



January 23, 2025

**New Mexico Oil Conservation Division**

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

**Re: Remediation Workplan  
Sand Dunes Fed 28 #1 SWD  
Incident Number nAPP2220160296  
Eddy County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of Oxy USA Inc. (Oxy), has prepared this *Remediation Workplan* to document assessment, delineation, and soil sampling activities performed at the Sand Dunes Fed 28 #1 SWD (Site). The purpose of the Site assessment, delineation, and soil sampling activities was to assess for the presence or absence of impacts to soil resulting from a crude oil and produced water release at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, Oxy is submitting this *Remediation Workplan* to request a variance for depth to water within 0.5-miles of the Site needed for closure.

**SITE DESCRIPTION AND RELEASE SUMMARY**

The Site is located in Unit J, Section 28, Township 23 South, Range 31 East, in Eddy County, New Mexico (32.273598°, -103.780617°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On July 19, 2022, a water transfer pump failed to go off, resulting in the release of approximately 30 barrels (bbls) of produced water and 10 bbls of crude oil into a lined containment and overflowing onto the pad. A vacuum truck was dispatched to the Site to recover free-standing fluids; all fluids were recovered. Oxy reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on July 20, 2022. The release was assigned Incident Number nAPP2220160296.

**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 are summarized below and detailed in the NMOCD permitting portal Form C-141 Site Characterization section. Site receptors are identified on **Figure 4**.

Depth to groundwater at the Site is reasonably estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Society (USGS) well 321648103482101, located approximately 1.5 miles northwest of the Site. The depth to water was most recently measured on September 20, 1972 and indicated to be 139.9 feet bgs. In addition, New Mexico Office of the State

Oxy USA Inc.  
Remediation Workplan  
Sand Dunes Fed 28 #1 SWD

Engineer documents well C-04553 POD 1, installed July 30, 2021, and located approximately 0.9 miles to the west of the Site, was drilled to 106 feet and encountered no water. The associated well records are included in **Appendix A**.

The closest continuously flowing or significant watercourse to the Site is a dry wash, located approximately 11,088 feet southwest 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 to a freshwater well or 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). Closure criteria is identified on **Figure 4**.

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
- Total TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

## LINER INSPECTION ACTIVITIES

On June 24, 2024, Ensolum arrived onsite to conduct a site assessment and liner inspection. Ensolum did not see any abnormalities or faults with the liner.

## DELINEATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

Between June 24, 2024 and July 30, 2024, Ensolum personnel conducted Site delineation activities to evaluate the release extent based on information provided on the Form C-141 and visual observations. Seven boreholes (PH01 through PH07) were advanced via backhoe within the release extent to assess for the presence or absence of impacted soil. The delineation boreholes were advanced to depths ranging from 0.5 feet to 4 feet bgs. In addition, six delineation soil samples (SS01 through SS04, DS01 and DS02) were collected around the release area, at depths ranging from 0.25 feet to 0.5 feet bgs to confirm the lateral extent of the release. Discrete soil samples were collected from each delineation pothole at depths ranging from 0.5 ft to 4 ft bgs. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Photographic documentation was completed during the Site visit and a photographic log is included as **Appendix B**.

The 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 under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the following chemicals of concern (COCs): 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 Standard Method SM4500Cl-B.

## CONFIRMATION SOIL SAMPLING AND EXCAVATION ACTIVITIES

Between October 7, 2024 and November 5, 2024, Ensolum personnel returned to the Site to complete confirmation soil sampling of the release extent. Twenty soil samples (CS01 through CS20) were

Oxy USA Inc.  
Remediation Workplan  
Sand Dunes Fed 28 #1 SWD

collected every 200 square feet at a depth of 0.25 feet bgs to confirm compliance with the reclamation requirements. Additionally, four hydrovac excavations were completed in the areas indicative of limits outside the reclamation requirements. These areas were resampled and renamed FS01 through FS07 respectively. Six soil samples (SW01 through SW06) were collected along the sidewalls of the hydrovac excavations every 200 square feet. The soil samples were field screened for VOCs and chloride. The soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on **Figure 3**. Photographic documentation was completed during the Site visit and a photographic log is included as **Appendix B**.

Laboratory analytical results for soil samples PH01 through PH07, CS01 through CS03, CS05 through CS07, CS09, CS10, CS13 through CS15, CS17 through CS20, FS01 through FS07, and SW01 through SW06 collected within the release area and soil samples SS01 through SS04, DS01, and DS02 collected around the release area indicated all COC concentrations were compliant with the reclamation requirement.

## VARIANCE REQUESTS

### Groundwater Variance

Based on a desktop review of the surrounding area, there is one NMOSE permitted well (C-04553-POD1) and one USGS permitted well (well 321648103482101) with depths to groundwater greater than 100 feet bgs as shown in **Figure 4**. The Well Records for both wells can be found as Supporting Documentation in **Appendix A**. However, USGS well 321648103482101 was completed in 1972, therefore its data is greater than 25 years of age and is approximately 1.5. As well, NMOSE well C4553-POD1 is approximately 0.9 miles west of the Site, which is outside the permissible 0.5-mile radius.

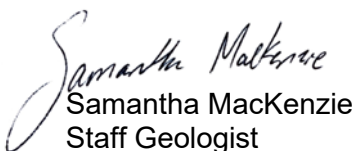
Ensolum, on behalf of Oxy, would like to request a depth to groundwater Closure Criteria Variance for the Site based on the information provided above and included as Supporting Documentation in **Appendix A** to reflect groundwater greater than 100 feet as shown in Table I of 19.15.29.12 NMAC for any on-pad remediation greater than 4 feet bgs.

## PROPOSED REMEDIATION WORKPLAN

Oxy is requesting a depth to water variance which would cease the need for any further work to be completed at the site. Oxy believes the remediation activities described above are protective of human health, the environment, and groundwater. As such, Oxy respectfully requests approval of this Remediation Workplan.

If you have any questions or comments, please contact Mr. Beaux Jennings at (210) 219-8858 or [bjennings@ensolum.com](mailto:bjennings@ensolum.com).

Sincerely,  
**Ensolum, LLC**

  
Samantha MacKenzie  
Staff Geologist

  
Beaux Jennings  
Associate Principal

cc: Wade Dittrich, Oxy USA Inc.  
Tyson Pierce, Oxy USA Inc.  
BLM

Oxy USA Inc.  
Remediation Workplan  
Sand Dunes Fed 28 #1 SWD

Appendices:

Figure 1	Topographic Map
Figure 2	Site Vicinity Map
Figure 3	Site Map
Figure 4	Closure Criteria Map
Figure 5	Backfill Site Map
Table 1	Soil Sample Analytical Results
Table 2	Backfill Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Photographic Log
Appendix C	Laboratory Analytical Reports & Chain-of-Custody Documentation





FIGURES







## Site Vicinity Map

Oxy USA Inc.  
Sand Dunes Fed 28 #1 SWD  
32.273598° N, 103.780617° W  
Eddy County, New Mexico

