.

From:

Oberding, Tomas, EMNRD

To: Cc:

Kyle Norman; "Hughes, Solomon"

Subject:

"Wright, Justin K"; "Hack Conder"; "Lara Weinheimer"; "Laura Flores"; "Sarah Edwards"; "Catherine Ursanic"

Date:

RE: COP MCA Well #357 (2) CAP Friday, October 31, 2014 8:45:11 AM

Aloha Mr. Norman et al,

Thank you for providing this CAP.

Based on the sample results- OCD gives conditional approval for the removal of soils as written. However, further actions must be approved through Santa Fe (with continued agreement form the BLM).

I will forward this to the groundwater specialists and shall provide an updated approval of conditions when I know more information.

Mahalo for your patience, and if there are any questions, please don't hesitate to ask. -Doc

Tomáš 'Doc' Oberding, PhD

Senior Environmental Specialist – New Mexico Oil Conservation Division

Energy, Minerals and Natural Resources Department

1625 N. French Dr.

Hobbs, NM 88240

(O): (575) 393-6161 ext 111

(C): 575-370-3180

(F): (575) 393-0720

E-Mail: tomas.oberding@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/

From: Kyle Norman [mailto:knorman@rice-ecs.com]

Sent: Thursday, October 30, 2014 1:58 PM

To: Oberding, Tomas, EMNRD; 'Hughes, Solomon'

Cc: 'Wright, Justin K'; 'Hack Conder'; 'Lara Weinheimer'; 'Laura Flores'; 'Sarah Edwards'; 'Catherine

Subject: COP MCA Well #357 (2) CAP

Gentlemen, attached is the Corrective Action Plan for the CoP MCA Well 357 (2). If you have any questions, please let us know. Otherwise, we await your approval. Thanks!

Kyle Norman

Project Lead

419 W. Cain

Hobbs NM 88240

Cell # (575)942-8542

Fax # (575)393-0293



**APPENDIX B** 

Photographic Log

# **ENSOLUM**

Photographic Log Maverick Permian, LLC MCA 301 NAPP2307558601





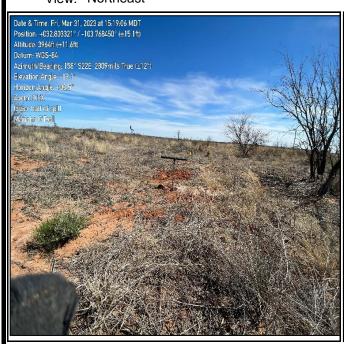
Photograph 1 Date: 03/31/2023 Description: Release area on the well pad

View: Northeast

Photograph 2 Date: 03/31/2023

Description: Release area on the well pad and pasture

View: Southeast



Photograph 3 Date: 03/31/2023 Description: Release area in the pasture

View: Southeast



Photograph 4 9/8/2023

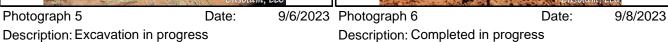
Description: Excavation in progress

View: North

# **ENSOLUM**

### Photographic Log Maverick Permian, LLC MCA 301 NAPP2307558601





View: Northwest View: Southeast



Photograph 7 Date: 9/8/2023 Photograph 8 Date: 9/8/2023

Description: Completed excavation Description: Completed excavation

View: North View: South

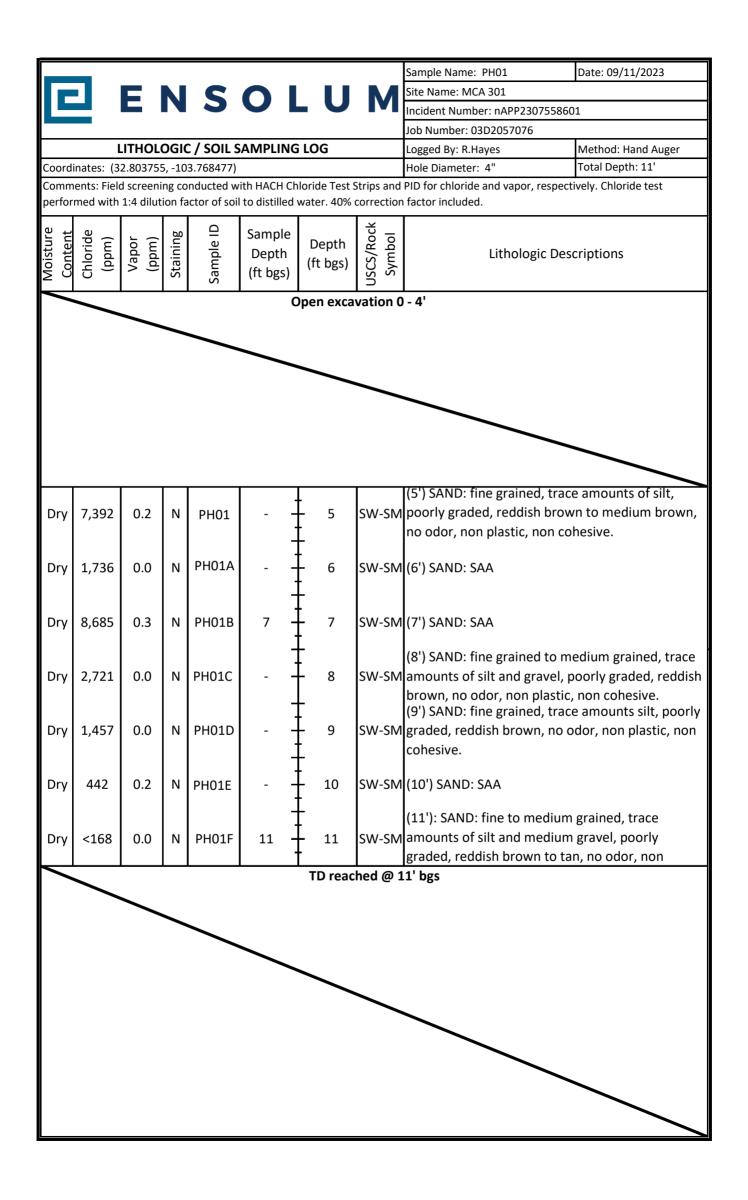


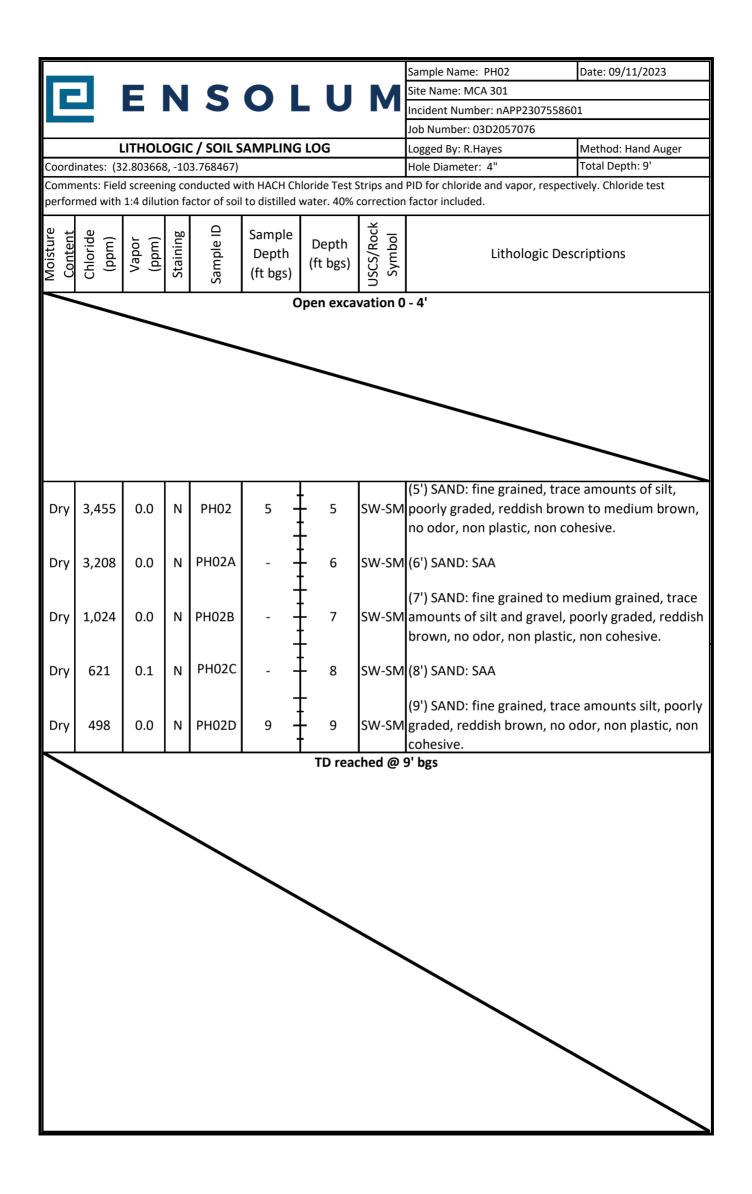
Photograph 8 Date: 9/8/2023
Description: Completed excavation

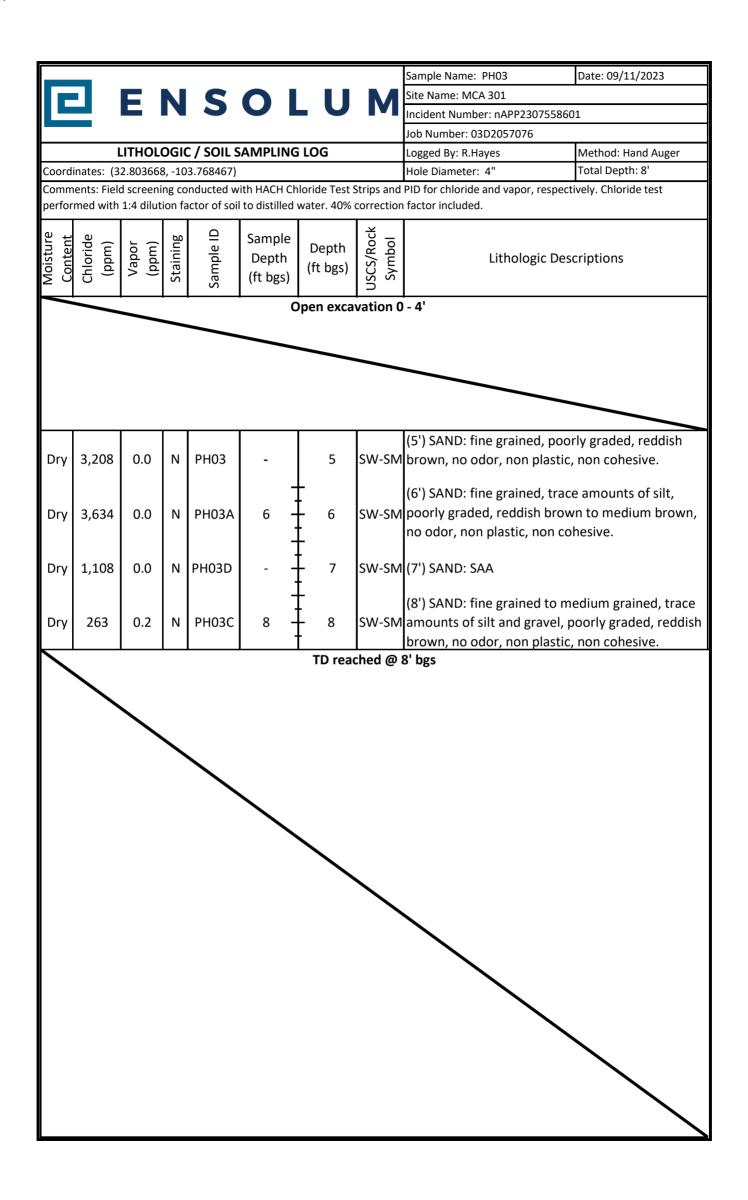


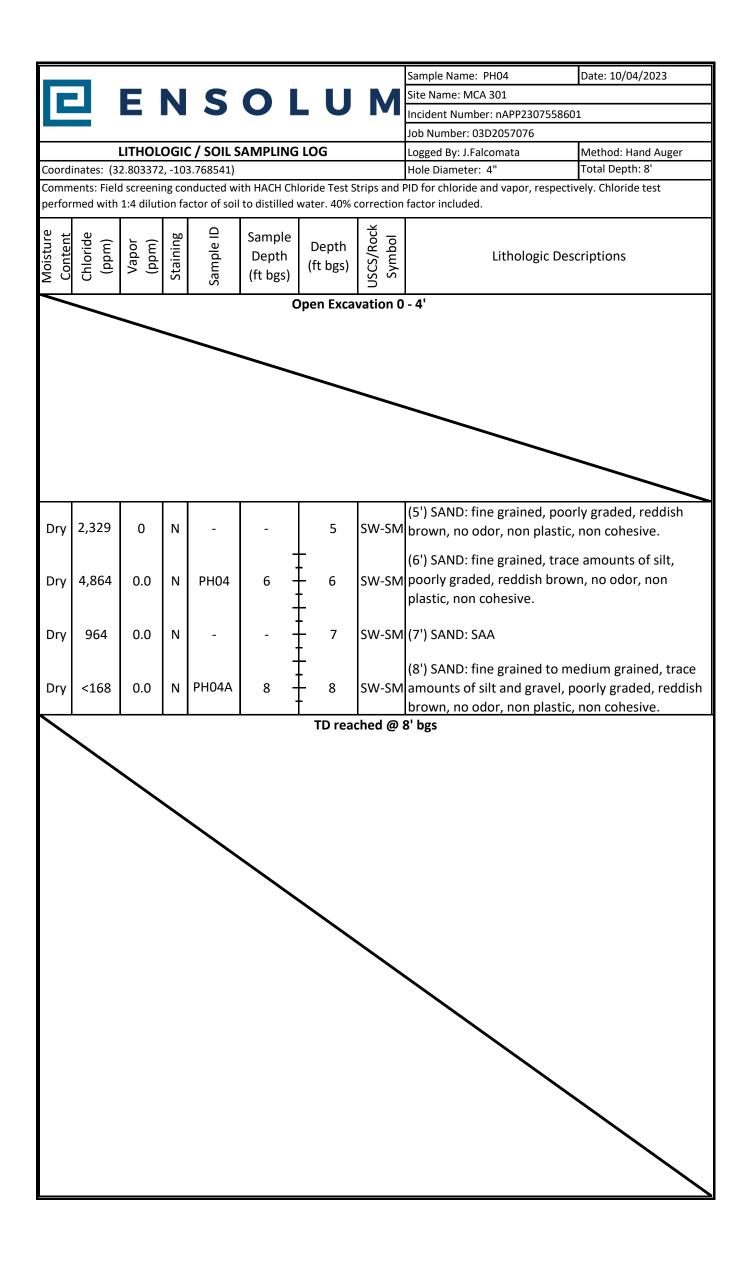
APPENDIX C

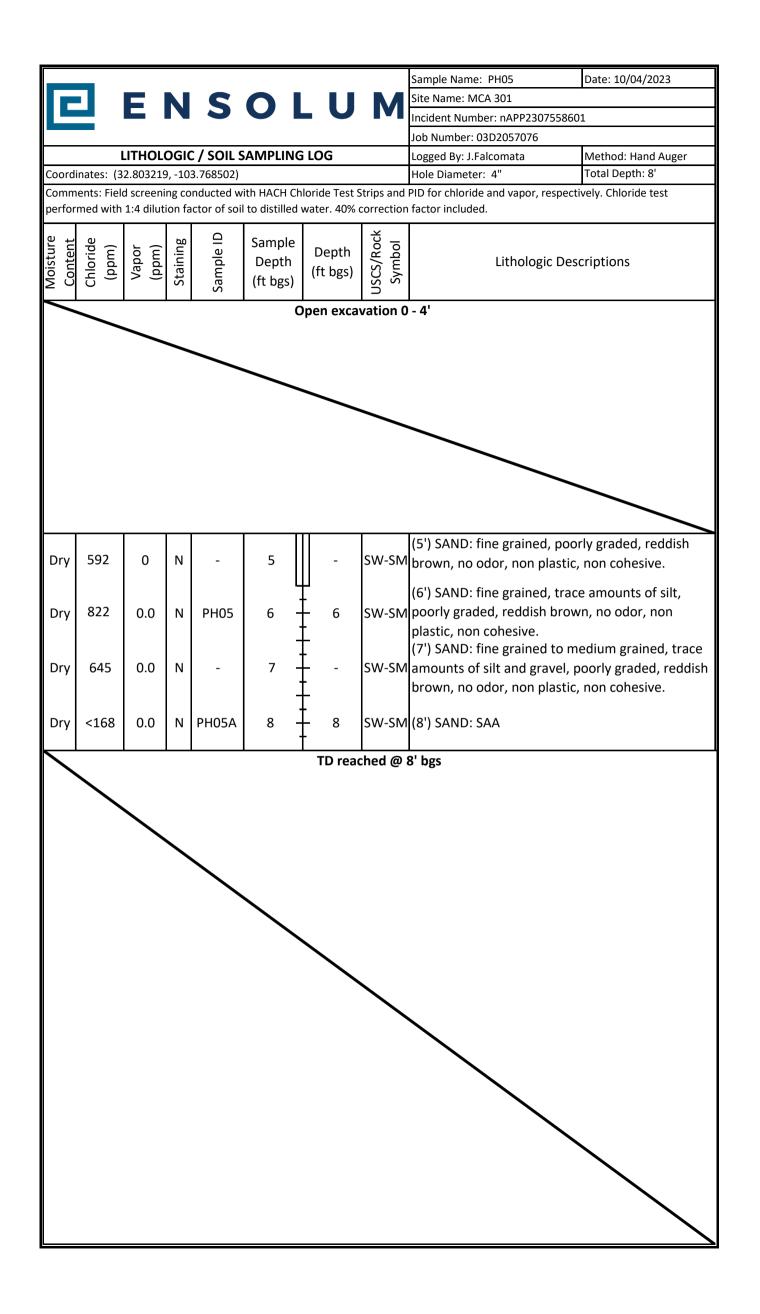
Lithologic Soil Sampling Logs













APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation



September 08, 2023

AIMEE COLE ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 301

Enclosed are the results of analyses for samples received by the laboratory on 09/06/23 13:56.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celey D. Keine