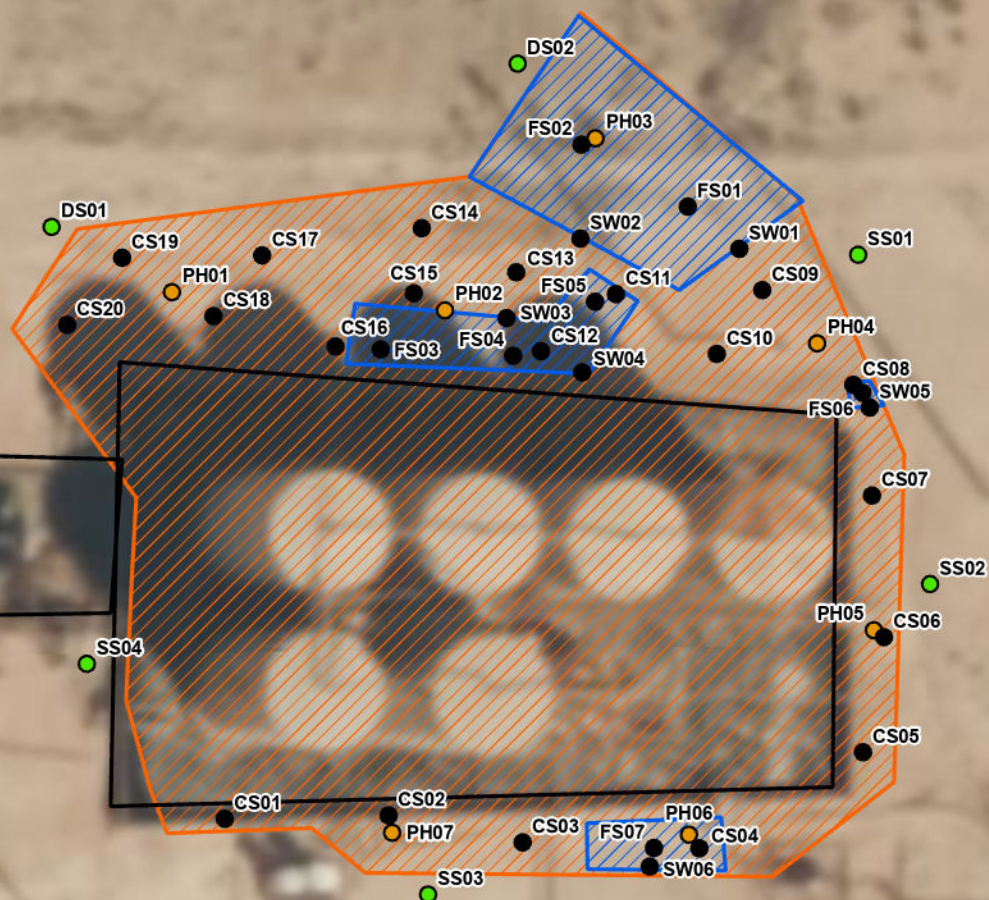
PROJECT NUMBER: 03B1417197

**FIGURE**  
**2**



**Legend**

- Delineation Soil Sample Location
- Confirmation Soil Sample Location
- Pothole Soil Sample Location
- Liner Boundary
- Excavation Extent
- Release Extent



0 25 50  
Feet

Sources: Environmental Systems Research Institute (ESRI)

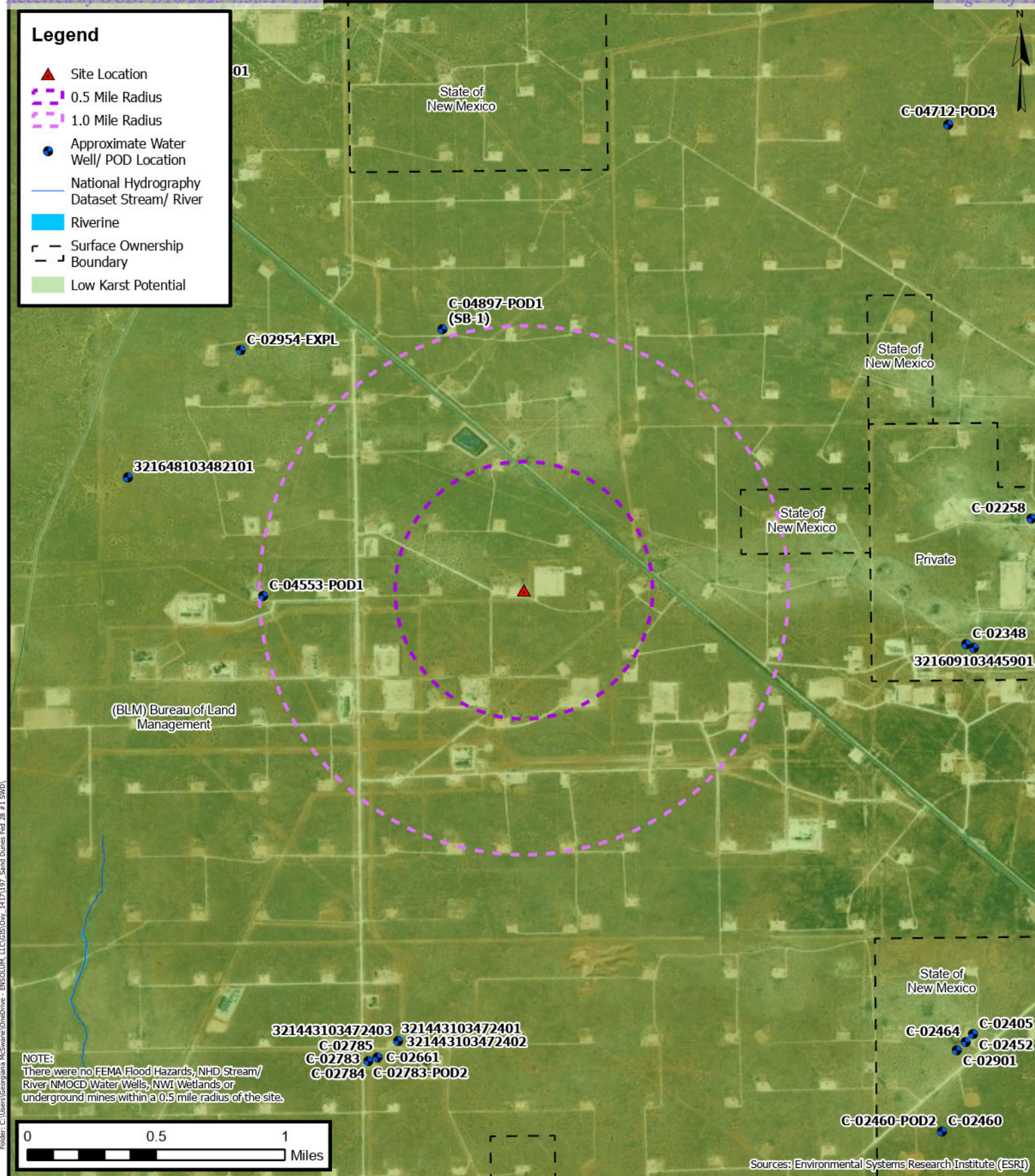
**Site Map**

Oxy USA Inc.  
Sand Dunes Fed 28 #1 SWD  
32.273598° N, 103.780617° W  
Eddy County, New Mexico

PROJECT NUMBER: 03B1417197

**FIGURE****3**





## Closure Criteria Map

Oxy USA Inc.  
Sand Dunes Fed 28 #1 SWD  
32.273598° N, 103.780617° W  
Eddy County, New Mexico

PROJECT NUMBER: 03B1417197

FIGURE

4



**Legend**

- Composite Sample Location

Lea Land Caliche Pit

0 1,000 2,000  
Feet

Sources: Environmental Systems Research Institute (ESRI)



## Backfill Site Map

Lea Land Caliche Pit  
32.5232397° N, 103.7845410° W  
Lea County, New Mexico

FIGURE  
5



TABLES





**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 Sand Dunes 28 Federal #001 SWD  
 Oxy USA Inc.  
 Eddy County, New Mexico  
 Project No. 03B1417197

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Toulene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO C <sub>6</sub> -C <sub>10</sub> (mg/kg)	TPH DRO >C <sub>10</sub> -C <sub>28</sub> (mg/kg)	TPH ORO >C <sub>28</sub> -C <sub>36</sub> (mg/kg)	TPH Total C <sub>6</sub> -C <sub>36</sub> (mg/kg)	Chloride (mg/kg)
<b>NMOCD Table I Closure Criteria (NMAC 19.15.29)</b>			<b>10</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>50</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>100</b>	<b>600</b>
<b>Delineation Soil Sample Analytical Results</b>												
SS01	07/30/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<b>96.0</b>
SS02	07/30/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<b>224</b>
SS03	07/30/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<b>96.0</b>
SS04	07/30/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<b>336</b>
DS01	11/05/2024	0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
DS02	11/05/2024	0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<b>32.0</b>

**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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 Sand Dunes 28 Federal #001 SWD  
 Oxy USA Inc.  
 Eddy County, New Mexico  
 Project No. 03B1417197

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Toulene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO C <sub>6</sub> -C <sub>10</sub> (mg/kg)	TPH DRO >C <sub>10</sub> -C <sub>28</sub> (mg/kg)	TPH ORO >C <sub>28</sub> -C <sub>36</sub> (mg/kg)	TPH GRO+DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg)	TPH Total C <sub>6</sub> -C <sub>36</sub> (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000
Pothole Soil Sample Analytical Results													
PH01	07/02/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	960
	07/02/2024	1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	512
	07/02/2024	2	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,620
PH02	07/02/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	368
	07/02/2024	1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	336
	07/02/2024	2	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	448
PH03	07/02/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,840
	07/02/2024	1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,500
	07/02/2024	2	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	928
PH04	07/02/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
	07/02/2024	2	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
	07/02/2024	4	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
PH05	07/02/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
	07/02/2024	3	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
	07/02/2024	4	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
PH06	07/02/2024	1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,500
	07/02/2024	3	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	816
	07/02/2024	4	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,060
PH07	07/02/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
	07/02/2024	1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
	07/02/2024	4	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0

**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 Sand Dunes 28 Federal #001 SWD  
 Oxy USA Inc.  
 Eddy County, New Mexico  
 Project No. 03B1417197

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Toulene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO C <sub>6</sub> -C <sub>10</sub> (mg/kg)	TPH DRO >C <sub>10</sub> -C <sub>28</sub> (mg/kg)	TPH ORO >C <sub>28</sub> -C <sub>36</sub> (mg/kg)	TPH GRO+DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg)	TPH Total C <sub>6</sub> -C <sub>36</sub> (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000
Confirmation Soil Sample Analytical Results													
CS01	10/07/2024	0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	8,320
CS02	10/07/2024	0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	17.7	17.3	17.7	35.0	3,600
CS03	10/07/2024	0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	62.8	57.0	62.8	119.8	2,360
CS04	10/07/2024	0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	1,660	989	1,660	2,649	3,320
CS05	10/07/2024	0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	251	147	251	398	4,560
CS06	10/07/2024	0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	12.5	<10.0	12.5	5,600
CS07	10/07/2024	0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	346	157	346	503	1,630
CS08	10/07/2024	0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	5,170	2,240	5,170	7,410	1,840
CS09	10/07/2024	0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	12.4	16.7	12.4	29.1	224
CS10	10/07/2024	0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	47.3	34.6	47.3	81.9	3,080
CS11	10/07/2024	0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	1,750	919	1,750	2,669	2,000
CS12	10/07/2024	0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	3,790	1,590	3,790	5,380	3,200
CS13	10/07/2024	0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	11.2	<10.0	11.2	11.2	224
CS14	10/07/2024	0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	6,800
CS15	10/07/2024	0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	153	70.6	153	223.6	6,960
CS16	10/07/2024	0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<50.0	6,080	2,280	6,080	8,360	5,200
CS17	10/07/2024	0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
CS18	10/07/2024	0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
CS19	10/07/2024	0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256
CS20	10/07/2024	0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	457	174	457	631	624

**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 Sand Dunes 28 Federal #001 SWD  
 Oxy USA Inc.  
 Eddy County, New Mexico  
 Project No. 03B1417197

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Toulene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO C <sub>6</sub> -C <sub>10</sub> (mg/kg)	TPH DRO >C <sub>10</sub> -C <sub>28</sub> (mg/kg)	TPH ORO >C <sub>28</sub> -C <sub>36</sub> (mg/kg)	TPH GRO+DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg)	TPH Total C <sub>6</sub> -C <sub>36</sub> (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000
Excavation Soil Sample Analytical Results													
FS01	07/29/2024	4	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
FS02	07/29/2024	4	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224
FS03	11/05/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	764	277	764	1,041	928
FS04	11/05/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	273	104	273	377	528
FS05	11/05/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	62.2	21.5	62.2	83.7	1,410
FS06	11/05/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	24.3	<10.0	24.3	24.3	96.0
FS07	11/05/2024	1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	17.9	<10.0	17.9	17.9	96.0
Excavation Sidewall Soil Sample Analytical Results													
SW01	07/29/2024	0-4	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
SW02	07/29/2024	0-4	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	528
SW03	11/05/2024	0-0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SW04	11/05/2024	0-0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW05	11/05/2024	0-0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SW06	11/05/2024	0-1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0

**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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

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

Concentrations filled in have been excavated



**TABLE 2**  
**BACKFILL SOIL SAMPLE ANALYTICAL RESULTS**  
 Lea Land Caliche Pit  
 Oxy USA, Inc.  
 Lea County, New Mexico  
 Ensolum Project No. NA

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total TPH (GRO+DRO+MRO) (mg/kg)	Chloride (mg/kg)
New Mexico Oil Conservation Division Closure Criteria for Soils Impacted by a Release (≤ 50 feet)			10	NE	NE	NE	50	NE	NE	NE	100	600
Composite Background Soil Sample Analytical Result												
Lea Land Caliche Pit	09/13/2024	NA	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	98.6	<10.0	98.6	560

bgs: below ground surface

mg/kg: milligrams per kilogram

NA: Not Applicable

NE: Not Established

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

MRO: Motor Oil/Lube Oil Range Organics

TPH: Total Petroleum Hydrocarbon



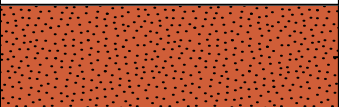
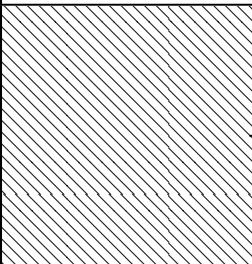
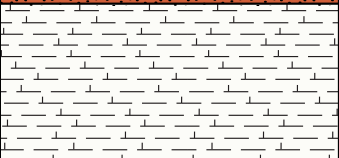
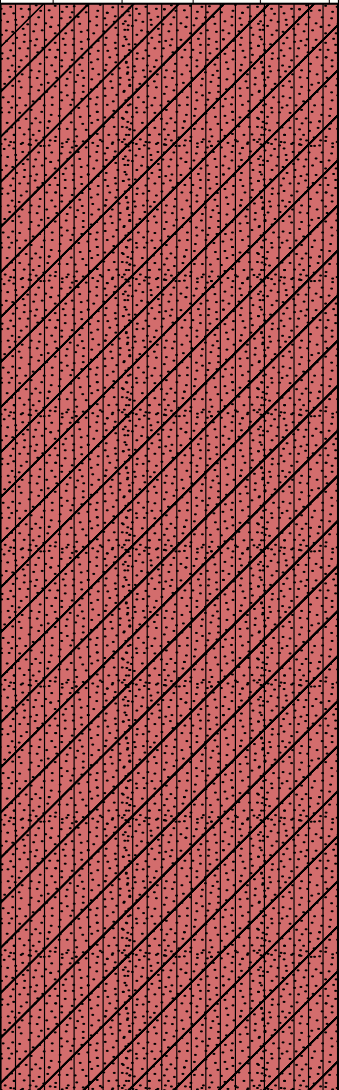
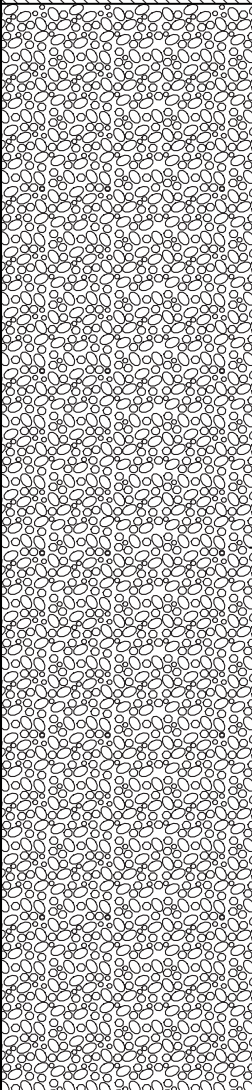
## APPENDIX A