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



#### Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

 Received:
 09/06/2023
 Sampling Date:
 09/06/2023

 Reported:
 09/08/2023
 Sampling Type:
 Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Dionica Hinojos

A ... - I. ... - - I D. ... 311 /

Project Location: 32.8037000 -103.7686000

#### Sample ID: SW 01 @ 0-4' (H234818-01)

BTEX 8021B	mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/07/2023	ND	2.00	99.9	2.00	0.798	
Toluene*	<0.050	0.050	09/07/2023	ND	1.99	99.4	2.00	6.58	
Ethylbenzene*	<0.050	0.050	09/07/2023	ND	2.09	105	2.00	0.404	
Total Xylenes*	<0.150	0.150	09/07/2023	ND	6.18	103	6.00	1.90	
Total BTEX	<0.300	0.300	09/07/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	115	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/07/2023	ND	432	108	400	3.64	
TPH 8015M	mg,	/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/07/2023	ND	184	92.1	200	0.382	
DRO >C10-C28*	<10.0	10.0	09/07/2023	ND	178	89.0	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	09/07/2023	ND					
Surrogate: 1-Chlorooctane	99.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	113 9	% 49.1-14	8						

Cardinal Laboratories \*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene



#### Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/06/2023 Sampling Date: 09/06/2023

Reported: 09/08/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Dionica Hinojos

Analyzed By: 1H /

Project Location: 32.8037000 -103.7686000

#### Sample ID: SW 02 @ 0-4' (H234818-02)

RTFY 8021R

B1EX 8021B	mg	/ <b>kg</b>	Anaiyze	a By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/07/2023	ND	2.00	99.9	2.00	0.798	
Toluene*	<0.050	0.050	09/07/2023	ND	1.99	99.4	2.00	6.58	
Ethylbenzene*	<0.050	0.050	09/07/2023	ND	2.09	105	2.00	0.404	
Total Xylenes*	<0.150	0.150	09/07/2023	ND	6.18	103	6.00	1.90	
Total BTEX	<0.300	0.300	09/07/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	113	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	09/07/2023	ND	432	108	400	3.64	
TPH 8015M	mg	/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/07/2023	ND	184	92.1	200	0.382	
DRO >C10-C28*	<10.0	10.0	09/07/2023	ND	178	89.0	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	09/07/2023	ND					
Surrogate: 1-Chlorooctane	100	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	111	% 49.1-14	8						

Cardinal Laboratories \*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results related only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keine



09/06/2023

Soil

#### Analytical Results For:

**ENSOLUM** AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/06/2023 Sampling Date: Reported: 09/08/2023

Sampling Type: Project Name: MCA 301 Sampling Condition: Cool & Intact Sample Received By: Project Number: 03D2057076 Dionica Hinojos

Project Location: 32.8037000 -103.7686000

#### Sample ID: SW 03 @ 0-4' (H234818-03)

BTEX 8021B	mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/07/2023	ND	2.00	99.9	2.00	0.798	
Toluene*	<0.050	0.050	09/07/2023	ND	1.99	99.4	2.00	6.58	
Ethylbenzene*	<0.050	0.050	09/07/2023	ND	2.09	105	2.00	0.404	
Total Xylenes*	<0.150	0.150	09/07/2023	ND	6.18	103	6.00	1.90	
Total BTEX	<0.300	0.300	09/07/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	112 9	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	'kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/07/2023	ND	432	108	400	3.64	
TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/07/2023	ND	184	92.1	200	0.382	
DRO >C10-C28*	<10.0	10.0	09/07/2023	ND	178	89.0	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	09/07/2023	ND					
Surrogate: 1-Chlorooctane	104	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	115 9	% 49.1-14	8						

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#### Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/06/2023 Sampling Date: 09/06/2023

Reported: 09/08/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Dionica Hinojos

Analyzed By: JH/

Project Location: 32.8037000 -103.7686000

mg/kg

#### Sample ID: SW 04 @ 0-4' (H234818-04)

BTEX 8021B

DILX OUZID	mg/ kg		Allalyzea by: 511/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/07/2023	ND	2.00	99.9	2.00	0.798	
Toluene*	<0.050	0.050	09/07/2023	ND	1.99	99.4	2.00	6.58	
Ethylbenzene*	<0.050	0.050	09/07/2023	ND	2.09	105	2.00	0.404	
Total Xylenes*	<0.150	0.150	09/07/2023	ND	6.18	103	6.00	1.90	
Total BTEX	<0.300	0.300	09/07/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	114 9	% 71.5-13	4						
Chloride, SM4500CI-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/07/2023	ND	432	108	400	3.64	
TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/07/2023	ND	184	92.1	200	0.382	
DRO >C10-C28*	<10.0	10.0	09/07/2023	ND	178	89.0	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	09/07/2023	ND					
Surrogate: 1-Chlorooctane	93.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	105	% 49.1-14	8						

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09/06/2023

#### Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/06/2023 Sampling Date:

Reported: 09/08/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Dionica Hinojos

Project Location: 32.8037000 -103.7686000

#### Sample ID: SW 05 @ 0-4' (H234818-05)

BTEX 8021B	mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/07/2023	ND	2.00	99.9	2.00	0.798	
Toluene*	<0.050	0.050	09/07/2023	ND	1.99	99.4	2.00	6.58	
Ethylbenzene*	<0.050	0.050	09/07/2023	ND	2.09	105	2.00	0.404	
Total Xylenes*	<0.150	0.150	09/07/2023	ND	6.18	103	6.00	1.90	
Total BTEX	<0.300	0.300	09/07/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	114	% 71.5-13	4						
Chloride, SM4500CI-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/07/2023	ND	432	108	400	3.64	
TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/07/2023	ND	184	92.1	200	0.382	
DRO >C10-C28*	<10.0	10.0	09/07/2023	ND	178	89.0	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	09/07/2023	ND					
Surrogate: 1-Chlorooctane	98.4	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	110	% 49.1-14	8						

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# Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/06/2023 Sampling Date: 09/06/2023

Reported: 09/08/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Dionica Hinojos

Analyzed By: 1H /

Project Location: 32.8037000 -103.7686000

# Sample ID: FS 01 @ 4' (H234818-06)

RTFY 8021R

Result < 0.050 < 0.050	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	T \/-  OC	DDD	
	0.050			55	70 RECOVERY	True Value QC	RPD	Qualifier
<0.050		09/07/2023	ND	2.00	99.9	2.00	0.798	
10.000	0.050	09/07/2023	ND	1.99	99.4	2.00	6.58	
<0.050	0.050	09/07/2023	ND	2.09	105	2.00	0.404	
<0.150	0.150	09/07/2023	ND	6.18	103	6.00	1.90	
<0.300	0.300	09/07/2023	ND					
111 9	% 71.5-13	4						
mg	/kg	Analyze	d By: AC					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
32.0	16.0	09/07/2023	ND	432	108	400	3.64	
mg,	/kg	Analyze	d By: MS					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<10.0	10.0	09/07/2023	ND	184	92.1	200	0.382	
<10.0	10.0	09/07/2023	ND	178	89.0	200	2.29	
<10.0	10.0	09/07/2023	ND					
102	% 48.2-13	4						
114	% 49.1-14	8						
	<0.300  1111  mg,  Result  32.0  mg,  Result  <10.0  <10.0  102	<0.300 1111 % 71.5-13 mg/ky Result Reporting Limit 32.0 16.0 mg/ky Result Reporting Limit <10.0 10.0 <10.0 10.0 <10.0 10.0 <10.0 10.0  <10.0 10.0  <10.2 % 48.2-13	<0.300       0.300       09/07/2023         111 % 71.5-134         mg/kg       Analyzed         Result Reporting Limit Analyzed         Result Reporting Limit Analyzed         <10.0	<0.300       09/07/2023       ND         111 %       71.5-134         mg/ky       Analyzed By: AC         Result Reporting Limit Analyzed By: MS         Result Reporting Limit Analyzed Method Blank         <10.0	<0.300       09/07/2023       ND         111 % 71.5-134         mg/ky       Analyzed By: AC         Result Reporting Limit Analyzed By: MS         Result Reporting Limit Analyzed Method Blank BS         <10.0	< 0.300       09/07/2023       ND         111 % 71.5-134         Try 1.5-134         Try 1.5-134         Try 1.5-134         Try 1.5-134         Try 1.5-134         Result Reporting Limit Analyzed By: MS         Result Reporting Limit Analyzed Method Blank BS % Recovery         <10.0 10.0 09/07/2023 ND 184 92.1	< 0.300       09/07/2023       ND         1111 % 71.5-134         True Value V	< 0.300       09/07/2023       ND         111

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# Analytical Results For:

**ENSOLUM** AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/06/2023 Sampling Date: 09/06/2023

Reported: 09/08/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact Sample Received By: Project Number: 03D2057076 Dionica Hinojos

Project Location: 32.8037000 -103.7686000

# Sample ID: FS 02 @ 4' (H234818-07)

BTEX 8021B	mg,	'kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/07/2023	ND	2.00	99.9	2.00	0.798	
Toluene*	<0.050	0.050	09/07/2023	ND	1.99	99.4	2.00	6.58	
Ethylbenzene*	<0.050	0.050	09/07/2023	ND	2.09	105	2.00	0.404	
Total Xylenes*	<0.150	0.150	09/07/2023	ND	6.18	103	6.00	1.90	
Total BTEX	<0.300	0.300	09/07/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	111 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	752	16.0	09/07/2023	ND	432	108	400	3.64	
TPH 8015M	mg,	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/07/2023	ND	184	92.1	200	0.382	
DRO >C10-C28*	<10.0	10.0	09/07/2023	ND	178	89.0	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	09/07/2023	ND					
Surrogate: 1-Chlorooctane	96.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	107	% 49.1-14	8						

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09/06/2023

# Analytical Results For:

**ENSOLUM** AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/06/2023 Sampling Date:

Reported: 09/08/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact Sample Received By: Project Number: 03D2057076 Dionica Hinojos

Project Location: 32.8037000 -103.7686000

# Sample ID: FS 03 @ 4' (H234818-08)

BTEX 8021B	mg/	'kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/07/2023	ND	2.00	99.9	2.00	0.798	
Toluene*	<0.050	0.050	09/07/2023	ND	1.99	99.4	2.00	6.58	
Ethylbenzene*	<0.050	0.050	09/07/2023	ND	2.09	105	2.00	0.404	
Total Xylenes*	<0.150	0.150	09/07/2023	ND	6.18	103	6.00	1.90	
Total BTEX	<0.300	0.300	09/07/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	115 9	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3080	16.0	09/07/2023	ND	432	108	400	3.64	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/07/2023	ND	184	92.1	200	0.382	
DRO >C10-C28*	<10.0	10.0	09/07/2023	ND	178	89.0	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	09/07/2023	ND					
Surrogate: 1-Chlorooctane	91.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	101 9	% 49.1-14	8						

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# Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/06/2023 Reported: 09/08/2023

Project Name: MCA 301
Project Number: 03D2057076

Project Location: 32.8037000 -103.7686000

Sampling Date: 09/06/2023

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Dionica Hinojos

# Sample ID: FS 04 @ 4' (H234818-09)

RTFY 8021R

BIEX 8021B	mg	/ <b>kg</b>	Anaiyze	a By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/07/2023	ND	2.00	99.9	2.00	0.798	
Toluene*	<0.050	0.050	09/07/2023	ND	1.99	99.4	2.00	6.58	
Ethylbenzene*	<0.050	0.050	09/07/2023	ND	2.09	105	2.00	0.404	
Total Xylenes*	<0.150	0.150	09/07/2023	ND	6.18	103	6.00	1.90	
Total BTEX	<0.300	0.300	09/07/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	114	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1760	16.0	09/07/2023	ND	432	108	400	3.64	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/07/2023	ND	184	92.1	200	0.382	
DRO >C10-C28*	<10.0	10.0	09/07/2023	ND	178	89.0	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	09/07/2023	ND					
Surrogate: 1-Chlorooctane	85.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	93.0	% 49.1-14	8						

Analyzed By: 1H /

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# Analytical Results For:

**ENSOLUM** AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/06/2023 Sampling Date: 09/06/2023

Reported: 09/08/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact Sample Received By: Project Number: 03D2057076 Dionica Hinojos

Project Location: 32.8037000 -103.7686000

# Sample ID: FS 05 @ 4' (H234818-10)

BTEX 8021B	mg/	kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/07/2023	ND	2.00	99.9	2.00	0.798	
Toluene*	<0.050	0.050	09/07/2023	ND	1.99	99.4	2.00	6.58	
Ethylbenzene*	<0.050	0.050	09/07/2023	ND	2.09	105	2.00	0.404	
Total Xylenes*	<0.150	0.150	09/07/2023	ND	6.18	103	6.00	1.90	
Total BTEX	<0.300	0.300	09/07/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	113 9	6 71.5-13	4						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1100	16.0	09/07/2023	ND	432	108	400	3.64	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/07/2023	ND	184	92.1	200	0.382	
DRO >C10-C28*	<10.0	10.0	09/07/2023	ND	178	89.0	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	09/07/2023	ND					
Surrogate: 1-Chlorooctane	91.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	99.9	% 49.1-14	8						

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# Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/06/2023 Sampling Date: 09/06/2023

Reported: 09/08/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Dionica Hinojos

Analyzed By: 1H /

Project Location: 32.8037000 -103.7686000

# Sample ID: FS 06 @ 4' (H234818-11)

RTFY 8021R

BIEX 8021B	mg	/ <b>kg</b>	Anaiyze	ea By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/07/2023	ND	2.00	99.9	2.00	0.798	
Toluene*	<0.050	0.050	09/07/2023	ND	1.99	99.4	2.00	6.58	
Ethylbenzene*	<0.050	0.050	09/07/2023	ND	2.09	105	2.00	0.404	
Total Xylenes*	<0.150	0.150	09/07/2023	ND	6.18	103	6.00	1.90	
Total BTEX	<0.300	0.300	09/07/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	116	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	09/07/2023	ND	432	108	400	3.64	
TPH 8015M	mg,	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/07/2023	ND	184	92.1	200	0.382	
DRO >C10-C28*	<10.0	10.0	09/07/2023	ND	178	89.0	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	09/07/2023	ND					
Surrogate: 1-Chlorooctane	94.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	104	% 49.1-14	8						

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keine



# Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/06/2023 Sampling Date: 09/06/2023

Reported: 09/08/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Dionica Hinojos

Project Location: 32.8037000 -103.7686000

# Sample ID: FS 07 @ 4' (H234818-12)

BTEX 8021B	mg/kg Analyzed By: JH/								
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/07/2023	ND	2.00	99.9	2.00	0.798	
Toluene*	<0.050	0.050	09/07/2023	ND	1.99	99.4	2.00	6.58	
Ethylbenzene*	<0.050	0.050	09/07/2023	ND	2.09	105	2.00	0.404	
Total Xylenes*	<0.150	0.150	09/07/2023	ND	6.18	103	6.00	1.90	
Total BTEX	<0.300	0.300	09/07/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	116	% 71.5-13	34						
Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5840	16.0	09/07/2023	ND	432	108	400	3.64	
TPH 8015M	mg,	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/07/2023	ND	184	92.1	200	0.382	
DRO >C10-C28*	<10.0	10.0	09/07/2023	ND	178	89.0	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	09/07/2023	ND					
Surrogate: 1-Chlorooctane	99.3	% 48.2-13	34						
Surrogate: 1-Chlorooctadecane	111	% 49.1-14	18						

Cardinal Laboratories \*=Accredited Analyte

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Celeg D. Keene



# **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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Celeg D. Freene

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

	(3/3) 333-2326 FAX (3/3) 393-24/6	24/6			
Company Name:	277 WILLIAMS		BILL TO		ANALYSIS REQUEST
Project Manager:	Ame bole		P.O. #: A.A.		- 1
Address: 8	22 Nat Pourks	Hwy	Company:		
City: POW	State: W	Wzip: 05820	Attn:		
Phone #: 720	)-854-7365 Fax#: -		Address:		
Project #: 080	2057 07 10 Project Owner:	er: Mowerich	City:		
Project Name:	10A 8UI		State: Zip:		
Project Location:	(82. 5037000, - 10	5.7686000	Phone #:		
Sampler Name:	Juli currer Follow	vota "	Fax #:	15	
FOR LAB USE ONLY		MATRIX	PRESERV. SAMI	SAMPLING	
	o market	NERS VATER		TE)	
- E	sample I.D.	(G)RAB OR # CONTAIN GROUNDW WASTEWA SOIL OIL SLUDGE	OTHER: ACID/BASE ICE / COOL OTHER:	TIME B	
	SW07 8 0-4	CTX	X 9/6/23	-	
CO C	SUUS 800-4'				
57 2	2004 80 0-4			500	
6	201 DH.			175	
01	1502 QU			1130	
200	2000 1004			138	
PLEASE NOTE: Liability and D	SDS OH	<		1145 5 7 7	
analyses. All claims including the service. In no event shall Cardinal faffilia. * or successors arising o	analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incrured by client, its subsidiaries, affilia, or successors arising out of or related to the performance of services hereupder by Cardinal reparations of whether styr. Asian is based upon any of the above standard response or thereupder.	mounty arth chemic sexcuster tentiedy for any claim arising whether based in contract or ford, shall be limited to the emount paid by the client for the and any other cause whatscever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the a rental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, a performance of senfores hereunder by Cardinal repartless of whether str. Asian is based in one and of the above stated reserves or otherwise.	ract or tort, shall be limited to the amount paid and received by Cardinal within 30 days after ins, loss of use, or loss of profits incurred by cardinish is hased innon any of the above stated recaim is hased innon any of the above stated recaim is hased innon any of the above.	aid by the client for the applicable for completion of the applicable / client, its substdiantes,	
Rollinguished By:	Date: 9/6/			Verbal Result:	Add'l Phone #:
Refinquished By:	1909 Time: 13:17	mather	-	MODE COEMSUMMION Pall	m Palcompta Bursolum
	Time:	,		ADDOOR CO	
Delivered By: (Circle One)	le One) Observed Temp. °C U	Sample	CHECKED BY:	Turnaround Time: Standard	Bacteria (only) Sa
Sampler - UPS - Bus - Other:	Bus - Other: Corrected Temp. °C	□ Ves □ Ves □ No □ No	Q A To	Thermometer ID #140 Correction Factor 0°C	l
					ı

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

Relinquished by:	PLEASE NOTE: Liability and Damages analyses, All claims including those for seryne. In no event shall Cardinal be lia beful and the services or sising out of or r	\$ = B	HB3488	FOR LAB USE ONLY	Project Location:	Project Name: MC	Project #: 16DU	Phone #: 120-8	City: Partob	Address: 8/77	Project Manager:	Company Name:	13/
Relinquished By:  Delivered By:  Del	PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or fort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable servipe. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, and the successors arising out of or related to the performance of s*res hereuprder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwis.	70004	Sample I.D.	DIDA CALVANIA	2, 5057000 - 102	1 301	Project Owner:	64 -13 16 Fax #:	State: NIM	Natl Parks H	MIL TOO	1000 TOTAL POLICE OF THE POLIC	11 14 17 17 17 17 17 17 17 17 17 17 17 17 17
Received By:	violusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount p whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days at all damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by cardinal, regardless of whether such claim is based upon any of the above stated	← ×	(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	MATRIX	5.7686000)		wner:		M 2ip: 88770	WW		10-2410	37.76
	ct or tort, shall be limited to the amount paid and received by Cardinal within 30 days after to use, or loss of profits incurred by of in is based upon any of the above stated re	€ ×	OTHER: ACID/BASE: ICE / COOL OTHER:	Fax #:	Phone #:	State: Zip:	City:	Address:	Attn:	Company:		BILL TO	
Verbal Rosivit:	pplicab		BTE)	SAMPLING					,				
No Add'i Phone #: Please provide Email address Num, Nom ; Sabota		<- X	Chloric	de	5							SISA IVNV	
House #: House material ensolume					8						_	SIS REQUEST	
nsblum.esm								4		7			



September 13, 2023

AIMEE COLE

**ENSOLUM** 

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 301

Enclosed are the results of analyses for samples received by the laboratory on 09/08/23 15:09.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Total Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2 Regulated VOCs and Total Trihalomethanes (TTHM)

Method EPA 552.2 Total Haloacetic Acids (HAA-5)

Celey D. Keene

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

Fax To:

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FS 18 @ 4'	H234886-01	Soil	08-Sep-23 10:35	08-Sep-23 15:09
FS 19 @ 4'	H234886-02	Soil	08-Sep-23 10:40	08-Sep-23 15:09
FS 20 @ 4'	H234886-03	Soil	08-Sep-23 13:10	08-Sep-23 15:09
FS 21 @ 4'	H234886-04	Soil	08-Sep-23 13:15	08-Sep-23 15:09
FS 22 @ 4'	H234886-05	Soil	08-Sep-23 13:20	08-Sep-23 15:09
FS 23 @ 4'	H234886-06	Soil	08-Sep-23 13:25	08-Sep-23 15:09
SW 06 @ 0-4'	H234886-07	Soil	08-Sep-23 10:55	08-Sep-23 15:09
SW 07 @ 0-4'	H234886-08	Soil	08-Sep-23 11:00	08-Sep-23 15:09
SW 08 @ 0-4'	H234886-09	Soil	08-Sep-23 11:05	08-Sep-23 15:09
SW 09 @ 0-4'	H234886-10	Soil	08-Sep-23 12:10	08-Sep-23 15:09
FS 08 @ 4'	H234886-11	Soil	08-Sep-23 09:00	08-Sep-23 15:09
FS 09 @ 4'	H234886-12	Soil	08-Sep-23 09:03	08-Sep-23 15:09
FS 10 @ 4'	H234886-13	Soil	08-Sep-23 10:50	08-Sep-23 15:09
FS 11 @ 4'	H234886-14	Soil	08-Sep-23 09:10	08-Sep-23 15:09
FS 12 @ 4'	H234886-15	Soil	08-Sep-23 09:13	08-Sep-23 15:09
FS 13 @ 4'	H234886-16	Soil	08-Sep-23 09:16	08-Sep-23 15:09
FS 14 @ 4'	H234886-17	Soil	08-Sep-23 09:19	08-Sep-23 15:09
FS 15 @ 4'	H234886-18	Soil	08-Sep-23 09:21	08-Sep-23 15:09
FS 16 @ 4'	H234886-19	Soil	08-Sep-23 10:45	08-Sep-23 15:09
FS 17 @ 4'	H234886-20	Soil	08-Sep-23 09:48	08-Sep-23 15:09
SW 10 @ 0-4'	H234886-21	Soil	08-Sep-23 12:15	08-Sep-23 15:09
SW 11 @ 0-4'	H234886-22	Soil	08-Sep-23 12:20	08-Sep-23 15:09
SW 12 @ 0-4'	H234886-23	Soil	08-Sep-23 12:25	08-Sep-23 15:09
SW 13 @ 0-4'	H234886-24	Soil	08-Sep-23 12:30	08-Sep-23 15:09

09/13/23 - Client changed some sample IDs (see COC). This is the revised report and will replace the one sent earlier today, 09/13/23.

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

lanager: AIMEE ( Fax To: Reported: 13-Sep-23 16:39

# FS 18 @ 4' H234886-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	8660		16.0	mg/kg	4	3091214	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compounds b	y EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091102	JH	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091102	JH	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091102	JH	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091102	JH	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091102	JH	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			98.6 %	71.5	-134	3091102	JH	12-Sep-23	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090902	MS	11-Sep-23	8015B	
DRO >C10-C28*	173		10.0	mg/kg	1	3090902	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	126		10.0	mg/kg	1	3090902	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			105 %	48.2	-134	3090902	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			134 %	49.1	-148	3090902	MS	11-Sep-23	8015B	

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# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

Fax To:

# FS 19 @ 4' H234886-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	ıl Laborat	ories					
Inorganic Compounds										
Chloride	576		16.0	mg/kg	4	3091214	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compounds b	y EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091102	JH	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091102	JH	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091102	JH	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091102	JH	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091102	JH	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			110 %	71.5	-134	3091102	JH	12-Sep-23	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			95.3 %	48.2	-134	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			96.2 %	49.1	-148	3090903	MS	11-Sep-23	8015B	

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Celey D. Keene, Lab Director/Quality Manager



# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

Fax To:

FS 20 @ 4' H234886-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	1310		16.0	mg/kg	4	3091214	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compounds b	y EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091102	JH	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091102	JH	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091102	JH	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091102	JH	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091102	JH	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			112 %	71.5	-134	3091102	JH	12-Sep-23	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			84.0 %	48.2	-134	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			84.6 %	49.1	-148	3090903	MS	11-Sep-23	8015B	

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Celeg D. Keene



# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Fax To:

Reported: 13-Sep-23 16:39

# FS 21 @ 4' H234886-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	ıl Laborat	ories					
Inorganic Compounds										
Chloride	1520		16.0	mg/kg	4	3091214	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compound	s by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (Pi	TD)		116 %	71.5	-134	3091103	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			96.0 %	48.2	-134	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			96.0 %	49.1	-148	3090903	MS	11-Sep-23	8015B	

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Celey D. Keene, Lab Director/Quality Manager



# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

13-Sep-23 16:39

Reported:

Fax To:

FS 22 @ 4' H234886-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	1380		16.0	mg/kg	4	3091214	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (PL	D)		114 %	71.5	-134	3091103	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			91.3 %	48.2	-134	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			93.5 %	49.1	-148	3090903	MS	11-Sep-23	8015B	

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Celey D. Keine



# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

Fax To:

FS 23 @ 4' H234886-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	1310		16.0	mg/kg	4	3091217	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compounds b	y EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			115 %	71.5	-134	3091103	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			92.4 %	48.2	-134	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			93.3 %	49.1	-148	3090903	MS	11-Sep-23	8015B	

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Celey D. Keine



# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

Fax To:

SW 06 @ 0-4' H234886-07 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	192		16.0	mg/kg	4	3091217	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compounds l	y EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)	1		116 %	71.5	-134	3091103	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
DRO >C10-C28*	55.8		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	41.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			75.7 %	48.2	-134	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			78.2 %	49.1	-148	3090903	MS	11-Sep-23	8015B	

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Celey D. Keene



# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

Fax To:

SW 07 @ 0-4' H234886-08 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	ıl Laborat	ories					
Inorganic Compounds										
Chloride	192		16.0	mg/kg	4	3091217	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID	))		115 %	71.5	-134	3091103	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by C	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			81.6 %	48.2	-134	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			82.5 %	49.1	-148	3090903	MS	11-Sep-23	8015B	

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Celeg D. Keene



# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

Fax To:

SW 08 @ 0-4' H234886-09 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	144		16.0	mg/kg	4	3091217	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (PIL	<b>)</b> )		112 %	71.5	-134	3091103	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by C	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			86.3 %	48.2	-134	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			86.7 %	49.1	-148	3090903	MS	11-Sep-23	8015B	

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Celeg D. Keene



# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

Fax To:

SW 09 @ 0-4' H234886-10 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	ıl Laborat	ories					
Inorganic Compounds										
Chloride	432		16.0	mg/kg	4	3091217	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			116 %	71.5	-134	3091103	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by GC	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			84.2 %	48.2	-134	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			85.1 %	49.1	-148	3090903	MS	11-Sep-23	8015B	

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Celey D. Keene, Lab Director/Quality Manager



# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

Fax To:

FS 08 @ 4' H234886-11 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	ıl Laborat	ories					
Inorganic Compounds										
Chloride	880		16.0	mg/kg	4	3091217	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (PL	D)		114 %	71.5	-134	3091103	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			87.5 %	48.2	-134	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			88.7 %	49.1	-148	3090903	MS	11-Sep-23	8015B	

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Celey D. Keene



# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

Fax To:

FS 09 @ 4' H234886-12 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	ıl Laborat	ories					
Inorganic Compounds										
Chloride	1720		16.0	mg/kg	4	3091217	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (PI	D)		111 %	71.5	-134	3091103	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			92.9 %	48.2	-134	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			92.6 %	49.1	-148	3090903	MS	11-Sep-23	8015B	

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Celeg D. Keene



# Analytical Results For:

**ENSOLUM** 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220

Project: MCA 301 Project Number: 03D2057076 Project Manager: AIMEE COLE

Fax To:

Reported: 13-Sep-23 16:39

FS 10 @ 4' H234886-13 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	1230		16.0	mg/kg	4	3091217	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)	)		111 %	71.5	-134	3091103	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by C	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			87.5 %	48.2	-134	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			88.8 %	49.1	-148	3090903	MS	11-Sep-23	8015B	

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Celey D. Keene



# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

Fax To:

FS 11 @ 4' H234886-14 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	18000		16.0	mg/kg	4	3091217	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID	))		117 %	71.5	-134	3091103	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by C	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			80.7 %	48.2	-134	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			81.7 %	49.1	-148	3090903	MS	11-Sep-23	8015B	

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# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

Fax To:

FS 12 @ 4' H234886-15 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	3000		16.0	mg/kg	4	3091217	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID	)		115 %	71.5	-134	3091103	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by C	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			90.1 %	48.2	-134	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			91.0 %	49.1	-148	3090903	MS	11-Sep-23	8015B	

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Celeg D. Keene



# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

Fax To:

FS 13 @ 4' H234886-16 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	1490		16.0	mg/kg	4	3091217	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID	)		113 %	71.5	-134	3091103	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by C	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			91.2 %	48.2	-134	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			93.0 %	49.1	-148	3090903	MS	11-Sep-23	8015B	

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Celey D. Keene, Lab Director/Quality Manager



# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

Fax To:

FS 14 @ 4' H234886-17 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	al Laborat	ories					
Inorganic Compounds										
Chloride	1520		16.0	mg/kg	4	3091217	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compound	s by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (P.	ID)		114 %	71.5	-134	3091103	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			83.5 %	48.2	-134	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			83.7 %	49.1	-148	3090903	MS	11-Sep-23	8015B	

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Celey D. Keene, Lab Director/Quality Manager

Reported:

13-Sep-23 16:39



### PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

ger: AIMEE COLE

Fax To:

FS 15 @ 4' H234886-18 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	ıl Laborat	ories					
Inorganic Compounds										
Chloride	6960		16.0	mg/kg	4	3091217	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compounds	s by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (Pl	(D)		113 %	71.5	-134	3091103	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			91.2 %	48.2	-134	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			92.5 %	49.1	-148	3090903	MS	11-Sep-23	8015B	

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Celey D. Keene, Lab Director/Quality Manager



# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

Fax To:

FS 16 @ 4' H234886-19 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	768		16.0	mg/kg	4	3091217	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050	·	0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			114 %	71.5-	-134	3091103	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by GC	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			89.5 %	48.2-	-134	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			91.3 %	49.1-	-148	3090903	MS	11-Sep-23	8015B	

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# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

Fax To:

FS 17 @ 4' H234886-20 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	18400		16.0	mg/kg	4	3091217	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (PII	D)		116 %	71.5	-134	3091103	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			98.1 %	48.2	-134	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			98.8 %	49.1	-148	3090903	MS	11-Sep-23	8015B	

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# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Fax To:

Reported: 13-Sep-23 16:39

SW 10 @ 0-4' H234886-21 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	80.0		16.0	mg/kg	4	3091217	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compounds l	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)	)		115 %	71.5	-134	3091103	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by C	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			99.6 %	48.2	-134	3090903	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			98.2 %	49.1	-148	3090903	MS	11-Sep-23	8015B	

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# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

Fax To:

SW 11 @ 0-4' H234886-22 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	al Laborat	ories					
Inorganic Compounds										
Chloride	80.0		16.0	mg/kg	4	3091217	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (PIL	))		116 %	71.5	-134	3091103	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090904	MS	11-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3090904	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3090904	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			102 %	48.2	-134	3090904	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			110 %	49.1	-148	3090904	MS	11-Sep-23	8015B	