### Referenced Well Records

---



## BOREHOLE LOG C-4553 POD 1

<b>PROJECT NUMBER</b> C-4553 POD 1 <b>PROJECT NAME</b> Soil Boring - DTG <b>CLIENT</b> OXY USA, Inc <b>ADDRESS</b> PO Box 4294, Houston TX 77210 <b>LICENCE NO.</b> WD-1035 Edd Coffey		<b>DRILLING DATE</b> 7/30/2021 <b>TOTAL DEPTH</b> 103 feet <b>DIAMETER</b> 8-3/4" <b>CASING</b> uPVC <b>SCREEN</b> uPVC Manually Slotted		<b>COORDINATES</b> 32.27335 N, -103.78742 <b>COORD SYS</b> WGS 84 <b>COMPLETION</b> Plugged and Abandoned <b>SURFACE ELEVATION</b> 3357 ft MSL	
<b>COMMENTS</b> South of large mesquite bush - west side of pad				<b>LOGGED BY</b> John Farrell P.G. <b>CHECKED BY</b> Dan Dunkelburg	
Graphic Log	Material Description	Plugging Diagram	Elevation (ft)		
	Sand, red, dry		5		
	Caliche, white, dry		10		
	Claystone, silty, reddish orange, dry		15		
			20		
			25		
			30		
			35		
			40		
			45		
			50		
			55		
			65		
			70		
			75		
			80		
			85		
			90		
			95		
			100		
Termination Depth at: 103 feet					

**Disclaimer** This bore log is intended for environmental not geotechnical purposes.

Page 1 of 1



## ENVIRONMENTAL WELL BH01 Env Well

<b>PROJECT NUMBER</b> NMOSE # C4553 Pod 1	<b>DRILLING COMPANY</b> ABC Drilling	<b>COORDINATES</b> 4581.8, 6021
<b>PROJECT NAME</b> Soil Boring	<b>DRILLER</b> Mr M. Brown	<b>COORD SYS</b>
<b>CLIENT</b> OXY	<b>DRILL RIG</b>	<b>SURFACE ELEVATION</b> 45.15
<b>ADDRESS</b> P O Box 4294, Houston TX 77210	<b>DRILLING METHOD</b> Augering Hollow Flight	<b>WELL TOC</b> A=45.2; B=45.23; C=45.17
<b>DRILLING DATE</b> 07	<b>TOTAL DEPTH</b> 14	<b>LOGGED BY</b> JB
<b>LICENCE NO.</b> L312-Nb4	<b>DIAMETER</b>	<b>CHECKED BY</b> M. Smart
<b>COMPLETION</b>		
<b>CASING</b> uPVC		<b>SCREEN</b> uPVC Factory Slotted
<b>COMMENTS</b> Near the corner of the main shed		

Depth (m)	Drilling Method	PID	Samples	Sample Type	Is Analysed?	Water	Well Installation	Graphic Log	Material Description	Moisture	Consistency	Additional Observations	Elevation (m)
1	AU	82					A B C		ASPHALT: Hard		H		45
2			BH01_2-2.1	SS					SILTY CLAY: Silty red clay with minor organic matter, Dry, Dense	D	D	Old pipework	44
3													43
4													42
5			BH01_5-5.3	SS	Y								41
6			BH01_5.8-6	SS									40
7			BH01_6.4-6.8	SS	Y				GRAVELLY SAND: Wet, Dense	W	D	Petroleum Smell	39
8			BH01_8-8.3	SS	Y								38
9			BH01_8.4-8.5	SS					SILTY CLAY: Dry, Dense	D	D		37
10			BH01_10-10.5	SS	Y				SANDY GRAVEL: Dry, Dense	D	D		36
11													35
12									GRANITE: Highly weathered granite, Dry, Hard	D	H		34
13													33
14													32
									Termination Depth at: 14 m				31

Disclaimer This bore log is intended for environmental not geotechnical purposes.

Page 1 of 1

## ENVIRONMENTAL BOREHOLE / TESTPIT TP04

<b>PROJECT NUMBER</b> Sample HGC			<b>DRILLING DATE</b> 13/08/2009 1:04:00 PM -			<b>COORDINATES</b> 4520, 6356		
<b>PROJECT NAME</b> Sample Hydrogeo & Contam			<b>DRILLING COMPANY</b> PGCi Drilling			<b>COORD SYS</b>		
<b>CLIENT</b> Redev Pty Ltd			<b>DRILLER</b> John McMullan			<b>SURFACE ELEVATION</b>		
<b>ADDRESS</b> 1 Hybiscus Blvd, Alderville			<b>DRILLING METHOD</b> Excavator			<b>LOGGED BY</b> Igor Krinitskiy		
			<b>TOTAL DEPTH</b> 4			<b>CHECKED BY</b>		
<b>COMMENTS</b>								
Depth (m)	PID	Penetration Resistance	Samples	Is Analysed?	Graphic Log	USCS	Material Description	Additional Observations
0.5					PT		TOPSOIL: PT Dark brown, moist. High Organic content., Saturated	
1					SC		CLAYEY SAND: SC, pale greenish brown medium bedding thickness, laminated, fine to medium, poorly graded, subangular, flat and elongated clayey silty sand Calcareous little chert, some coal, moist, weak HCL reaction, weak cementation, widely fissured	iron oxide staining, no odour
1.5								
2								
2.5	4000		TP04 2.5	Y			SANDSTONE: very dark brownish gray thickly crossbedded, bioturbated, flow banded, medium grained clayey quartz sandstone, Dry, very hard, very wide fracture spacing, moderately weathered, 60 deg (Primary) bedding angle	iron oxide staining, slight odour
3	4						GRANITE:	
3.5							Termination Depth at:3.2 m	
4								
4.5								
5								
5.5								

Disclaimer This log is intended for environmental not geotechnical purposes.

Page 1 of 1




[USGS Home](#)  
[Contact USGS](#)  
[Search USGS](#)

## National Water Information System: Web Interface

USGS Water Resources

Data Category:	Geographic Area:	
Groundwater	New Mexico	GO

Click to hideNews Bulletins

- Explore the *NEW* [USGS National Water Dashboard](#) interactive map to access real-time water data from over 13,500 stations nationwide.
- [Full News](#) 

Groundwater levels for New Mexico

Click to hide state-specific text

 Important: [Next Generation Monitoring Location Page](#)

### Search Results -- 1 sites found

**Agency code** = usgs

**site\_no list** =

- 321648103482101

**Minimum number of levels** = 1

[Save file of selected sites](#) to local disk for future upload

### USGS 321648103482101 23S.31E.29.11333

Eddy County, New Mexico

Latitude 32°16'48", Longitude 103°48'21" NAD27

Land-surface elevation 3,336 feet above NAVD88

The depth of the well is 220 feet below land surface.

This well is completed in the Other aquifers (N9999OTHER) national aquifer.

This well is completed in the Dewey Lake Redbeds (312DYLK) local aquifer.

#### Output formats

[Table of data](#)

[Tab-separated data](#)

[Graph of data](#)

[Reselect period](#)

Date	Time	? Water-level date- time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water- level approval status
1959-03-26		D	62610		3195.91	NGVD29	1	Z			A
1959-03-26		D	62611		3197.57	NAVD88	1	Z			A
1959-03-26		D	72019	138.43			1	Z			A
1972-09-20		D	62610		3194.44	NGVD29	P	Z			A
1972-09-20		D	62611		3196.10	NAVD88	P	Z			A
1972-09-20		D	72019	139.90			P	Z			A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Status	P	Pumping
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

[Questions or Comments](#)  
[Automated retrievals](#)  
[Help](#)  
[Data Tips](#)  
[Explanation of terms](#)  
[Subscribe for system changes](#)  
[News](#)

[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

**Title: Groundwater for New Mexico: Water Levels**

**URL: <https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?>**



Page Contact Information: [New Mexico Water Data Maintainer](#)

Page Last Modified: 2024-06-11 12:12:03 EDT

0.27 0.23 nadww01



## APPENDIX B

### Photographic Log

---



# Photographic Log

Oxy USA, inc.