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Celeg D. Keene



# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

Fax To:

SW 12 @ 0-4' H234886-23 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	ıl Laborat	ories					
Inorganic Compounds										
Chloride	16.0		16.0	mg/kg	4	3091217	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compound	s by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091103	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (P.	ID)		115 %	71.5	-134	3091103	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090904	MS	11-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3090904	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3090904	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			107 %	48.2	-134	3090904	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			115 %	49.1	-148	3090904	MS	11-Sep-23	8015B	

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Celeg D. Keene



# Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

Fax To:

SW 13 @ 0-4' H234886-24 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	ıl Laborat	ories					
Inorganic Compounds										
Chloride	32.0		16.0	mg/kg	4	3091217	AC	12-Sep-23	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091113	MS	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091113	MS	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091113	MS	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091113	MS	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091113	MS	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID	))		103 %	71.5	-134	3091113	MS	12-Sep-23	8021B	
Petroleum Hydrocarbons by C	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3090904	MS	11-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3090904	MS	11-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3090904	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctane			126 %	48.2	-134	3090904	MS	11-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			138 %	49.1	-148	3090904	MS	11-Sep-23	8015B	

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Celey D. Keene, Lab Director/Quality Manager

Reported:

13-Sep-23 16:39



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

### Analytical Results For:

**ENSOLUM** 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220

Project: MCA 301 Project Number: 03D2057076 Project Manager: AIMEE COLE

Fax To:

# **Inorganic Compounds - Quality Control**

### **Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3091214 - 1:4 DI Water										
Blank (3091214-BLK1)				Prepared &	Analyzed:	12-Sep-23				
Chloride	ND	16.0	mg/kg							
LCS (3091214-BS1)				Prepared &	Analyzed:	12-Sep-23				
Chloride	448	16.0	mg/kg	400		112	80-120			
LCS Dup (3091214-BSD1)				Prepared &	Analyzed:	12-Sep-23				
Chloride	432	16.0	mg/kg	400		108	80-120	3.64	20	
Batch 3091217 - 1:4 DI Water										
Blank (3091217-BLK1)				Prepared &	Analyzed:	12-Sep-23				
Chloride	ND	16.0	mg/kg							
LCS (3091217-BS1)				Prepared &	Analyzed:	12-Sep-23				
Chloride	448	16.0	mg/kg	400		112	80-120			
LCS Dup (3091217-BSD1)				Prepared &	Analyzed:	12-Sep-23				
Chloride	448	16.0	mg/kg	400		112	80-120	0.00	20	

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Celey D. Keene



### Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

Fax To:

### **Volatile Organic Compounds by EPA Method 8021 - Quality Control**

### **Cardinal Laboratories**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3091102 - Volatiles										
Blank (3091102-BLK1)				Prepared &	Analyzed:	11-Sep-23				

Blank (3091102-BLK1)				Prepared & Ana	lyzed: 11-Sep-23				
Benzene	ND	0.050	mg/kg						
Toluene	ND	0.050	mg/kg						
Ethylbenzene	ND	0.050	mg/kg						
Total Xylenes	ND	0.150	mg/kg						
Total BTEX	ND	0.300	mg/kg						
Surrogate: 4-Bromofluorobenzene (PID)	0.0516		mg/kg	0.0500	103	71.5-134			
LCS (3091102-BS1)				Prepared & Ana	lyzed: 11-Sep-23				
Benzene	1.95	0.050	mg/kg	2.00	97.5	82.8-130			
Toluene	2.26	0.050	mg/kg	2.00	113	86-128			
Ethylbenzene	2.29	0.050	mg/kg	2.00	114	85.9-128			
m,p-Xylene	4.58	0.100	mg/kg	4.00	114	89-129			
o-Xylene	2.31	0.050	mg/kg	2.00	115	86.1-125			
Total Xylenes	6.89	0.150	mg/kg	6.00	115	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	0.0543		mg/kg	0.0500	109	71.5-134			
LCS Dup (3091102-BSD1)				Prepared & Ana	lyzed: 11-Sep-23				
Benzene	1.85	0.050	mg/kg	2.00	92.5	82.8-130	5.18	15.8	
Toluene	2.24	0.050	mg/kg	2.00	112	86-128	1.00	15.9	
Ethylbenzene	2.29	0.050	mg/kg	2.00	114	85.9-128	0.0631	16	
m,p-Xylene	4.56	0.100	mg/kg	4.00	114	89-129	0.466	16.2	
o-Xylene	2.28	0.050	mg/kg	2.00	114	86.1-125	1.40	16.7	
Total Xylenes	6.83	0.150	mg/kg	6.00	114	88.2-128	0.777	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0560		mg/kg	0.0500	112	71.5-134			

## Batch 3091103 - Volatiles

Blank (3091103-BLK1)		Prepared: 11-Sep-23 Analyzed: 12-S	ep-23
Benzene	ND	0.050 mg/kg	
Toluene	ND	0.050 mg/kg	
Ethylbenzene	ND	0.050 mg/kg	
Total Xylenes	ND	0.150 mg/kg	

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



%REC

### Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

RPD

Fax To:

### **Volatile Organic Compounds by EPA Method 8021 - Quality Control**

### **Cardinal Laboratories**

Spike

Source

Reporting

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3091103 - Volatiles										
Blank (3091103-BLK1)				Prepared: 1	11-Sep-23 A	Analyzed: 1	2-Sep-23			
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0563		mg/kg	0.0500		113	71.5-134			
LCS (3091103-BS1)				Prepared: 1	11-Sep-23 A	Analyzed: 1	2-Sep-23			
Benzene	1.99	0.050	mg/kg	2.00		99.6	82.8-130			
Toluene	1.96	0.050	mg/kg	2.00		98.0	86-128			
Ethylbenzene	2.09	0.050	mg/kg	2.00		105	85.9-128			
m,p-Xylene	4.19	0.100	mg/kg	4.00		105	89-129			
o-Xylene	2.07	0.050	mg/kg	2.00		103	86.1-125			
Total Xylenes	6.25	0.150	mg/kg	6.00		104	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	0.0528		mg/kg	0.0500		106	71.5-134			
LCS Dup (3091103-BSD1)				Prepared: 1	11-Sep-23 A	Analyzed: 1	2-Sep-23			
Benzene	1.98	0.050	mg/kg	2.00		98.8	82.8-130	0.807	15.8	
Toluene	1.95	0.050	mg/kg	2.00		97.3	86-128	0.707	15.9	
Ethylbenzene	2.09	0.050	mg/kg	2.00		104	85.9-128	0.0733	16	
m,p-Xylene	4.18	0.100	mg/kg	4.00		105	89-129	0.0187	16.2	
o-Xylene	2.08	0.050	mg/kg	2.00		104	86.1-125	0.619	16.7	
Total Xylenes	6.27	0.150	mg/kg	6.00		104	88.2-128	0.193	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0531		mg/kg	0.0500		106	71.5-134			
Batch 3091113 - Volatiles										
Blank (3091113-BLK1)				Prepared: 1	11-Sep-23 A	Analyzed: 1	2-Sep-23			
Benzene	ND	0.050	mg/kg							

Blank (3091113-BLK1)				Prepared: 11-Sep	-23 Analyzed: 1	2-Sep-23	
Benzene	ND	0.050	mg/kg				
Toluene	ND	0.050	mg/kg				
Ethylbenzene	ND	0.050	mg/kg				
Total Xylenes	ND	0.150	mg/kg				
Total BTEX	ND	0.300	mg/kg				
Surrogate: 4-Bromofluorobenzene (PID)	0.0518		mg/kg	0.0500	104	71.5-134	

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



%REC

# **Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

RPD

Fax To:

### **Volatile Organic Compounds by EPA Method 8021 - Quality Control**

### **Cardinal Laboratories**

Reporting

Spike

Source

		1 0		1						
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3091113 - Volatiles										
LCS (3091113-BS1)				Prepared &	Analyzed:	11-Sep-23				
Benzene	2.05	0.050	mg/kg	2.00		102	82.8-130			
Toluene	2.09	0.050	mg/kg	2.00		105	86-128			
Ethylbenzene	2.04	0.050	mg/kg	2.00		102	85.9-128			
m,p-Xylene	4.15	0.100	mg/kg	4.00		104	89-129			
o-Xylene	1.95	0.050	mg/kg	2.00		97.7	86.1-125			
Total Xylenes	6.10	0.150	mg/kg	6.00		102	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	0.0504		mg/kg	0.0500		101	71.5-134			
LCS Dup (3091113-BSD1)				Prepared: 1	1-Sep-23 A	nalyzed: 1	2-Sep-23			
Benzene	2.07	0.050	mg/kg	2.00		103	82.8-130	0.925	15.8	
Toluene	2.09	0.050	mg/kg	2.00		104	86-128	0.262	15.9	
Ethylbenzene	2.07	0.050	mg/kg	2.00		103	85.9-128	1.17	16	
m,p-Xylene	4.20	0.100	mg/kg	4.00		105	89-129	1.21	16.2	
o-Xylene	2.02	0.050	mg/kg	2.00		101	86.1-125	3.44	16.7	
Total Xylenes	6.22	0.150	mg/kg	6.00		104	88.2-128	1.93	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0500		mg/kg	0.0500		100	71.5-134			

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Celey D. Keine



### Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

Fax To:

### Petroleum Hydrocarbons by GC FID - Quality Control

### **Cardinal Laboratories**

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3090902 - General Prep - Organics										
Blank (3090902-BLK1)				Prepared: (	9-Sep-23 A	nalyzed: 1	1-Sep-23			
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	52.6		mg/kg	50.0		105	48.2-134			
Surrogate: 1-Chlorooctadecane	61.1		mg/kg	50.0		122	49.1-148			
LCS (3090902-BS1)				Prepared: (	9-Sep-23 A	nalyzed: 1	1-Sep-23			
GRO C6-C10	195	10.0	mg/kg	200		97.5	66.4-123			
DRO >C10-C28	223	10.0	mg/kg	200		112	66.5-118			
Total TPH C6-C28	418	10.0	mg/kg	400		104	77.6-123			
Surrogate: 1-Chlorooctane	56.0		mg/kg	50.0		112	48.2-134			
Surrogate: 1-Chlorooctadecane	61.9		mg/kg	50.0		124	49.1-148			
LCS Dup (3090902-BSD1)				Prepared: (	9-Sep-23 A	nalyzed: 1	1-Sep-23			
GRO C6-C10	197	10.0	mg/kg	200		98.7	66.4-123	1.24	17.7	
DRO >C10-C28	222	10.0	mg/kg	200		111	66.5-118	0.692	21	
Total TPH C6-C28	419	10.0	mg/kg	400		105	77.6-123	0.214	18.5	
Surrogate: 1-Chlorooctane	55.7		mg/kg	50.0		111	48.2-134			
Surrogate: 1-Chlorooctadecane	61.2		mg/kg	50.0		122	49.1-148			
Batch 3090903 - General Prep - Organics										
Blank (3090903-BLK1)				Prepared: (	)9-Sep-23 A	nalyzed: 1	1-Sep-23			
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	48.5		mg/kg	50.0		96.9	48.2-134			
Surrogate: 1-Chlorooctadecane	52.2		mg/kg	50.0		104	49.1-148			

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Celeg D. Keine



## Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 13-Sep-23 16:39

Fax To:

### Petroleum Hydrocarbons by GC FID - Quality Control

### **Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
,	Result	Limit	Omis	Level	Kesuit	/UKEC	Lillits	KI D	Lillit	110105
Batch 3090903 - General Prep - Organics										
LCS (3090903-BS1)				Prepared: (	09-Sep-23 A	nalyzed: 1	1-Sep-23			
GRO C6-C10	205	10.0	mg/kg	200		102	66.4-123			
DRO >C10-C28	206	10.0	mg/kg	200		103	66.5-118			
Total TPH C6-C28	410	10.0	mg/kg	400		103	77.6-123			
Surrogate: 1-Chlorooctane	52.4		mg/kg	50.0		105	48.2-134			
Surrogate: 1-Chlorooctadecane	57.6		mg/kg	50.0		115	49.1-148			
LCS Dup (3090903-BSD1)				Prepared: (	09-Sep-23 A	nalyzed: 1	1-Sep-23			
GRO C6-C10	208	10.0	mg/kg	200		104	66.4-123	1.72	17.7	
DRO >C10-C28	214	10.0	mg/kg	200		107	66.5-118	3.69	21	
Total TPH C6-C28	422	10.0	mg/kg	400		105	77.6-123	2.71	18.5	
Surrogate: 1-Chlorooctane	52.1		mg/kg	50.0		104	48.2-134			
Surrogate: 1-Chlorooctadecane	58.2		mg/kg	50.0		116	49.1-148			
Batch 3090904 - General Prep - Organics										
Blank (3090904-BLK1)				Prepared: (	09-Sep-23 A	nalyzed: 1	1-Sep-23			
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	44.7		mg/kg	50.0		89.3	48.2-134			
Surrogate: 1-Chlorooctadecane	46.7		mg/kg	50.0		93.5	49.1-148			
LCS (3090904-BS1)				Prepared: (	)9-Sep-23 A	nalyzed: 1	1-Sep-23			
GRO C6-C10	200	10.0	mg/kg	200		100	66.4-123			
DRO >C10-C28	217	10.0	mg/kg	200		109	66.5-118			
Total TPH C6-C28	417	10.0	mg/kg	400		104	77.6-123			
Surrogate: 1-Chlorooctane	46.1		mg/kg	50.0		92.1	48.2-134			
Surrogate: 1-Chlorooctadecane	48.0		mg/kg	50.0		95.9	49.1-148			

Cardinal Laboratories \*=Accredited Analyte

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### Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220

Analyte

Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

13-Sep-23 16:39

%REC

Limits

RPD

Reported:

RPD

Limit

Notes

Fax To:

### Petroleum Hydrocarbons by GC FID - Quality Control

### **Cardinal Laboratories**

Units

Reporting

Limit

Result

Spike

Level

Source

Result

%REC

L CS Dun (2000004 DSD1)				Proporad: 00 Sa	22 Analyzadi 1	1 San 22		
LCS Dup (3090904-BSD1)				Prepared: 09-Sep	5-23 Anaiyzed:	1-Sep-23		
GRO C6-C10	196	10.0	mg/kg	200	98.1	66.4-123	1.86	17.7
DRO >C10-C28	205	10.0	mg/kg	200	103	66.5-118	5.55	21
Total TPH C6-C28	402	10.0	mg/kg	400	100	77.6-123	3.76	18.5
Surrogate: 1-Chlorooctane	48.5		mg/kg	50.0	96.9	48.2-134		
Surrogate: 1-Chlorooctadecane	49.9		mg/kg	50.0	99.9	49.1-148		

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Celey D. Keine



### **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

Page 34 of 37

Relinguished By:

Date: Time:

Sampler - UPS - Bus - Other: Delivered By: (Circle One)

Corrected Temp. °C

Observed Temp. °C 17.68

CHECKED BY: (Initials)

Turnaround Time:

Standard Rush

Bacteria (only) Sample Condition
Cool Intact Observed Temp. °C

Yes Yes
No Corrected Temp. °C

ore 9/13/23

Corrected Temp. °C

Thermometer ID #140 Correction Factor 0°C

\* Eustoner requested ID changes

# CHAIN-OF CUSTODY AND ANALYSIS REQUEST



101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

Company Name: Ensolum LLC		BILL TO	ANAI YSIS	RECHEST
Project Manager: Ampe Gle	P.O. #:			500
NEW YEAR	Hwy	any:		
City: Cery's bud State:	21p: 88220	Amee Gle		
Phone #: 770-364-7365 Fax #:		SS:		
Project #: 6307057076 Project Owner:	Mareich			
Project Name: MCA 301		Zip:		
-,078	103, 76860 Phone #			
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FOR LAB USE ONLY	MATRIX PRE	PRESERV. SAMPLING		
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Relinquished By:  Date: 9186  Received By:  All Browles	Received By:	Namy of the above stated reasons or otherwise.  Verbal Result:	It: □ Yes □ No Add'l Phone #:	
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January Time: 8:09	Some of the sold	Q Q t		ensulum com istila

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# CHAIN-OF CUSTODY AND ANALYSIS REQUEST



101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

Project Manager: LASO WM	2 TTC	BILL TO		ANALYSIS DECLIEST
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Aller manager. Hollage	Colo.	P.O. #:		
Address: 3/22 National	Parks Hury	Company:		
city: Carlobas	State: NM zip: 88220	Attn: Amee Cale	ale	
Phone #: 7030 205 7076	76 Fax#:	() -		
Project #: 4 720 - 384 -	7365 Project Owner: Marcich	City:		
Project Name: MCA 301		State: Zip:		
Project Location: 32, 803	570, -103.76860	#		
Sampler Name: ROMN		Fax #:		
FOR LAB USE ONLY	MATRIX	SERV.	SAMPLING	A
HACHOGO	RS TER		k	X
Lab I.D. Samp	(G)RAB OR (C) # CONTAINER GROUNDWAT WASTEWATE SOIL DIL SLUDGE	OTHER: ACID/BASE: CE / COOL OTHER:	TP# 01- 01-	BIE
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nalyses. All claims including those for negligence and any other cause whatsoever shall be deemed nalyses. In no event shall cardinal be liable for incidental or consequental damages, including without fittiales or successors arisin out of or related to the conformation of a state of the conformation of t	nalyses. All claims including those for negligence and any other cause whatboever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable envise. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries,	arising whether based in contract or fort, shall be limited to the amount paid by the client for the waived unless made in writing and received by Cardinal within 30 days after completion of the a limitetion, business interruptions, loss of use, or loss of profils incurred by client, its subsidiaries,	d by the client for the or completion of the applicable slient, its subsidiaries,	
Relinquished By:	2		Verbal Result: ☐ Yes ☐ No Add'I Phone #: All Results are emailed. Please provide Email address:	□ No   Add'l Phone #:
Relinquished By:	Date: Received By:	8	acole@ensolum	solum com Jalcomasona ensolum con
	Time:			
Delivered By: (Circle One)	Observed Temp. °C Sample Condition	n CHECKED BY:	Turnaround Time: Stand	ard Sacteria (only) Sa
Sampler - UPS - Bus - Other:	Corrected Temp. °C Yes Tyes	3	Thermometer ID #140 Correction Factor 0°C	

# CHAIN-OF CUSTODY AND ANALYSIS REQUEST



101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

Sampler - UPS - Bus - Other:	Delivered By: (Circle One)	Relinquished By:	Relinquished By:	vice. In no event shall Cardinal be liable for incidental or consectiates or successors arising out of or related to the performance	EASE NOTE: Liability and Damages. Cardinal's liability and alyses. All claims including those for negligence and any of		-	Sw	SW 17	I CMS			Lab I.D. Sample I.D.	HJ34686	FOR LAB USE ONLY	n: 32.803	Project Name: MCA 30	Project #: 63970570 76	Phone #: 126-364 - 7365 Fax #:	city: Cadsbad	Address: 3/22 Nov	Project Manager: 14 hae
Corrected Temp. °C Qye	Time: Observed Temp. °C / - Samp	Date: 10 Received By:	Receive	consequental damages, including without limitation, business named of services hereunder L. Cardinal, regardless of whe	nd client's exclusive remedy for any claim arising whether bother cause whatever that he december white decembers.			360-4.	15007	00-4	0	# CONT	OR (C)	R	I I I I I I I I I I I I I I I I I I I	70,-103.76860		Project Owner: Many Ch	365 Fax #:	State: NM Zip: 88220	Hostival Parks How	36
(Initials)	Sample Condition CHECKED BY: Turnaround Time:	eneper acole		service. In no event shall Cardinal be liable for incidental or consequental damages, including without limiting, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, infiliates or successors arising out of or related to the performance of services hereunder it. Partinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.	**************************************			V V V 1230	1215	0221	×	SOIL OIL SLUDG OTHER ACID/B/ ICE / CO OTHER	: ASE: DOL		MATRIX PRESERV SAMPLING	Phone #:	State: Zip:	city:	Address:		Company:	P.O. #:
Rush Cool Infact Observed Temp. °C actor 0°C	nur Regues	acole@orslum.com, johlamita@ensolum.com.	Verbal Result: ☐ Yes ☐ No Add'I Phone #: All Results are emailed. Please provide Email address:	rhe applicable files, se,	the			4			× ×		TEX PH -									



September 14, 2023

AIMEE COLE
ENSOLUM
3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 301

Enclosed are the results of analyses for samples received by the laboratory on 09/12/23 11:33.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celey D. Keine

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



### Analytical Results For:

**ENSOLUM** AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/12/2023 Sampling Date: 09/12/2023 Reported: 09/14/2023 Soil

Sampling Type: Project Name: MCA 301 Sampling Condition: Cool & Intact

Project Number: 03D2057076 Sample Received By: Tamara Oldaker

Project Location: MAVERICK ( 32.80370-103.76860 )

### Sample ID: FS 25 @ 4' (H234918-01)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/12/2023	ND	1.91	95.6	2.00	2.45	
Toluene*	<0.050	0.050	09/12/2023	ND	1.96	98.1	2.00	1.70	
Ethylbenzene*	<0.050	0.050	09/12/2023	ND	1.99	99.3	2.00	2.88	
Total Xylenes*	<0.150	0.150	09/12/2023	ND	5.86	97.7	6.00	2.99	
Total BTEX	<0.300	0.300	09/12/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	115 9	% 71.5-13	4						
Chloride, SM4500CI-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1680	16.0	09/13/2023	ND	432	108	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2023	ND	191	95.5	200	3.61	
DRO >C10-C28*	<10.0	10.0	09/12/2023	ND	202	101	200	1.82	
EXT DRO >C28-C36	<10.0	10.0	09/12/2023	ND					
Surrogate: 1-Chlorooctane	102 5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	107 9	% 49.1-14	8						

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### Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/12/2023 Sampling Date: 09/12/2023

Reported: 09/14/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Tamara Oldaker

Analyzed By: MS

Project Location: MAVERICK ( 32.80370-103.76860 )

mg/kg

### Sample ID: FS 26 @ 4' (H234918-02)

BTEX 8021B

	9/	9	7	7					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/12/2023	ND	1.91	95.6	2.00	2.45	
Toluene*	<0.050	0.050	09/12/2023	ND	1.96	98.1	2.00	1.70	
Ethylbenzene*	<0.050	0.050	09/12/2023	ND	1.99	99.3	2.00	2.88	
Total Xylenes*	<0.150	0.150	09/12/2023	ND	5.86	97.7	6.00	2.99	
Total BTEX	<0.300	0.300	09/12/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	117	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2040	16.0	09/13/2023	ND	432	108	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2023	ND	191	95.5	200	3.61	
DRO >C10-C28*	<10.0	10.0	09/12/2023	ND	202	101	200	1.82	
EXT DRO >C28-C36	<10.0	10.0	09/12/2023	ND					
Surrogate: 1-Chlorooctane	80.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	84.1	% 49.1-14	8						

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Celey D. Keine



### Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/12/2023 Sampling Date: 09/12/2023

Reported: 09/14/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Tamara Oldaker

Applyzod By: MC

Project Location: MAVERICK ( 32.80370-103.76860 )

### Sample ID: FS 27 @ 4' (H234918-03)

RTFY 8021R

BIEX 8021B	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/12/2023	ND	1.91	95.6	2.00	2.45	
Toluene*	<0.050	0.050	09/12/2023	ND	1.96	98.1	2.00	1.70	
Ethylbenzene*	<0.050	0.050	09/12/2023	ND	1.99	99.3	2.00	2.88	
Total Xylenes*	<0.150	0.150	09/12/2023	ND	5.86	97.7	6.00	2.99	
Total BTEX	<0.300	0.300	09/12/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	110	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1740	16.0	09/13/2023	ND	432	108	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2023	ND	191	95.5	200	3.61	
DRO >C10-C28*	<10.0	10.0	09/12/2023	ND	202	101	200	1.82	
EXT DRO >C28-C36	<10.0	10.0	09/12/2023	ND					
Surrogate: 1-Chlorooctane	82.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	86.7	% 49.1-14	8						

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Celey D. Keene



### Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/12/2023 Sampling Date: 09/12/2023

Reported: 09/14/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Tamara Oldaker

Analyzed By: MS

Project Location: MAVERICK ( 32.80370-103.76860 )

mg/kg

### Sample ID: FS 28 @ 4' (H234918-04)

BTEX 8021B

	9,	9	7	7: : : :					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/12/2023	ND	1.91	95.6	2.00	2.45	
Toluene*	<0.050	0.050	09/12/2023	ND	1.96	98.1	2.00	1.70	
Ethylbenzene*	<0.050	0.050	09/12/2023	ND	1.99	99.3	2.00	2.88	
Total Xylenes*	<0.150	0.150	09/12/2023	ND	5.86	97.7	6.00	2.99	
Total BTEX	<0.300	0.300	09/12/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	116	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9120	16.0	09/13/2023	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2023	ND	191	95.5	200	3.61	
DRO >C10-C28*	<10.0	10.0	09/12/2023	ND	202	101	200	1.82	
EXT DRO >C28-C36	<10.0	10.0	09/12/2023	ND					
Surrogate: 1-Chlorooctane	80.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	83.0	% 49.1-14	8						

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Celey D. Keene



### Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/12/2023 Sampling Date: 09/12/2023

Reported: 09/14/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Tamara Oldaker

Analyzed By: MS

Project Location: MAVERICK ( 32.80370-103.76860 )

### Sample ID: SW 14 @ 0-4' (H234918-05)

BTEX 8021B

DIEX GOZID	ilig/ kg		Analyzed by: 1-15						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/12/2023	ND	1.91	95.6	2.00	2.45	
Toluene*	<0.050	0.050	09/12/2023	ND	1.96	98.1	2.00	1.70	
Ethylbenzene*	<0.050	0.050	09/12/2023	ND	1.99	99.3	2.00	2.88	
Total Xylenes*	<0.150	0.150	09/12/2023	ND	5.86	97.7	6.00	2.99	
Total BTEX	<0.300	0.300	09/12/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	115	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	09/13/2023	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2023	ND	191	95.5	200	3.61	
DRO >C10-C28*	<10.0	10.0	09/12/2023	ND	202	101	200	1.82	
EXT DRO >C28-C36	<10.0	10.0	09/12/2023	ND					
Surrogate: 1-Chlorooctane	81.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	83.2	% 49.1-14	8						

Cardinal Laboratories \*=Accredited Analyte

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### Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/12/2023 Sampling Date: 09/12/2023

Reported: 09/14/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Tamara Oldaker

Analyzed By: MS

Project Location: MAVERICK ( 32.80370-103.76860 )

mg/kg

### Sample ID: SW 15 @ 0-4' (H234918-06)

BTEX 8021B

DIEX GOZID	mg/kg		Analyzed by: 1-15						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/12/2023	ND	1.91	95.6	2.00	2.45	
Toluene*	<0.050	0.050	09/12/2023	ND	1.96	98.1	2.00	1.70	
Ethylbenzene*	<0.050	0.050	09/12/2023	ND	1.99	99.3	2.00	2.88	
Total Xylenes*	<0.150	0.150	09/12/2023	ND	5.86	97.7	6.00	2.99	
Total BTEX	<0.300	0.300	09/12/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	114	% 71.5-13	4						
Chloride, SM4500CI-B	mg	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	09/13/2023	ND	432	108	400	0.00	
TPH 8015M	mg	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2023	ND	191	95.5	200	3.61	
DRO >C10-C28*	<10.0	10.0	09/12/2023	ND	202	101	200	1.82	
EXT DRO >C28-C36	<10.0	10.0	09/12/2023	ND					
Surrogate: 1-Chlorooctane	85.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	86.1	% 49.1-14	8						

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### Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/12/2023 Sampling Date: 09/12/2023

Reported: 09/14/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Tamara Oldaker

Analyzed By: MS

Project Location: MAVERICK ( 32.80370-103.76860 )

### Sample ID: SW 16 @ 0-4' (H234918-07)

BTEX 8021B

DIEX GOZID	mg/ kg		Analyzed by: 1-15						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/12/2023	ND	1.91	95.6	2.00	2.45	
Toluene*	<0.050	0.050	09/12/2023	ND	1.96	98.1	2.00	1.70	
Ethylbenzene*	<0.050	0.050	09/12/2023	ND	1.99	99.3	2.00	2.88	
Total Xylenes*	<0.150	0.150	09/12/2023	ND	5.86	97.7	6.00	2.99	
Total BTEX	<0.300	0.300	09/12/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	113	% 71.5-13	4						
Chloride, SM4500CI-B	mg	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	09/13/2023	ND	416	104	400	3.77	
TPH 8015M	mg	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/12/2023	ND	191	95.5	200	3.61	
DRO >C10-C28*	<10.0	10.0	09/12/2023	ND	202	101	200	1.82	
EXT DRO >C28-C36	<10.0	10.0	09/12/2023	ND					
Surrogate: 1-Chlorooctane	83.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	84.7	% 49.1-14	8						

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### **Notes and Definitions**

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

recovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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7676 Proje	1-7365 Fax#	Stat	Vadona	Tree of	Solum L	101 East Marland, Hobbs, (575) 393-2326 FAX (57.	POPAti

Project Manager:	rsólum LLC BILL	ANALYSIS REQUEST
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City: Carlybad	State: NM Zip: 88220	800 /
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CHAIN-OF CUSTODY AND ANALYSIS REQUEST



September 20, 2023

AIMEE COLE
ENSOLUM
3122 NATIONAL I

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 301

Enclosed are the results of analyses for samples received by the laboratory on 09/15/23 14:32.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab\_accred\_certif.html">www.tceq.texas.gov/field/ga/lab\_accred\_certif.html</a>.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celey D. Keine

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



### Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/15/2023 Sampling Date: 09/14/2023 Reported: 09/20/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Dionica Hinojos

Applymed By MC

Project Location: MAVERICK ( 32.80370-103.76860 )

### Sample ID: FS 11 A @ 4.5' (H235009-01)

DTEV 0021D

BTEX 8021B	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2023	ND	1.85	92.4	2.00	1.08	
Toluene*	<0.050	0.050	09/18/2023	ND	1.91	95.6	2.00	1.80	
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.92	96.2	2.00	0.837	
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.84	97.4	6.00	0.854	
Total BTEX	<0.300	0.300	09/18/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	115	% 71.5-13	4						
Chloride, SM4500CI-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5600	16.0	09/18/2023	ND	400	100	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.8	200	1.67	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	204	102	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					
Surrogate: 1-Chlorooctane	91.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	95.1	% 49.1-14	8						

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Celey D. Keene



### Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/15/2023 Sampling Date: 09/14/2023

Reported: 09/20/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Dionica Hinojos

Analyzed By: MS

Project Location: MAVERICK ( 32.80370-103.76860 )

mg/kg

### Sample ID: FS 17 A @ 4.5' (H235009-02)

BTEX 8021B

	9,	9	7	7					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2023	ND	1.85	92.4	2.00	1.08	
Toluene*	<0.050	0.050	09/18/2023	ND	1.91	95.6	2.00	1.80	
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.92	96.2	2.00	0.837	
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.84	97.4	6.00	0.854	
Total BTEX	<0.300	0.300	09/18/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	115	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3120	16.0	09/18/2023	ND	400	100	400	3.92	
TPH 8015M	mg	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.8	200	1.67	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	204	102	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					
Surrogate: 1-Chlorooctane	83.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	89.9	% 49.1-14	8						

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### Analytical Results For:

**ENSOLUM** AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/15/2023 Sampling Date: 09/14/2023

Reported: 09/20/2023 Sampling Type: Soil Project Name: MCA 301 Sampling Condition: Cool & Intact

Sample Received By: Project Number: 03D2057076 Dionica Hinojos Project Location: MAVERICK ( 32.80370-103.76860 )

### Sample ID: FS 29 @ 4' (H235009-03)

BTEX 8021B	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2023	ND	1.85	92.4	2.00	1.08	
Toluene*	<0.050	0.050	09/18/2023	ND	1.91	95.6	2.00	1.80	
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.92	96.2	2.00	0.837	
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.84	97.4	6.00	0.854	
Total BTEX	<0.300	0.300	09/18/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	114 9	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	09/18/2023	ND	400	100	400	3.92	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.8	200	1.67	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	204	102	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					
Surrogate: 1-Chlorooctane	70.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	73.5	% 49.1-14	8						

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### Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/15/2023 Sampling Date: 09/14/2023

Reported: 09/20/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Dionica Hinojos

Project Location: MAVERICK ( 32.80370-103.76860 )

### Sample ID: FS 30 @ 4' (H235009-04)

BTEX 8021B	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2023	ND	1.85	92.4	2.00	1.08	
Toluene*	<0.050	0.050	09/18/2023	ND	1.91	95.6	2.00	1.80	
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.92	96.2	2.00	0.837	
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.84	97.4	6.00	0.854	
Total BTEX	<0.300	0.300	09/18/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	118	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	496	16.0	09/18/2023	ND	400	100	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.8	200	1.67	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	204	102	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					
Surrogate: 1-Chlorooctane	88.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	94.1	% 49.1-14	18						

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Celey D. Keene



### Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/15/2023 Sampling Date: 09/14/2023

Reported: 09/20/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Dionica Hinojos