Sand Dunes Fed 28 #1 SWD

Incident Number: nAPP2220160296



Photograph: 1  
Description: Liner Inspection  
View: North

Date: 6/24/2024



Photograph: 2  
Description: Liner Inspection  
View: Southeast

Date: 6/24/2024



Photograph: 3  
Description: Release Extent  
View: East

Date: 7/2/2024



Photograph: 4  
Description: Potholing Activities  
View: West

Date: 7/2/2024





### Photographic Log

Oxy USA, inc.

Sand Dunes Fed 28 #1 SWD

Incident Number: nAPP2220160296



Photograph: 5 Date: 7/29/2024  
Description: Excavation Activites  
View: West



Photograph: 6 Date: 10/7/2024  
Description: Excavation Activites  
View: Southeast



Photograph: 7 Date: 11/5/2024  
Description: Excavation Activites  
View: South



Photograph: 8 Date: 11/5/2024  
Description: Excavation Activites  
View: South



## APPENDIX C

### Laboratory Analytical Reports & Chain of Custody Documentation

---



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

---

July 10, 2024

HADLIE GREEN

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: SAND DUNES FED 28 #1 SWD

Enclosed are the results of analyses for samples received by the laboratory on 07/03/24 9:57.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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 [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited 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.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 HADLIE GREEN  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/03/2024  
 Reported: 07/10/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/02/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 01 0.5 (H244000-01)**

BTX 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	07/09/2024	ND	2.01	101	2.00	3.42	
Toluene*	<0.050	0.050	07/09/2024	ND	2.16	108	2.00	4.76	
Ethylbenzene*	<0.050	0.050	07/09/2024	ND	2.24	112	2.00	3.58	
Total Xylenes*	<0.150	0.150	07/09/2024	ND	6.87	115	6.00	2.66	
Total BTX	<0.300	0.300	07/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	960	16.0	07/09/2024	ND	432	108	400	0.00		

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	07/09/2024	ND	94.3	94.3	100	0.663	
DRO >C10-C28*	<10.0	10.0	07/09/2024	ND	91.0	91.0	100	0.652	
EXT DRO >C28-C36	<10.0	10.0	07/09/2024	ND					

Surrogate: 1-Chlorooctane 99.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 HADLIE GREEN  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/03/2024  
 Reported: 07/10/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/02/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 01 1 (H244000-02)**

BTX 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	07/09/2024	ND	2.01	100	2.00	1.50	QM-07, QR-03
Toluene*	<0.050	0.050	07/09/2024	ND	2.00	99.9	2.00	0.540	QM-07, QR-03
Ethylbenzene*	<0.050	0.050	07/09/2024	ND	2.03	101	2.00	0.146	QM-07, QR-03
Total Xylenes*	<0.150	0.150	07/09/2024	ND	6.00	100	6.00	0.162	QM-07, QR-03
Total BTX	<0.300	0.300	07/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	07/09/2024	ND	432	108	400	0.00	

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	07/09/2024	ND	94.3	94.3	100	0.663	
DRO >C10-C28*	<10.0	10.0	07/09/2024	ND	91.0	91.0	100	0.652	
EXT DRO >C28-C36	<10.0	10.0	07/09/2024	ND					

Surrogate: 1-Chlorooctane 95.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.9 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 HADLIE GREEN  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/03/2024  
 Reported: 07/10/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/02/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 01 2 (H244000-03)**

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	07/09/2024	ND	2.01	100	2.00	1.50		
Toluene*	<0.050	0.050	07/09/2024	ND	2.00	99.9	2.00	0.540		
Ethylbenzene*	<0.050	0.050	07/09/2024	ND	2.03	101	2.00	0.146		
Total Xylenes*	<0.150	0.150	07/09/2024	ND	6.00	100	6.00	0.162		
Total BTEx	<0.300	0.300	07/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1620	16.0	07/09/2024	ND	432	108	400	0.00		

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	07/09/2024	ND	94.3	94.3	100	0.663	
DRO >C10-C28*	<10.0	10.0	07/09/2024	ND	91.0	91.0	100	0.652	
EXT DRO >C28-C36	<10.0	10.0	07/09/2024	ND					

Surrogate: 1-Chlorooctane 89.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.3 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 HADLIE GREEN  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/03/2024  
 Reported: 07/10/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/02/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 02 0.5 (H244000-04)**

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	07/09/2024	ND	2.01	100	2.00	1.50		
Toluene*	<0.050	0.050	07/09/2024	ND	2.00	99.9	2.00	0.540		
Ethylbenzene*	<0.050	0.050	07/09/2024	ND	2.03	101	2.00	0.146		
Total Xylenes*	<0.150	0.150	07/09/2024	ND	6.00	100	6.00	0.162		
Total BTEx	<0.300	0.300	07/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	368	16.0	07/09/2024	ND	432	108	400	0.00		

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	07/09/2024	ND	94.3	94.3	100	0.663	
DRO >C10-C28*	<10.0	10.0	07/09/2024	ND	91.0	91.0	100	0.652	
EXT DRO >C28-C36	<10.0	10.0	07/09/2024	ND					

Surrogate: 1-Chlorooctane 97.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.5 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager





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

**Analytical Results For:**

ENSOLUM, LLC  
 HADLIE GREEN  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/03/2024  
 Reported: 07/10/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/02/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 02 1 (H244000-05)**

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	07/09/2024	ND	2.01	100	2.00	1.50	
Toluene*	<0.050	0.050	07/09/2024	ND	2.00	99.9	2.00	0.540	
Ethylbenzene*	<0.050	0.050	07/09/2024	ND	2.03	101	2.00	0.146	
Total Xylenes*	<0.150	0.150	07/09/2024	ND	6.00	100	6.00	0.162	
Total BTEX	<0.300	0.300	07/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	336	16.0	07/09/2024	ND	432	108	400	0.00		

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	07/09/2024	ND	94.3	94.3	100	0.663	
DRO >C10-C28*	<10.0	10.0	07/09/2024	ND	91.0	91.0	100	0.652	
EXT DRO >C28-C36	<10.0	10.0	07/09/2024	ND					

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.6 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 HADLIE GREEN  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/03/2024  
 Reported: 07/10/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/02/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 02 2 (H244000-06)**

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	07/09/2024	ND	2.01	100	2.00	1.50	
Toluene*	<0.050	0.050	07/09/2024	ND	2.00	99.9	2.00	0.540	
Ethylbenzene*	<0.050	0.050	07/09/2024	ND	2.03	101	2.00	0.146	
Total Xylenes*	<0.150	0.150	07/09/2024	ND	6.00	100	6.00	0.162	
Total BTEx	<0.300	0.300	07/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	448	16.0	07/09/2024	ND	432	108	400	0.00		

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	07/09/2024	ND	94.3	94.3	100	0.663	
DRO >C10-C28*	<10.0	10.0	07/09/2024	ND	91.0	91.0	100	0.652	
EXT DRO >C28-C36	<10.0	10.0	07/09/2024	ND					

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 HADLIE GREEN  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/03/2024  
 Reported: 07/10/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/02/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 03 0.5 (H244000-07)**

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	07/09/2024	ND	2.01	100	2.00	1.50		
Toluene*	<0.050	0.050	07/09/2024	ND	2.00	99.9	2.00	0.540		
Ethylbenzene*	<0.050	0.050	07/09/2024	ND	2.03	101	2.00	0.146		
Total Xylenes*	<0.150	0.150	07/09/2024	ND	6.00	100	6.00	0.162		
Total BTEX	<0.300	0.300	07/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2840	16.0	07/09/2024	ND	432	108	400	0.00		

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	07/09/2024	ND	94.3	94.3	100	0.663	
DRO >C10-C28*	<10.0	10.0	07/09/2024	ND	91.0	91.0	100	0.652	
EXT DRO >C28-C36	<10.0	10.0	07/09/2024	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 100 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 HADLIE GREEN  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/03/2024  
 Reported: 07/10/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/02/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 03 1 (H244000-08)**

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	07/09/2024	ND	2.01	100	2.00	1.50		
Toluene*	<0.050	0.050	07/09/2024	ND	2.00	99.9	2.00	0.540		
Ethylbenzene*	<0.050	0.050	07/09/2024	ND	2.03	101	2.00	0.146		
Total Xylenes*	<0.150	0.150	07/09/2024	ND	6.00	100	6.00	0.162		
Total BTEX	<0.300	0.300	07/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1500	16.0	07/09/2024	ND	432	108	400	0.00		

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	07/09/2024	ND	94.3	94.3	100	0.663	
DRO >C10-C28*	<10.0	10.0	07/09/2024	ND	91.0	91.0	100	0.652	
EXT DRO >C28-C36	<10.0	10.0	07/09/2024	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 HADLIE GREEN  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/03/2024  
 Reported: 07/10/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/02/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 03 2 (H244000-09)**

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	07/09/2024	ND	2.01	100	2.00	1.50		
Toluene*	<0.050	0.050	07/09/2024	ND	2.00	99.9	2.00	0.540		
Ethylbenzene*	<0.050	0.050	07/09/2024	ND	2.03	101	2.00	0.146		
Total Xylenes*	<0.150	0.150	07/09/2024	ND	6.00	100	6.00	0.162		
Total BTEx	<0.300	0.300	07/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	928	16.0	07/09/2024	ND	432	108	400	0.00		

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	07/09/2024	ND	94.3	94.3	100	0.663	
DRO >C10-C28*	<10.0	10.0	07/09/2024	ND	91.0	91.0	100	0.652	
EXT DRO >C28-C36	<10.0	10.0	07/09/2024	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 HADLIE GREEN  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/03/2024  
 Reported: 07/10/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/02/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 04 0.5 (H244000-10)**

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	07/09/2024	ND	2.01	100	2.00	1.50		
Toluene*	<0.050	0.050	07/09/2024	ND	2.00	99.9	2.00	0.540		
Ethylbenzene*	<0.050	0.050	07/09/2024	ND	2.03	101	2.00	0.146		
Total Xylenes*	<0.150	0.150	07/09/2024	ND	6.00	100	6.00	0.162		
Total BTEX	<0.300	0.300	07/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	07/09/2024	ND	432	108	400	0.00		

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	07/09/2024	ND	94.3	94.3	100	0.663	
DRO >C10-C28*	<10.0	10.0	07/09/2024	ND	91.0	91.0	100	0.652	
EXT DRO >C28-C36	<10.0	10.0	07/09/2024	ND					

Surrogate: 1-Chlorooctane 98.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.1 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 HADLIE GREEN  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/03/2024  
 Reported: 07/10/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/02/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 04 2 (H244000-11)**

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	07/09/2024	ND	2.01	100	2.00	1.50		
Toluene*	<0.050	0.050	07/09/2024	ND	2.00	99.9	2.00	0.540		
Ethylbenzene*	<0.050	0.050	07/09/2024	ND	2.03	101	2.00	0.146		
Total Xylenes*	<0.150	0.150	07/09/2024	ND	6.00	100	6.00	0.162		
Total BTEx	<0.300	0.300	07/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	07/09/2024	ND	432	108	400	0.00		

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	07/09/2024	ND	94.3	94.3	100	0.663	
DRO >C10-C28*	<10.0	10.0	07/09/2024	ND	91.0	91.0	100	0.652	
EXT DRO >C28-C36	<10.0	10.0	07/09/2024	ND					

Surrogate: 1-Chlorooctane 90.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.5 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 HADLIE GREEN  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/03/2024  
 Reported: 07/10/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/02/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 04 4 (H244000-12)**

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	07/09/2024	ND	2.01	100	2.00	1.50		
Toluene*	<0.050	0.050	07/09/2024	ND	2.00	99.9	2.00	0.540		
Ethylbenzene*	<0.050	0.050	07/09/2024	ND	2.03	101	2.00	0.146		
Total Xylenes*	<0.150	0.150	07/09/2024	ND	6.00	100	6.00	0.162		
Total BTEX	<0.300	0.300	07/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	07/09/2024	ND	432	108	400	0.00		

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	07/09/2024	ND	94.3	94.3	100	0.663	
DRO >C10-C28*	<10.0	10.0	07/09/2024	ND	91.0	91.0	100	0.652	
EXT DRO >C28-C36	<10.0	10.0	07/09/2024	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager





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

**Analytical Results For:**

ENSOLUM, LLC  
 HADLIE GREEN  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/03/2024  
 Reported: 07/10/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/02/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 05 0.5 (H244000-13)**

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	07/09/2024	ND	2.01	100	2.00	1.50	
Toluene*	<0.050	0.050	07/09/2024	ND	2.00	99.9	2.00	0.540	
Ethylbenzene*	<0.050	0.050	07/09/2024	ND	2.03	101	2.00	0.146	
Total Xylenes*	<0.150	0.150	07/09/2024	ND	6.00	100	6.00	0.162	
Total BTEX	<0.300	0.300	07/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	07/09/2024	ND	432	108	400	0.00		

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	07/09/2024	ND	94.3	94.3	100	0.663	
DRO >C10-C28*	<10.0	10.0	07/09/2024	ND	91.0	91.0	100	0.652	
EXT DRO >C28-C36	<10.0	10.0	07/09/2024	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 HADLIE GREEN  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/03/2024  
 Reported: 07/10/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/02/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 05 3 (H244000-14)**

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	07/09/2024	ND	2.01	100	2.00	1.50	
Toluene*	<0.050	0.050	07/09/2024	ND	2.00	99.9	2.00	0.540	
Ethylbenzene*	<0.050	0.050	07/09/2024	ND	2.03	101	2.00	0.146	
Total Xylenes*	<0.150	0.150	07/09/2024	ND	6.00	100	6.00	0.162	
Total BTEX	<0.300	0.300	07/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	07/09/2024	ND	432	108	400	0.00		

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	07/09/2024	ND	94.3	94.3	100	0.663	
DRO >C10-C28*	<10.0	10.0	07/09/2024	ND	91.0	91.0	100	0.652	
EXT DRO >C28-C36	<10.0	10.0	07/09/2024	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 HADLIE GREEN  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/03/2024  
 Reported: 07/10/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/02/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 05 4 (H244000-15)**

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	07/09/2024	ND	2.01	100	2.00	1.50		
Toluene*	<0.050	0.050	07/09/2024	ND	2.00	99.9	2.00	0.540		
Ethylbenzene*	<0.050	0.050	07/09/2024	ND	2.03	101	2.00	0.146		
Total Xylenes*	<0.150	0.150	07/09/2024	ND	6.00	100	6.00	0.162		
Total BTEX	<0.300	0.300	07/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	07/09/2024	ND	432	108	400	0.00		

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	07/09/2024	ND	94.3	94.3	100	0.663	
DRO >C10-C28*	<10.0	10.0	07/09/2024	ND	91.0	91.0	100	0.652	
EXT DRO >C28-C36	<10.0	10.0	07/09/2024	ND					

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 HADLIE GREEN  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/03/2024  
 Reported: 07/10/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/02/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 06 1 (H244000-16)**

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	07/09/2024	ND	2.01	100	2.00	1.50		
Toluene*	<0.050	0.050	07/09/2024	ND	2.00	99.9	2.00	0.540		
Ethylbenzene*	<0.050	0.050	07/09/2024	ND	2.03	101	2.00	0.146		
Total Xylenes*	<0.150	0.150	07/09/2024	ND	6.00	100	6.00	0.162		
Total BTEx	<0.300	0.300	07/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1500	16.0	07/09/2024	ND	432	108	400	0.00		