Applyzod By: MC

Project Location: MAVERICK ( 32.80370-103.76860 )

ma/ka

### Sample ID: FS 31 @ 4' (H235009-05)

RTFY 8021R

B1EX 8021B	mg	/кд	Anaiyze	а ву: м5					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2023	ND	1.85	92.4	2.00	1.08	
Toluene*	<0.050	0.050	09/18/2023	ND	1.91	95.6	2.00	1.80	
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.92	96.2	2.00	0.837	
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.84	97.4	6.00	0.854	
Total BTEX	<0.300	0.300	09/18/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	118	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	656	16.0	09/18/2023	ND	400	100	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.8	200	1.67	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	204	102	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					
Surrogate: 1-Chlorooctane	87.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	91.2	% 49.1-14	8						

Cardinal Laboratories \*=Accredited Analyte

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### Analytical Results For:

**ENSOLUM** AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/15/2023 Sampling Date: 09/14/2023

Reported: 09/20/2023 Sampling Type: Soil Project Name: MCA 301

Sampling Condition: Cool & Intact Sample Received By: Project Number: 03D2057076 Dionica Hinojos

Project Location: MAVERICK ( 32.80370-103.76860 )

### Sample ID: FS 32 @ 4' (H235009-06)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2023	ND	1.85	92.4	2.00	1.08	
Toluene*	<0.050	0.050	09/18/2023	ND	1.91	95.6	2.00	1.80	
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.92	96.2	2.00	0.837	
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.84	97.4	6.00	0.854	
Total BTEX	<0.300	0.300	09/18/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	115 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	592	16.0	09/18/2023	ND	400	100	400	3.92	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.8	200	1.67	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	204	102	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					
Surrogate: 1-Chlorooctane	88.9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	93.3	% 49.1-14	8						

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### Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/15/2023 Sampling Date: 09/14/2023

Reported: 09/20/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Dionica Hinojos

Applyzod By: MC

Project Location: MAVERICK ( 32.80370-103.76860 )

### Sample ID: FS 33 @ 4' (H235009-07)

RTFY 8021R

B1EX 8021B	mg	/кд	Anaiyze	а ву: м5					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2023	ND	1.85	92.4	2.00	1.08	
Toluene*	<0.050	0.050	09/18/2023	ND	1.91	95.6	2.00	1.80	
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.92	96.2	2.00	0.837	
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.84	97.4	6.00	0.854	
Total BTEX	<0.300	0.300	09/18/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	116	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	672	16.0	09/18/2023	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.8	200	1.67	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	204	102	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					
Surrogate: 1-Chlorooctane	88.4	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	93.5	% 49.1-14	8						

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### Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/15/2023 Sampling Date: 09/14/2023

Reported: 09/20/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Dionica Hinojos

Analyzed By: MS

Project Location: MAVERICK ( 32.80370-103.76860 )

mg/kg

### Sample ID: FS 34 @ 4' (H235009-08)

BTEX 8021B

DILX GOZID	ıııg,	, kg	Andryzo	u by. 1-15					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2023	ND	1.94	97.2	2.00	1.00	
Toluene*	<0.050	0.050	09/18/2023	ND	2.00	99.9	2.00	1.83	
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.93	96.5	2.00	0.549	
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.80	96.7	6.00	1.40	
Total BTEX	<0.300	0.300	09/18/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	109	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	624	16.0	09/18/2023	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.8	200	1.67	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	204	102	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					
Surrogate: 1-Chlorooctane	93.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	99.3	% 49.1-14	8						

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### Analytical Results For:

**ENSOLUM** AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/15/2023 Sampling Date: 09/14/2023

Reported: 09/20/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact Sample Received By: Project Number: 03D2057076 Dionica Hinojos

Project Location: MAVERICK ( 32.80370-103.76860 )

### Sample ID: FS 35 @ 4' (H235009-09)

BTEX 8021B	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2023	ND	1.94	97.2	2.00	1.00	
Toluene*	<0.050	0.050	09/18/2023	ND	2.00	99.9	2.00	1.83	
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.93	96.5	2.00	0.549	
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.80	96.7	6.00	1.40	
Total BTEX	<0.300	0.300	09/18/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	108 9	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	496	16.0	09/18/2023	ND	416	104	400	3.77	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.8	200	1.67	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	204	102	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					
Surrogate: 1-Chlorooctane	89.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	94.0	% 49.1-14	8						

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### Analytical Results For:

**ENSOLUM** AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/15/2023 Sampling Date: 09/14/2023

Reported: 09/20/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact Sample Received By: Project Number: 03D2057076 Dionica Hinojos

Project Location: MAVERICK ( 32.80370-103.76860 )

### Sample ID: FS 36 @ 4' (H235009-10)

BTEX 8021B	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2023	ND	1.94	97.2	2.00	1.00	
Toluene*	<0.050	0.050	09/18/2023	ND	2.00	99.9	2.00	1.83	
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.93	96.5	2.00	0.549	
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.80	96.7	6.00	1.40	
Total BTEX	<0.300	0.300	09/18/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	110 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	09/18/2023	ND	416	104	400	3.77	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.8	200	1.67	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	204	102	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					
Surrogate: 1-Chlorooctane	87.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	90.5	% 49.1-14	8						

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### Analytical Results For:

**ENSOLUM** AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/15/2023 Sampling Date: 09/14/2023

Reported: 09/20/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact Sample Received By: Project Number: 03D2057076 Dionica Hinojos

Project Location: MAVERICK ( 32.80370-103.76860 )

### Sample ID: SS 01 @ 0.5' (H235009-11)

BTEX 8021B	mg,	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2023	ND	1.94	97.2	2.00	1.00	
Toluene*	<0.050	0.050	09/18/2023	ND	2.00	99.9	2.00	1.83	
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.93	96.5	2.00	0.549	
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.80	96.7	6.00	1.40	
Total BTEX	<0.300	0.300	09/18/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	108	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	09/18/2023	ND	416	104	400	3.77	
TPH 8015M	mg,	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.8	200	1.67	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	204	102	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					
Surrogate: 1-Chlorooctane	68.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	72.8	% 49.1-14	8						

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### Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/15/2023 Sampling Date: 09/14/2023

Reported: 09/20/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Dionica Hinojos

Project Location: MAVERICK ( 32.80370-103.76860 )

### Sample ID: SS 02 @ 0.5' (H235009-12)

BTEX 8021B	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2023	ND	1.94	97.2	2.00	1.00	
Toluene*	<0.050	0.050	09/18/2023	ND	2.00	99.9	2.00	1.83	
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.93	96.5	2.00	0.549	
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.80	96.7	6.00	1.40	
Total BTEX	<0.300	0.300	09/18/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	106	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	09/18/2023	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.8	200	1.67	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	204	102	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					
Surrogate: 1-Chlorooctane	90.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	93.7	% 49.1-14	8						

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### Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/15/2023 Sampling Date: 09/14/2023

Reported: 09/20/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Dionica Hinojos

Project Location: MAVERICK ( 32.80370-103.76860 )

### Sample ID: SS 03 @ 0.5' (H235009-13)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2023	ND	1.94	97.2	2.00	1.00	
Toluene*	<0.050	0.050	09/18/2023	ND	2.00	99.9	2.00	1.83	
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.93	96.5	2.00	0.549	
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.80	96.7	6.00	1.40	
Total BTEX	<0.300	0.300	09/18/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	107	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	09/18/2023	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.8	200	1.67	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	204	102	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					
Surrogate: 1-Chlorooctane	91.4	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	96.1	% 49.1-14	8						

Cardinal Laboratories \*=Accredited Analyte

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### Analytical Results For:

**ENSOLUM** AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/15/2023 Sampling Date: 09/14/2023

Reported: 09/20/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact Sample Received By: Project Number: 03D2057076 Dionica Hinojos

Project Location: MAVERICK ( 32.80370-103.76860 )

### Sample ID: SS 04 @ 0.5' (H235009-14)

BTEX 8021B	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2023	ND	1.94	97.2	2.00	1.00	
Toluene*	<0.050	0.050	09/18/2023	ND	2.00	99.9	2.00	1.83	
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.93	96.5	2.00	0.549	
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.80	96.7	6.00	1.40	
Total BTEX	<0.300	0.300	09/18/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	108 9	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	544	16.0	09/18/2023	ND	416	104	400	3.77	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.8	200	1.67	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	204	102	200	5.36	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					
Surrogate: 1-Chlorooctane	77.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	81.9	% 49.1-14	8						

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Celey D. Keene



## **Notes and Definitions**

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

ecovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keine

# CHAIN-OF CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

(979) 393-2326 FAX (575) 393-2476		
Company Name: En Silva (1)	BILL TO	
1	BILL 10	ANALYSIS REQUEST
Project Manager: 1 man ()	P.O.#:	
Address: 3/22 Naxbral Parks Have	Company:	
City: Con Sould State: NA Zin: 94720	Atta: Acar Ch	
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Phone #: / WUXLT VOT	100000000000000000000000000000000000000	

State   Paper   Pape	□ No □ No Corrected Temp. °C	0.0.0	Cardinal cannot accept verhal changes Please amail changes to all	† Cardinal c	1 OKW-000 K 3.4 077
ANALYSIS REQUEST    Mark   Male   Mal	Bacteria (only) Sa	Turnaround Time: Thermometer ID #140	Sample Condition Cool Intact Wes Yes		ivered By: (Circle One)
BILL TO  ANALYSIS REQUEST    Company:   Comp					
Sample I.D.  State: NAV Zip: 96720 Attn: Amce 6 le  State: NAV Zip: 96720 Attn: Amce 6 le  State: NAV Zip: 96720 Attn: Amce 6 le  State: Zip:  Poone #:  Poo	John Common Colum.	REMARKS:	Received By:	-	elinquished By:
Sample I.D.  Sampl	Pieee provide Email address:	All Results are emailed.		CEIM: MICE	Jan Jan L
BTEX  X TPH  X CI-	ON C	1	rdinal, regardless of whether such claim is based upon any of the above stated.  Received By:	Date: O//C	elinquished By:
* TPH  * CI-		ter completion of the applicable client, its subsidiaries.	erned waived unless made in writing and received by Cardinal within 30 days at without timitation, business interruptions, loss of use, or loss of profits incurred by	egigence and any other cause whatsoever shall be do to incidental or consequental damages, including a	in no event shall Cardinal be liab
Sample I.D.  Sampl		of by the client for the	velaim arising whether based in contract or tort, shall be limited to the amount to	Cardina's liability and client's exclusive remedy for an	E NOTE: Liability and Damages.
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Sample I.D.  State: NAME Company:  State: NAME Zip: 96720 Attn: Announce Company:  State: NAME Zip: 96720 Attn: Announce Cole  Address:  Address: Zip:  Phone #:  PSITA @4.5'  PRESERVI SAMPLING  PROBLEM TIME  STATE TIME  STATE  SOIL  SULDGE  OTHER:  ACID/BASE:  K QI/UL/ 1868 X X X X X X X X X X X X X X X X X X		1520		1533 84	0
Sample I.D.  State: MANSHUM City: PROZO Attn: Anderss: Zip:  MARTSIN PRESERV SAMPLING  PO 38H7365 Fax #:  MARTSIN PRESERV SAMPLING  PS 17 A 34 55' C # GROUNDWATER WASTEWATER ACID/BASE:  PS 17 A 34 55' C # GROUNDWATER WASTEWATER ACID/BASE:  PS 17 A 34 55' C # GROUNDWATER WASTEWATER ACID/BASE:  PS 17 A 34 55' C # GROUNDWATER WASTEWATER ACID/BASE:  PS 17 A 34 55' C # GROUNDWATER WASTEWATER ACID/BASE:  PS 17 A 34 55' C # GROUNDWATER WASTEWATER ACID/BASE:  PS 17 A 34 55' C # GROUNDWATER WASTEWATER ACID/BASE:  PS 17 A 34 55' C # GROUNDWATER WASTEWATER ACID/BASE:  PS 17 A 34 55' C # GROUNDWATER WASTEWATER ACID/BASE:  PD 15 17 A 34 55' C # GROUNDWATER WASTEWATER ACID/BASE:  PD 27 A 35 A 36 A 1		1518		F532 @4	<u>Je</u>
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er: A Shua City:  State: MA Zip: 86770 Attn: Amer City:  132. 86370 -103. 76860 Phone #:  Phone #:  MATRIX PRESERV. SAMPLING  BILL TO  P.O. #:  Company:  State: Zip:  Phone #:  Fax #:  MATRIX PRESERV. SAMPLING	-  -	^	AINERS IDWATER WATER  E : ASE:	Sample I.D.	Lab I.D.
er: Frank LLC P.O.#:  1722 Naxbul Parks Huy Company:  State: NA Zip: 86720 Attn: Amer () le  20 3847365 Fax #:  302057076 Project Owner: Marghy City:  MCA301  182. 86370, -103. 768600 Phone #:  Phone #:  Park #:			MATRIX PRESERV.		
e: Fashum LLC P.O. #:  1722 Naxbul Parks Hung Company:  State: 19th Zip: \$6720 Attn: Annee Gle  203847305 Fax #:  302057076 Project Owner: 194000 Phone #:					7
Fashum LLC  Almee Gle  P.O. #:  P.O. #:  Company:  Company:  State: NA zip: 86770  Attn: Amee Gle  Address:  P2057076 Project Owner: Marghly  State: Zip:  State: Zip:			Phone #:	3/0,-103.	Project Location: 3
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Manager: Asmee Cite  13122 Naxbuil Parks Huy  Coulsbus State: NA zip: 88720 Attn: Amee Cite  7 20 3847365 Fax #: Address:			more	7076	Project #: 63 D2
Manager: Asmee Gle P.O.#:  13122 Nuxbrul Parks Huy company:  Coulsbud State: NAY Zip: 86020 Attn: Amee Gle					Phone #: / 40 3
Prof. #: Ensolute LLC BILL TO  Ress: 3/22 Naxbrul Parks Have Company:  Company:		le	zip: 85000 Attn: Amee	State:	Ces
Asmee Cole P.O.#:				Parks	Address: 3/22
Ensolum LLC BILL TO			P.O. #:	0	oject manager:
COMEN AUGUST AND AUGUS	ANALYSIS REQUEST	0		tosly Li	niori Managaria.

P.O. #:

BILL TO

ANALYSIS REQUEST

State: NM Zip: 38220

-103,76860

MATRIX

PRESERV

SAMPLING

Fax #:

Phone #:

State: City:

Zip:

mana, ch

Address:

Attn: Amer Company:

Coke

Received by: (Circle by ampler - UPS - Bus		LEASE NOTE: Lability and D Mayers. All claims including the fine of successors arised the cardinal finishes or successors arised to a contract the finishes or successors arised to the finishes or successors arised to the finishes of successors arised to the finishes of successors arised to the finishes of successors arised to the finishes of successors arised to the finishes of successors are successors arised to the finishes of successors are successors are successors and the finishes of successors are success	Mr35269	FOR LAB USE ONLY	Project Name: Project Location: Sampler Name:	Phone #: 72	Pag Company Name: Project Manager: Address:	e 147 of
One) - Other:	or or reason to the performance of	amages. Cardinal's liability and client hose for negligence and any other ca		Sample I	MG# 301 32.80370	63847365	(575) 393-2326 1 (575) 393-2326 1 (Ensolute) (A mee C	abora
Observed Temp. °C 2.9°C Corrected Temp. °C † Cardinal cannot a	Time:   4:33 Rece	's excluste remedy for any claim ar- use whatsoever shall be deemed wa ental damages, including without fin	(G)RAB C	THE RESERVE OF THE PARTY OF THE	, -103, 7 68	State: NM Zip:	Hobbs, NM 88240 =AX (575) 393-2476 [LC]	tories

# CONTAINERS

SOIL OIL SLUDGE OTHER

ACID/BASE:

ICE / COOL OTHER

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DATE

TIME

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GROUNDWATER WASTEWATER

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intal damages, including without limitation, business inten

ived unless made in writing and received by Cardinal within 30 days after con

ed by client, its subsidiaries,

ition of the applicable

Verbal Result: ☐ Yes ☐ No: Add'l Phone #:
All Results are emailed. Piease provide Email address:

acole@ensolum.com

Received By:

Date: ( 100 Received By:

Sample Condition
Cool Intact
Wes 19 Yes
No 11 No

CHECKED BY:

Turnaround Time:

Standard

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

Thermometer ID #140 Correction Factor 0°C

CHAIN-OF CUSTODY AND ANALYSIS REQUEST

Bacteria (only) Sample Condition
Cool Intact Observed Temp
I Yes Yes
No Corrected Temp tal amo to @ ensylum, con Corrected Temp. °C Observed Temp. °C Page 18 of 18 Released to Imaging: 2/13/2024 2:26:32 PM



October 02, 2023

AIMEE COLE

**ENSOLUM** 

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 301

Enclosed are the results of analyses for samples received by the laboratory on 09/11/23 14:26.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Total Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2 Regulated VOCs and Total Trihalomethanes (TTHM)

Method EPA 552.2 Total Haloacetic Acids (HAA-5)

Celey D. Keene

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



## Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 02-Oct-23 15:06

Fax To:

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PH 02 @ 5'	H234903-03	Soil	11-Sep-23 10:15	11-Sep-23 14:26
PH 02D @ 9'	H234903-04	Soil	11-Sep-23 11:00	11-Sep-23 14:26
PH 03A @ 6'	H234903-05	Soil	11-Sep-23 10:35	11-Sep-23 14:26
PH 03C @ 8'	H234903-06	Soil	11-Sep-23 11:05	11-Sep-23 14:26
FS 24 @ 4'	H234903-07	Soil	11-Sep-23 12:15	11-Sep-23 14:26

10/02/23 - Client requested removal of samples -01 and -02. This is the revised report and will replace the one sent on 09/14/23.