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	07/09/2024	ND	94.3	94.3	100	0.663	
DRO >C10-C28*	<10.0	10.0	07/09/2024	ND	91.0	91.0	100	0.652	
EXT DRO >C28-C36	<10.0	10.0	07/09/2024	ND					

Surrogate: 1-Chlorooctane 99.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.7 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 HADLIE GREEN  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/03/2024  
 Reported: 07/10/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/02/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 06 3 (H244000-17)**

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	07/09/2024	ND	2.01	100	2.00	1.50		
Toluene*	<0.050	0.050	07/09/2024	ND	2.00	99.9	2.00	0.540		
Ethylbenzene*	<0.050	0.050	07/09/2024	ND	2.03	101	2.00	0.146		
Total Xylenes*	<0.150	0.150	07/09/2024	ND	6.00	100	6.00	0.162		
Total BTEX	<0.300	0.300	07/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	816	16.0	07/09/2024	ND	432	108	400	0.00		

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	07/09/2024	ND	94.3	94.3	100	0.663	
DRO >C10-C28*	<10.0	10.0	07/09/2024	ND	91.0	91.0	100	0.652	
EXT DRO >C28-C36	<10.0	10.0	07/09/2024	ND					

Surrogate: 1-Chlorooctane 92.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.1 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 HADLIE GREEN  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/03/2024  
 Reported: 07/10/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/02/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 06 4 (H244000-18)**

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	07/09/2024	ND	2.01	100	2.00	1.50		
Toluene*	<0.050	0.050	07/09/2024	ND	2.00	99.9	2.00	0.540		
Ethylbenzene*	<0.050	0.050	07/09/2024	ND	2.03	101	2.00	0.146		
Total Xylenes*	<0.150	0.150	07/09/2024	ND	6.00	100	6.00	0.162		
Total BTEx	<0.300	0.300	07/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1060	16.0	07/09/2024	ND	400	100	400	7.69		

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	07/09/2024	ND	95.7	95.7	100	0.272	
DRO >C10-C28*	<10.0	10.0	07/09/2024	ND	91.8	91.8	100	0.490	
EXT DRO >C28-C36	<10.0	10.0	07/09/2024	ND					

Surrogate: 1-Chlorooctane 91.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.4 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 HADLIE GREEN  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/03/2024  
 Reported: 07/10/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/02/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 07 0.5 (H244000-19)**

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	07/09/2024	ND	2.01	100	2.00	1.50	
Toluene*	<0.050	0.050	07/09/2024	ND	2.00	99.9	2.00	0.540	
Ethylbenzene*	<0.050	0.050	07/09/2024	ND	2.03	101	2.00	0.146	
Total Xylenes*	<0.150	0.150	07/09/2024	ND	6.00	100	6.00	0.162	
Total BTEx	<0.300	0.300	07/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.3 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	07/09/2024	ND	400	100	400	7.69		

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	07/09/2024	ND	95.7	95.7	100	0.272	
DRO >C10-C28*	<10.0	10.0	07/09/2024	ND	91.8	91.8	100	0.490	
EXT DRO >C28-C36	<10.0	10.0	07/09/2024	ND					

Surrogate: 1-Chlorooctane 91.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.0 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 HADLIE GREEN  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/03/2024  
 Reported: 07/10/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/02/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 07 1 (H244000-20)**

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	07/09/2024	ND	2.01	100	2.00	1.50		
Toluene*	<0.050	0.050	07/09/2024	ND	2.00	99.9	2.00	0.540		
Ethylbenzene*	<0.050	0.050	07/09/2024	ND	2.03	101	2.00	0.146		
Total Xylenes*	<0.150	0.150	07/09/2024	ND	6.00	100	6.00	0.162		
Total BTEX	<0.300	0.300	07/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-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	07/09/2024	ND	400	100	400	7.69		

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	07/09/2024	ND	95.7	95.7	100	0.272	
DRO >C10-C28*	<10.0	10.0	07/09/2024	ND	91.8	91.8	100	0.490	
EXT DRO >C28-C36	<10.0	10.0	07/09/2024	ND					

Surrogate: 1-Chlorooctane 88.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.3 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager





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

**Analytical Results For:**

ENSOLUM, LLC  
 HADLIE GREEN  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/03/2024  
 Reported: 07/10/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/02/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: PH 07 4 (H244000-21)**

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	07/09/2024	ND	2.01	100	2.00	1.50		
Toluene*	<0.050	0.050	07/09/2024	ND	2.00	99.9	2.00	0.540		
Ethylbenzene*	<0.050	0.050	07/09/2024	ND	2.03	101	2.00	0.146		
Total Xylenes*	<0.150	0.150	07/09/2024	ND	6.00	100	6.00	0.162		
Total BTEX	<0.300	0.300	07/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	07/09/2024	ND	400	100	400	7.69		

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	07/09/2024	ND	95.7	95.7	100	0.272	
DRO >C10-C28*	<10.0	10.0	07/09/2024	ND	91.8	91.8	100	0.490	
EXT DRO >C28-C36	<10.0	10.0	07/09/2024	ND					

Surrogate: 1-Chlorooctane 68.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 60.4 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager

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

---

### Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
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

---

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 whatsoever 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.

A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC

BILL TO

ANALYSIS REQUEST

Project Manager: *Hodie Green*

P.O. #:

Address: 601 N Marientfield Street, Suite 400

*OK, USA, Inc*

City: Midland

State: TX Zip: 79701

Address:

*Attn: Mike Pittman*

Phone #: 432-557-6895

Fax #:

Address:

Project #: 038147108

Project Owner:

City:

Project Name: *Sub Piles Federal 28 #1 SW*

State: Zip:

Project Location: *Eddy County, NM*

Phone #

Sampler Name: NKD

Fax #:

FOR LAB USE ONLY

MATRIX

PRESERV.

SAMPLING

Lab I.D. Sample I.D.

Depth (feet)

*11344000*

(G)RAB OR (C)OMP.

# CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE TIME

*BTEX  
TPH*

*Chlorides 4500*

<i>1</i>	<i>PH01</i>	<i>0.5</i>	<i>C</i>	<i>1</i>	<i>X</i>	<i>7/2/24 1035</i>	<i>X</i>	<i>X</i>	<i>X</i>										
<i>2</i>	<i>PH01</i>	<i>2</i>	<i>C</i>	<i>1</i>	<i>X</i>	<i>7/2/24 1040</i>	<i>X</i>	<i>X</i>	<i>X</i>										
<i>3</i>	<i>PH01</i>	<i>0.5</i>	<i>C</i>	<i>1</i>	<i>X</i>	<i>7/2/24 1045</i>	<i>X</i>	<i>X</i>	<i>X</i>										
<i>4</i>	<i>PH02</i>	<i>1</i>	<i>C</i>	<i>1</i>	<i>X</i>	<i>7/2/24 105</i>	<i>X</i>	<i>X</i>	<i>X</i>										
<i>5</i>	<i>PH02</i>	<i>0.5</i>	<i>C</i>	<i>1</i>	<i>X</i>	<i>7/2/24 1020</i>	<i>X</i>	<i>X</i>	<i>X</i>										
<i>6</i>	<i>PH02</i>	<i>0.5</i>	<i>C</i>	<i>1</i>	<i>X</i>	<i>7/2/24 1030</i>	<i>X</i>	<i>X</i>	<i>X</i>										
<i>7</i>	<i>PH03</i>	<i>1</i>	<i>C</i>	<i>1</i>	<i>X</i>	<i>7/2/24 1050</i>	<i>X</i>	<i>X</i>	<i>X</i>										
<i>8</i>	<i>PH03</i>	<i>2</i>	<i>C</i>	<i>1</i>	<i>X</i>	<i>7/2/24 1100</i>	<i>X</i>	<i>X</i>	<i>X</i>										
<i>9</i>	<i>PH03</i>	<i>0.5</i>	<i>C</i>	<i>1</i>	<i>X</i>	<i>7/2/24 0450</i>	<i>X</i>	<i>X</i>	<i>X</i>										
<i>10</i>	<i>PH04</i>		<i>C</i>	<i>1</i>	<i>X</i>														