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## Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 02-Oct-23 15:06

Fax To:

## PH 02 @ 5' H234903-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	ıl Laborat	ories					
Inorganic Compounds										
Chloride	1120		16.0	mg/kg	4	3091324	AC	13-Sep-23	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			115 %	71.5	-134	3091205	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by GC	CFID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3091215	MS	12-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3091215	MS	12-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3091215	MS	12-Sep-23	8015B	
Surrogate: 1-Chlorooctane			95.8 %	48.2	-134	3091215	MS	12-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			106 %	49.1	-148	3091215	MS	12-Sep-23	8015B	

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## Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Fax To:

Reported: 02-Oct-23 15:06

## PH 02D @ 9' H234903-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardin	al Laborat	tories					
Inorganic Compounds										
Chloride	32.0		16.0	mg/kg	4	3091324	AC	13-Sep-23	4500-Cl-B	
Volatile Organic Compound	s by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (P	ID)		112 %	71.5	-134	3091205	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3091215	MS	12-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3091215	MS	12-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3091215	MS	12-Sep-23	8015B	
Surrogate: 1-Chlorooctane			106 %	48.2	-134	3091215	MS	12-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			116 %	49.1	-148	3091215	MS	12-Sep-23	8015B	

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



## Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 02-Oct-23 15:06

Fax To:

PH 03A @ 6' H234903-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	6400		16.0	mg/kg	4	3091324	AC	13-Sep-23	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID	))		114 %	71.5	-134	3091205	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by C	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3091215	MS	12-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3091215	MS	12-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3091215	MS	12-Sep-23	8015B	
Surrogate: 1-Chlorooctane			100 %	48.2	-134	3091215	MS	12-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			112 %	49.1	-148	3091215	MS	12-Sep-23	8015B	

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



## Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Fax To:

Reported: 02-Oct-23 15:06

PH 03C @ 8' H234903-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	64.0		16.0	mg/kg	4	3091324	AC	13-Sep-23	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (PI	D)		113 %	71.5	-134	3091205	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3091215	MS	12-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3091215	MS	12-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3091215	MS	12-Sep-23	8015B	
Surrogate: 1-Chlorooctane			107 %	48.2	-134	3091215	MS	12-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			119 %	49.1	-148	3091215	MS	12-Sep-23	8015B	

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



## Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Fax To:

Reported: 02-Oct-23 15:06

FS 24 @ 4' H234903-07 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	al Laborat	ories					
Inorganic Compounds										
Chloride	1220		16.0	mg/kg	4	3091324	AC	13-Sep-23	4500-Cl-B	
Volatile Organic Compound	s by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	3091205	JH/	12-Sep-23	8021B	
Surrogate: 4-Bromofluorobenzene (P.	ID)		114 %	71.5	-134	3091205	JH/	12-Sep-23	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	3091215	MS	12-Sep-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3091215	MS	12-Sep-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3091215	MS	12-Sep-23	8015B	
Surrogate: 1-Chlorooctane			104 %	48.2	-134	3091215	MS	12-Sep-23	8015B	
Surrogate: 1-Chlorooctadecane			116 %	49.1	-148	3091215	MS	12-Sep-23	8015B	

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## Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

lanager: AIMEE CO Fax To: Reported: 02-Oct-23 15:06

## **Inorganic Compounds - Quality Control**

## **Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3091324 - 1:4 DI Water										
Blank (3091324-BLK1)				Prepared &	Analyzed:	13-Sep-23				
Chloride	ND	16.0	mg/kg							
LCS (3091324-BS1)				Prepared &	Analyzed:	13-Sep-23				
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (3091324-BSD1)				Prepared &	Analyzed:	13-Sep-23				
Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20	

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%REC

## **Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 02-Oct-23 15:06

RPD

Fax To:

Reporting

## Volatile Organic Compounds by EPA Method 8021 - Quality Control

## **Cardinal Laboratories**

Spike

Source

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3091205 - Volatiles										
Blank (3091205-BLK1)				Prepared &	: Analyzed:	12-Sep-23				
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0566		mg/kg	0.0500		113	71.5-134			
LCS (3091205-BS1)				Prepared &	Analyzed:	12-Sep-23				
Benzene	1.92	0.050	mg/kg	2.00		96.2	82.8-130			
Toluene	1.92	0.050	mg/kg	2.00		96.2	86-128			
Ethylbenzene	2.04	0.050	mg/kg	2.00		102	85.9-128			
m,p-Xylene	4.09	0.100	mg/kg	4.00		102	89-129			
o-Xylene	2.02	0.050	mg/kg	2.00		101	86.1-125			
Total Xylenes	6.11	0.150	mg/kg	6.00		102	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	0.0527		mg/kg	0.0500		105	71.5-134			
LCS Dup (3091205-BSD1)				Prepared &	Analyzed:	12-Sep-23				
Benzene	1.91	0.050	mg/kg	2.00		95.7	82.8-130	0.485	15.8	
Toluene	1.92	0.050	mg/kg	2.00		96.0	86-128	0.168	15.9	
Ethylbenzene	2.04	0.050	mg/kg	2.00		102	85.9-128	0.114	16	
m,p-Xylene	4.07	0.100	mg/kg	4.00		102	89-129	0.441	16.2	
o-Xylene	2.00	0.050	mg/kg	2.00		100	86.1-125	0.687	16.7	
Total Xylenes	6.07	0.150	mg/kg	6.00		101	88.2-128	0.522	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0528		mg/kg	0.0500		106	71.5-134			

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



%REC

## Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Project: MCA 301
Project Number: 03D2057076
Project Manager: AIMEE COLE

Reported: 02-Oct-23 15:06

RPD

Fax To:

Reporting

## Petroleum Hydrocarbons by GC FID - Quality Control

## **Cardinal Laboratories**

Spike

Source

		reporting		opine	Source		FORELE		141 25	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3091215 - General Prep - Organics										
Blank (3091215-BLK1)				Prepared &	k Analyzed:	12-Sep-23				
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	45.9		mg/kg	50.0		91.8	48.2-134			
Surrogate: 1-Chlorooctadecane	51.7		mg/kg	50.0		103	49.1-148			
LCS (3091215-BS1)				Prepared &	દે Analyzed:	12-Sep-23				
GRO C6-C10	218	10.0	mg/kg	200		109	66.4-123			
DRO >C10-C28	208	10.0	mg/kg	200		104	66.5-118			
Total TPH C6-C28	426	10.0	mg/kg	400		106	77.6-123			
Surrogate: 1-Chlorooctane	48.2		mg/kg	50.0		96.4	48.2-134			
Surrogate: 1-Chlorooctadecane	57.3		mg/kg	50.0		115	49.1-148			
LCS Dup (3091215-BSD1)				Prepared &	દે Analyzed:	12-Sep-23				
GRO C6-C10	216	10.0	mg/kg	200		108	66.4-123	0.933	17.7	
DRO >C10-C28	213	10.0	mg/kg	200		106	66.5-118	2.27	21	
Total TPH C6-C28	429	10.0	mg/kg	400		107	77.6-123	0.641	18.5	
Surrogate: 1-Chlorooctane	46.3		mg/kg	50.0		92.5	48.2-134			
Surrogate: 1-Chlorooctadecane	54.5		mg/kg	50.0		109	49.1-148			

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



## **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

Page 11 of 12



September 25, 2023

AIMEE COLE ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 301

Enclosed are the results of analyses for samples received by the laboratory on 09/22/23 11:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab\_accred\_certif.html">www.tceq.texas.gov/field/ga/lab\_accred\_certif.html</a>.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celey D. Keine

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



## Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/22/2023 Sampling Date: 09/22/2023

Reported: 09/25/2023 Sampling Type: Soil Project Name: MCA 301 Sampling Condition: Coo

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Tamara Oldaker

Applymed By MC

Project Location: MAVERICK ( 32.80370-103.76860 )

## Sample ID: PH 01 B @ 7' (H235160-01)

DTEV 0021D

BTEX 8021B	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2023	ND	1.90	95.1	2.00	3.62	
Toluene*	<0.050	0.050	09/23/2023	ND	1.95	97.3	2.00	4.99	
Ethylbenzene*	<0.050	0.050	09/23/2023	ND	1.94	97.2	2.00	4.52	
Total Xylenes*	<0.150	0.150	09/23/2023	ND	5.89	98.2	6.00	5.15	
Total BTEX	<0.300	0.300	09/23/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	106	% 71.5-13	4						
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3000	16.0	09/25/2023	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/23/2023	ND	222	111	200	0.390	
DRO >C10-C28*	<10.0	10.0	09/23/2023	ND	216	108	200	1.43	
EXT DRO >C28-C36	<10.0	10.0	09/23/2023	ND					
Surrogate: 1-Chlorooctane	105	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	119	% 49.1-14	8						

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Celey D. Keene



## Analytical Results For:

**ENSOLUM** AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 09/22/2023 Sampling Date: 09/22/2023

Reported: 09/25/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact Sample Received By: Tamara Oldaker Project Number: 03D2057076

Project Location: MAVERICK ( 32.80370-103.76860 )

## Sample ID: PH 01 F @ 11' (H235160-02)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2023	ND	1.90	95.1	2.00	3.62	
Toluene*	<0.050	0.050	09/23/2023	ND	1.95	97.3	2.00	4.99	
Ethylbenzene*	<0.050	0.050	09/23/2023	ND	1.94	97.2	2.00	4.52	
Total Xylenes*	<0.150	0.150	09/23/2023	ND	5.89	98.2	6.00	5.15	
Total BTEX	<0.300	0.300	09/23/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	107 9	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	09/25/2023	ND	416	104	400	3.77	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/23/2023	ND	222	111	200	0.390	
DRO >C10-C28*	<10.0	10.0	09/23/2023	ND	216	108	200	1.43	
EXT DRO >C28-C36	<10.0	10.0	09/23/2023	ND					
Surrogate: 1-Chlorooctane	97.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	108 9	% 49.1-14	8						

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Celey D. Keene



## **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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Celeg D. Freene

# CHAIN-OF CUSTODY AND ANALYSIS REQUEST



# 101 East Marland, Hobbs, NM 88240

(575) 393-2326 FAX (575) 393-2476	76			ANALYSIS REO	RECHEST
Company Name: English LLC		BILL 10	-		
Project Manager: Amee Cole	-	P.O. #:			
North		Company:			
Codshirt State: NM	Zip: 88270 /	Attn: Amee Oke			
#		Address:			
		City:			
7		State: Zip:			
on:		Phone #:			
		1			
	MATRIX	PRESERV. SAMPLING	ING		
H235110	RS TER	_	H EX	3	
Lab I.D. Sample I.D.	)RAB OR ( CONTAINE ROUNDWA ASTEWATI DIL L LUDGE	THER: CID/BASE: E / COOL THER:	TP. BI	-	
DHOLD BY	× 5	7	0900 X X		
110 Z 10HO 2		X	0935 × × ×		
4-22-23 + HM					
PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shell be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shell be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable analyses. All claims including those for negligence and any other cause whatsoever shell be deemed unless made in writing and received by Cardinal within 30 days after completion of the applicable analyses. All claims including white he had to be a consequent of the contract of t	any claim arising whether based in contract deemed waived unless made in writing and without limitation, business interruptions, lo	or tort, shall be limited to the amount paid received by Cardinal within 30 days after oss of use, or loss of profits incurred by cli	by the client for the completion of the applicable ent, its subsidiaries,		<i>y</i>
affiliates or successors arising out of or related to the performance of services hereunder r. Relinquished By:	Received By:	is based upon any or the above sured red	Verbal Result: ☐ Yes ☐ No Add'I Phone #: All Results are emailed. Please provide Email address:	□ No Add'I Phone #:	
Z	Janara,	Madal	acele@ensol	enslum com	
Relinquished By:	Received By:		REMARKS:		
Delivered By: (Circle One) Observed Temp. °C 28		CHECKED BY:	Turnaround Time: Stand	ard 🗆	Bacteria (only) Sample Condition Cool Intact Observed Temp. °C
ner:		A.O.	Thermometer ID #140 Correction Factor 0°C	hr	1



October 09, 2023

AIMEE COLE
ENSOLUM
3122 NATIONAL

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 301

Enclosed are the results of analyses for samples received by the laboratory on 10/04/23 15:04.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Celey D. Keine

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



## Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 10/04/2023 Sampling Date: 10/04/2023

Reported: 10/09/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Tamara Oldaker

Analyzed By: MS

Project Location: MAVERICK ( 32.80370-103.76860 )

mg/kg

## Sample ID: PH 04 @ 6' (H235405-01)

BTEX 8021B

DIEX COLLE	9/	119	Anaryzo	a 271110					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/06/2023	ND	2.20	110	2.00	3.64	
Toluene*	<0.050	0.050	10/06/2023	ND	2.08	104	2.00	3.05	
Ethylbenzene*	<0.050	0.050	10/06/2023	ND	2.12	106	2.00	4.06	
Total Xylenes*	<0.150	0.150	10/06/2023	ND	6.18	103	6.00	3.51	
Total BTEX	<0.300	0.300	10/06/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	113	% 71.5-13	4						
Chloride, SM4500CI-B	mg	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2200	16.0	10/06/2023	ND	432	108	400	3.64	
TPH 8015M	mg,	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/05/2023	ND	211	106	200	1.77	
DRO >C10-C28*	<10.0	10.0	10/05/2023	ND	228	114	200	1.93	
EXT DRO >C28-C36	<10.0	10.0	10/05/2023	ND					
Surrogate: 1-Chlorooctane	85.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	101	% 49.1-14	8						

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene



## Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 10/04/2023 Sampling Date: 10/04/2023

Reported: 10/09/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Tamara Oldaker

Project Location: MAVERICK ( 32.80370-103.76860 )

## Sample ID: PH 04A @ 8' (H235405-02)

BTEX 8021B	mg	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/06/2023	ND	2.20	110	2.00	3.64	
Toluene*	<0.050	0.050	10/06/2023	ND	2.08	104	2.00	3.05	
Ethylbenzene*	< 0.050	0.050	10/06/2023	ND	2.12	106	2.00	4.06	
Total Xylenes*	<0.150	0.150	10/06/2023	ND	6.18	103	6.00	3.51	
Total BTEX	<0.300	0.300	10/06/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	114	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	10/06/2023	ND	432	108	400	3.64	
TPH 8015M	mg,	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/05/2023	ND	211	106	200	1.77	
DRO >C10-C28*	<10.0	10.0	10/05/2023	ND	228	114	200	1.93	
EXT DRO >C28-C36	<10.0	10.0	10/05/2023	ND					
Surrogate: 1-Chlorooctane	86.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	99.9	% 49.1-14	8						

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Celey D. Keine



## Analytical Results For:

ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 10/04/2023 Sampling Date: 10/04/2023

Reported: 10/09/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact
Project Number: 03D2057076 Sample Received By: Tamara Oldaker

Analyzed By: MS

Project Location: MAVERICK ( 32.80370-103.76860 )

mg/kg

## Sample ID: PH 05 @ 6' (H235405-03)

BTEX 8021B

	9,	9	7	7					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/06/2023	ND	2.20	110	2.00	3.64	
Toluene*	<0.050	0.050	10/06/2023	ND	2.08	104	2.00	3.05	
Ethylbenzene*	<0.050	0.050	10/06/2023	ND	2.12	106	2.00	4.06	
Total Xylenes*	<0.150	0.150	10/06/2023	ND	6.18	103	6.00	3.51	
Total BTEX	<0.300	0.300	10/06/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	118	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2320	16.0	10/06/2023	ND	432	108	400	3.64	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/05/2023	ND	211	106	200	1.77	
DRO >C10-C28*	<10.0	10.0	10/05/2023	ND	228	114	200	1.93	
EXT DRO >C28-C36	<10.0	10.0	10/05/2023	ND					
Surrogate: 1-Chlorooctane	78.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	92.5	% 49.1-14	8						

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Celey D. Keene



## Analytical Results For:

**ENSOLUM** AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:

Received: 10/04/2023 Sampling Date: 10/04/2023

Reported: 10/09/2023 Sampling Type: Soil

Project Name: MCA 301 Sampling Condition: Cool & Intact Sample Received By: Project Number: 03D2057076 Tamara Oldaker

Project Location: MAVERICK ( 32.80370-103.76860 )

## Sample ID: PH 05 @ 8' (H235405-04)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/06/2023	ND	2.20	110	2.00	3.64	
Toluene*	<0.050	0.050	10/06/2023	ND	2.08	104	2.00	3.05	
Ethylbenzene*	<0.050	0.050	10/06/2023	ND	2.12	106	2.00	4.06	
Total Xylenes*	<0.150	0.150	10/06/2023	ND	6.18	103	6.00	3.51	
Total BTEX	<0.300	0.300	10/06/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	111 9	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	10/06/2023	ND	432	108	400	3.64	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/05/2023	ND	211	106	200	1.77	
DRO >C10-C28*	<10.0	10.0	10/05/2023	ND	228	114	200	1.93	
EXT DRO >C28-C36	<10.0	10.0	10/05/2023	ND					
Surrogate: 1-Chlorooctane	75.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	89.0	% 49.1-14	8						

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## **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below  $6^{\circ}\text{C}$ 

Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keine

# CHAIN-OF-CUSTODY AND ANALYSIS PEQUEST



Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Relinquished By:	PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental darkages, including whole limitation, business interruptions; loss of use, or loss of profits incurred by client, its subsidiaries, service. In no event shall Cardinal be liable for incidental or consequental darkages, including whole limitation, business interruptions; loss of use, or loss of profits incurred by client, its subsidiaries,	2 offor a	HZ35465 PHOY A	Lab I.D. Sample I.D.	Sampler Name: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Project Location: 32, 8037	Project #: 0302051016	Phone #: 720 -384-7365	city: 1 nurshow	Address: 677 Not	Project Manager: A.MIII		(575) 393-2326
Observed Temp. °C 48 Co		and client's exclusive remedy for any claim arising whethy other cause whatsoever shall be deemed waived unless consequental dathages, including without limitation, but	26.8	# CON	B OR (C)OMP. TAINERS NDWATER EWATER	Fallimeta	-108,7686	Project Owner: \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	Fax#:	State: NM 20:78270	Dourks Hww		110	FAX (575) 393-2476
Sample Condition CHECKED BY: Cool_intact (Initials)  Yes Yes	TONA MARKET	arising whether based in contract or tort, shall be limited to the amount waived unless made in writing and received by Cardinal within 30 days: waived unless made in writing and received by Cardinal within 30 days: limitation, business interruptions, loss of use, or loss of profits incurred introduces of whether earth claim is based upon any of the above;init_	<	X SOIL OIL SLUDG OTHER ACIDIE X ICE / C OTHER	GE R: BASE:	MATRIX PRESERV. SAN	#	City:	Address:	Attn:	Company:	P.O.#: A.A.	BILL TO	
Turnaround Time: Standard Bacteria (only) Sample Condition  Rush Cool Intact Observed Temp  Thermometer ID #140 Process Standard Bacteria (only) Sample Condition  Rush Robert Standard Bacteria (only) Sample Condition	are emailed. Please provide Email address:	unt paid by the client for the applicable red by client, its subsidiaries, 'and reasons or otherwise.	1040	-	BTEX TPH Chlor	SAMPLING	5						ANALYSIS REQUEST	
Observed Temp. °C	matera ensolumen													



APPENDIX E

**NMOCD Notifications** 



APPENDIX F Final C-141 District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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 Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

Incident ID	NAPP2307558601
District RP	
Facility ID	
Application ID	

# **Release Notification**

## **Responsible Party**

Responsible	Party Mave	erick Permian,	LLC		OGRID 3	31199
Contact Nan	ne Bryce W	/agoner			Contact To	elephone 928-241-1862
			resources.com	Incident #	(assigned by OCD) NAPP2307558601	
			inty Road, Hob		/I 88240	
			Locatio	n of R	Release S	ource
Latitude 32	.80370				Longitude	-103.76860
			(NAD 83 in	decimal de	egrees to 5 decin	nal places)
Site Name M	CA 301				Site Type	
Date Release		2/23/2023			API# (if app	plicable) 30-025-24226
	1			T	· L	
Unit Letter	Section	Township	Range		Cour	<u>ity</u>
J	28 17S 32E Lea					
Surface Owne	er: State	X Federal 7	Γribal ☐ Private		)	
			Nature ar	nd Vo	lume of l	Release
				tions or specific	justification for the volumes provided below)	
Crude Oi		Volume Releas	sed (bbls)			Volume Recovered (bbls)
Produced	l Water	Volume Releas	sed (bbls) 6.9			Volume Recovered (bbls) 0 bbls
			ation of dissolved r >10,000 mg/l?	l chlorid	e in the	☐ Yes ☐ No
Condensa	ate	Volume Releas	sed (bbls)			Volume Recovered (bbls)
Natural C	Gas	Volume Releas	sed (Mcf)			Volume Recovered (Mcf)
Other (de	escribe)	Volume/Weigh	nt Released (provi	ide units	)	Volume/Weight Recovered (provide units)
south from	the well he	ad (POR) into the	•	ture. Th	e released o	shut-in injection well. The release migrated occurred on and off pad. The source of the

Received by OCD: 10/23/2023/11/35:44 AM State of New Mexico
Page 2 Oil Conservation Division

PageH04eof 185	Page	H474e03	f 185
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Incident ID	NAPP2307558601
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the respon	sible party consider this a major release?
☐ Yes 🛛 No		
If YES, was immediate no	otice given to the OCD? By whom? To wh	om? When and by what means (phone, email, etc)?
	Initial Ro	esponse
The responsible	party must undertake the following actions immediatel	vunless they could create a safety hazard that would result in injury
The source of the rele	ease has been stopped.	
The impacted area ha	s been secured to protect human health and	the environment.
Released materials ha	ave been contained via the use of berms or d	ikes, absorbent pads, or other containment devices.
	ecoverable materials have been removed and d above have <u>not</u> been undertaken, explain v	
has begun, please attach	a narrative of actions to date. If remedial	emediation immediately after discovery of a release. If remediation efforts have been successfully completed or if the release occurred lease attach all information needed for closure evaluation.
regulations all operators are public health or the environr failed to adequately investig	required to report and/or file certain release notinent. The acceptance of a C-141 report by the Cate and remediate contamination that pose a thre	pest of my knowledge and understand that pursuant to OCD rules and fications and perform corrective actions for releases which may endanger CD does not relieve the operator of liability should their operations have at to groundwater, surface water, human health or the environment. In responsibility for compliance with any other federal, state, or local laws
Printed Name: Bryce V	Vagoner	Title: Permian HSE Specialist II
Signature:	yr II	Date: 3/16/2023
email: Bryce.Wagor	er@mavresources.com	Telephone: 928-241-1862
OCD Only		
Received by:Jocelyn	Harimon	Date: 03/20/2023

NAPP2307558601

Pooled Fluids on the Surface								
	Depth (in)	# of Boundaries *edges of pool where depth is 0 . don't count shared boundaries	Oil-Water Ratio (%)	Pooled Area (ft <sup>2</sup> )	Estimated Average Depth (ft.)	Pooled Volume (bbl.)	Volume of Oil in Subsurface (bbl.)	Volume of Water in Subsurface (bbl.)
Rectangle A			0.00	0.0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle B				0.0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle C				0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle D				0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle E				0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
				Total Vol	ume (bbls):	0.00	0.00	0.00

Subsurface Fluids								
	Depth (in.)	Saturation (%) *10% in consolidated sediments after rain to 50% in sand with no precipitation	Oil-Water Ratio (%)	Area (ft²)	Volume (bbl.)	Estimated Volume in Subsurface (bbl.)	Volume of Oil in Subsurface (bbl.)	Volume of Water in Subsurface (bbl.)
Rectangle A	0.3	0.30	0.00	355.0	1.3	0.4	0.00	0.4
Rectangle B	0.5	0.30	0.00	175.0	1.3	0.4	0.00	0.4
Rectangle C	1.0	0.30	0.00	480.0	7.1	2.1	0.00	2.1
Rectangle D	0.5	0.30	0.00	745.0	5.5	1.7	0.00	1.7
Rectangle E	0.3	0.30	0.00	655.0	2.4	0.7	0.00	0.7
Rectangle F	0.3	0.30	0.00	1205.0	4.5	1.3	0.00	1.3
Rectangle G	0.1	0.30	0.00	315.0	0.3	0.1	0.00	0.1
Rectangle H	0.0	0.30	0.00	1000.0	0.5	0.1	0.00	0.1
Rectangle I				0.0	0.0	0.0	0.00	0.0
Rectangle J				0.0	0.0	0.0	0.00	0.0
Total Volume (bbls): 6.87 0.00 6.87								

ASE VOLUME (bbls): 6.9

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410

Phone:(505) 334-6178 Fax:(505) 334-6170 1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 198120

## **CONDITIONS**

Operator:	OGRID:
Maverick Permian LLC	331199
1111 Bagby Street Suite 1600	Action Number:
Houston, TX 77002	198120
	Action Type:
	[C-141] Release Corrective Action (C-141)

### CONDITIONS

Created By	Condition	Condition Date
jharimon	None	3/20/2023

e of New Mexico

Incident ID	NAPP2307558601
District RP	
Facility ID	
Application ID	

## **Site Assessment/Characterization**

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>51-100 (feet bgs)</u>				
Did this release impact groundwater or surface water?					
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ⊠ No				
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ⊠ No				
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ⊠ No				
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ⊠ No				
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ⊠ No				
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ⊠ No				
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ⊠ No				
Are the lateral extents of the release overlying a subsurface mine?					
Are the lateral extents of the release overlying an unstable area such as karst geology?					
Are the lateral extents of the release within a 100-year floodplain?					
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	X Yes No				
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.					
Characterization Report Checklist: Each of the following items must be included in the report.					
<ul> <li>Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.</li> <li>Field data</li> <li>Data table of soil contaminant concentration data</li> <li>Depth to water determination</li> <li>Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release</li> <li>Boring or excavation logs</li> <li>Photographs including date and GIS information</li> <li>Topographic/Aerial maps</li> <li>Laboratory data including chain of custody</li> </ul>					

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Received by OCD: 10/23/2023 11:35:44 AM State of New Mexico
Page 4 Oil Conservation Division

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Incident ID	NAPP2307558601
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.				
Printed Name:Bryce Wagoner	Title: _Permian HSE Specialist			
Signature: Kyn Myr 111	Date:10/12/2023			
email: _bryce.wagoner@mavresources.com	Telephone: <u>928-241-1862</u>			
OCD Only				
Received by:	Date:			
and/or regulations.  Printed Name:Bryce Wagoner  Signature:	Title: _Permian HSE Specialist  Date:			

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	1 480 177 07 1
Incident ID	NAPP2307558601
District RP	
Facility ID	
Application ID	

# Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: Each of the following items must be included in the closure report.				
Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)				
☐ Laboratory analyses of final sampling (Note: appropriate ODC Dis	strict office must be notified 2 days prior to final sampling)			
Description of remediation activities				
I hereby certify that the information given above is true and complete to and regulations all operators are required to report and/or file certain release may endanger public health or the environment. The acceptance of a C-should their operations have failed to adequately investigate and remedia human health or the environment. In addition, OCD acceptance of a C-compliance with any other federal, state, or local laws and/or regulations restore, reclaim, and re-vegetate the impacted surface area to the conditionaccordance with 19.15.29.13 NMAC including notification to the OCD of Printed Name: Bryce Wagoner  Signature:  Bryce Wagoner@mavresources.com	ease notifications and perform corrective actions for releases which 141 report by the OCD does not relieve the operator of liability atte contamination that pose a threat to groundwater, surface water, 141 report does not relieve the operator of responsibility for s. The responsible party acknowledges they must substantially ons that existed prior to the release or their final land use in			
OCD Only				
Received by:	Date:			
Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.				
Closure Approved by:	Date:			
Printed Name:	Title:			
_				

From: Aimee Cole

To: "ocd.enviro@state.nm.us"

**Subject:** Maverick - Sampling Notification (Week of 8/28/2023)

**Date:** Wednesday, August 23, 2023 12:48:00 PM

**Attachments:** image001.png image002.png

image003.png image004.png

Maverick Permian, LLC plans to complete sampling activities at the following sites the week of August 28, 2023.

• MCA 409 Flowline/ NAPP2318846991

• Sampling Dates: 8/28/2023 – 8/29/2023

ABO 3 Battery / nAPP2314448299

• Sampling Dates: 8/28/2023 – 8/29/2023

• Grayburg Eumont Strawn Battery / NAPP2302036818

• Sampling Dates: 8/28/2023

• MCA 95 / NAPP2306757137

• Sampling Dates: 8/28/2023 – 9/1/2023

• MCA 301 / NAPP2307558601

• Sampling Dates: 8/31/2023 – 9/1/2023

Thank you,



## **Aimee Cole**

Senior Managing Scientist 720-384-7365

Ensolum, LLC

From: Wells, Shelly, EMNRD

To: <u>Aimee Cole</u>

Cc: Bratcher, Michael, EMNRD; Velez, Nelson, EMNRD

**Subject:** RE: [EXTERNAL] Maverick - Sampling Notification (Week of 9/4/2023)

Date: Wednesday, August 30, 2023 2:02:54 PM
Attachments: image001.png

image002.png image003.png image004.png

## [\*\*EXTERNAL EMAIL\*\*]

Good afternoon Aimee,

The OCD has received your notification. When reporting sampling at multiple locations it is required to provide the date and time for each location. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thank you,

Shelly

Shelly Wells \* Environmental Specialist-Advanced Environmental Bureau EMNRD-Oil Conservation Division 1220 S. St. Francis Drive | Santa Fe, NM 87505 (505)469-7520 | Shelly Wells@emnrd.nm.gov

http://www.emnrd.state.nm.us/OCD/

From: Aimee Cole <acole@ensolum.com>
Sent: Wednesday, August 30, 2023 2:28 PM

To: Enviro, OCD, EMNRD < OCD. Enviro@emnrd.nm.gov>

**Subject:** [EXTERNAL] Maverick - Sampling Notification (Week of 9/4/2023)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Maverick Permian, LLC plans to complete sampling activities at the following sites the week of September 4, 2023.

- MCA 409 Flowline/ NAPP2318846991
  - Sampling Date: 9/5/2023
- ABO 3 Battery / nAPP2314448299
  - Sampling Date: 9/5/2023

- Grayburg Eumont Strawn Battery / NAPP2302036818
  - Sampling Date: 9/6/2023
- MCA 301 / NAPP2307558601
  - Sampling Dates: 9/5/2023 9/8/2023

Thank you,



## Aimee Cole Senior Managing Scientist 720-384-7365 Ensolum, LLC

From: <u>Buchanan, Michael, EMNRD</u>
To: <u>Aimee Cole; Enviro, OCD, EMNRD</u>

Cc: Bratcher, Michael, EMNRD; Velez, Nelson, EMNRD

Subject: RE: [EXTERNAL] Maverick - Sampling Notification (Week of 9/11/2023)

**Date:** Wednesday, September 6, 2023 3:53:29 PM

Attachments: imaqe001.pnq imaqe002.pnq imaqe002.pnq

image003.png image004.png

You don't often get email from michael.buchanan@emnrd.nm.gov. Learn why this is important

## [ \*\*EXTERNAL EMAIL\*\*]

Hi Aimee,

The OCD has received your notification. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thank you,

From: Aimee Cole <acole@ensolum.com>
Sent: Wednesday, September 6, 2023 2:32 PM

To: Enviro, OCD, EMNRD < OCD. Enviro@emnrd.nm.gov>

Subject: [EXTERNAL] Maverick - Sampling Notification (Week of 9/11/2023)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Maverick Permian, LLC plans to complete sampling activities at the following sites the week of September 11, 2023.

- MCA 301 / NAPP2307558601
  - Sampling Dates: 9/11/2023 9/12/2023
- MCA 95 / NAPP2306757137
  - Sampling Dates: 9/12/2023 9/15/2023

Thank you,

**Aimee Cole** 



Senior Managing Scientist 720-384-7365 Ensolum, LLC

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 278346

## **CONDITIONS**

Operator:	OGRID:
Maverick Permian LLC	331199
, and the second	Action Number:
Houston, TX 77002	278346
	Action Type:
	[C-141] Release Corrective Action (C-141)

### CONDITIONS

Created By		Condition Date
scwells	None	2/13/2024