PLEASE NOTE: Liability and Damages: Cardinal's liability and client's exclusive remedy for any claim arising from this contract or tort, shall be limited to the amount paid by the client for the analysis. 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 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 services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:

Received By:

Verbal Result: ☐ Yes ☒ No Add'l Phone #:

All Results are emailed. Please provide Email address:

*Allen Kew*

*7/3/24 0957*

*Speed Riquelme*

*hylene @ Ensolum, NM*

REMARKS: *Same 7.15 water tested. called HADLEY green. send acid test to run sample*

Delivered By: (Circle One)

Observed Temp.: *2.4*

Sample Condition

CHECKED BY: (Initials)

Turnaround Time: *10:24*

Standard ☒ Bacteria (only) Sample Condition

Sampler - UPS - Bus - Other:

Corrected Temp.: *2.4*

Cool Intact ☒ Yes ☐ No

*SR*

Thermometer ID: *#140*

Corrected Temp.: *2.4*

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





202

file 1000  
file 1010  
file 0425





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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC										<b>BILL TO</b> ANALYSIS REQUEST									
Project Manager: <i>Hadi'e Green</i>																			
Address: 601 N Marientfeld Street, Suite 400										P.O. #:									
City: Midland										City: <i>OK, USA, Inc</i>									
State: TX Zip: 79701										Address: <i>A+th: Wade Pittsby</i>									
Phone #: <i>432-557-8845</i> Fax #:										City:									
Project #: <i>03B1417198</i> Project Owner:										State: Zip:									
Project Name: <i>Sund Dues Fed</i>										Phone #									
Project Location: <i>Eddy County, NM</i>										Fax #:									
Sample Name: <i>NKD</i>																			

FOR LAB USE ONLY											
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					PRESERV.	SAMPLING
					GROUNDWATER						
					WASTEWATER						
					SOIL						
					OIL						
					SLUDGE						
					OTHER :						
					ACID/BASE:						
					ICE / COOL						
					OTHER :						
					DATE	TIME					

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp.: °C Corrected Temp.: °C	Sample Condition Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CHECKED BY: (Initials)	Turnaround Time:	Standard <input checked="" type="checkbox"/> Rush	Bacteria (only) Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Sample Condition Observed Temp.: °C Corrected Temp.: °C
--	---	--	---------------------------	------------------	--	---	---

Relinquished By:	Date:	Time:	Received By:	Date:	Time:	Received By:	Date:	Time:
------------------	-------	-------	--------------	-------	-------	--------------	-------	-------

Verbal Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #:									
All Results are emailed. Please provide Email address:									
REMARKS:									



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

---

August 01, 2024

BEAUX JENNINGS  
ENSOLUM, LLC  
705 W WADLEY AVE.  
MIDLAND, TX 79705

RE: SAND DUNES FED 28 #1 SWD

Enclosed are the results of analyses for samples received by the laboratory on 07/29/24 16:31.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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 [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited 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.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene  
Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 BEAUX JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/29/2024  
 Reported: 08/01/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/29/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: FS 01 4 (H244505-01)**

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	07/30/2024	ND	1.92	96.0	2.00	6.92		
Toluene*	<0.050	0.050	07/30/2024	ND	2.02	101	2.00	6.41		
Ethylbenzene*	<0.050	0.050	07/30/2024	ND	2.10	105	2.00	6.15		
Total Xylenes*	<0.150	0.150	07/30/2024	ND	6.46	108	6.00	5.87		
Total BTEx	<0.300	0.300	07/30/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	07/30/2024	ND	448	112	400	3.51		

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	07/30/2024	ND	189	94.5	200	3.63	
DRO >C10-C28*	<10.0	10.0	07/30/2024	ND	178	88.9	200	7.58	
EXT DRO >C28-C36	<10.0	10.0	07/30/2024	ND					

Surrogate: 1-Chlorooctane 112 % 48.2-134

Surrogate: 1-Chlorooctadecane 134 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 BEAUX JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/29/2024  
 Reported: 08/01/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/29/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: FS 02 4 (H244505-02)**

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	07/30/2024	ND	1.92	96.0	2.00	6.92		
Toluene*	<0.050	0.050	07/30/2024	ND	2.02	101	2.00	6.41		
Ethylbenzene*	<0.050	0.050	07/30/2024	ND	2.10	105	2.00	6.15		
Total Xylenes*	<0.150	0.150	07/30/2024	ND	6.46	108	6.00	5.87		
Total BTEX	<0.300	0.300	07/30/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	07/30/2024	ND	448	112	400	3.51		

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	07/30/2024	ND	204	102	200	4.71	
DRO >C10-C28*	<10.0	10.0	07/30/2024	ND	195	97.3	200	0.823	
EXT DRO >C28-C36	<10.0	10.0	07/30/2024	ND					

Surrogate: 1-Chlorooctane 114 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 BEAUX JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/29/2024  
 Reported: 08/01/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/29/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: SW 01 0-4 (H244505-03)**

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	07/30/2024	ND	1.92	96.0	2.00	6.92		
Toluene*	<0.050	0.050	07/30/2024	ND	2.02	101	2.00	6.41		
Ethylbenzene*	<0.050	0.050	07/30/2024	ND	2.10	105	2.00	6.15		
Total Xylenes*	<0.150	0.150	07/30/2024	ND	6.46	108	6.00	5.87		
Total BTEx	<0.300	0.300	07/30/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	07/30/2024	ND	448	112	400	3.51		

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	07/30/2024	ND	204	102	200	4.71	
DRO >C10-C28*	<10.0	10.0	07/30/2024	ND	195	97.3	200	0.823	
EXT DRO >C28-C36	<10.0	10.0	07/30/2024	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager





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

**Analytical Results For:**

ENSOLUM, LLC  
 BEAUX JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/29/2024  
 Reported: 08/01/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417198  
 Project Location: EDDY COUNTY, NM

Sampling Date: 07/29/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: SW 02 0-4 (H244505-04)**

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	07/30/2024	ND	1.92	96.0	2.00	6.92		
Toluene*	<0.050	0.050	07/30/2024	ND	2.02	101	2.00	6.41		
Ethylbenzene*	<0.050	0.050	07/30/2024	ND	2.10	105	2.00	6.15		
Total Xylenes*	<0.150	0.150	07/30/2024	ND	6.46	108	6.00	5.87		
Total BTEX	<0.300	0.300	07/30/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	528	16.0	07/30/2024	ND	448	112	400	3.51		

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	07/30/2024	ND	204	102	200	4.71	
DRO >C10-C28*	<10.0	10.0	07/30/2024	ND	195	97.3	200	0.823	
EXT DRO >C28-C36	<10.0	10.0	07/30/2024	ND					

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 100 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



---

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

---

### 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

---

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 whatsoever 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.

A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

[illegible]



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

October 11, 2024

SAMANTHA MACKENZIE

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: SAND DUNES FED 28 #1 SWD

Enclosed are the results of analyses for samples received by the laboratory on 10/07/24 13:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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 [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited 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.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 10/07/2024  
 Reported: 10/11/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 10/07/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: CS 01 0.25 (H246080-01)**

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	10/07/2024	ND	2.05	102	2.00	2.15		
Toluene*	<0.050	0.050	10/07/2024	ND	2.06	103	2.00	2.04		
Ethylbenzene*	<0.050	0.050	10/07/2024	ND	2.12	106	2.00	2.98		
Total Xylenes*	<0.150	0.150	10/07/2024	ND	6.22	104	6.00	3.48		
Total BTEx	<0.300	0.300	10/07/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	8320	16.0	10/07/2024	ND	400	100	400	3.92		

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	10/07/2024	ND	211	106	200	1.34	
DRO >C10-C28*	<10.0	10.0	10/07/2024	ND	205	103	200	1.52	
EXT DRO >C28-C36	<10.0	10.0	10/07/2024	ND					

Surrogate: 1-Chlorooctane 69.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 66.3 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager





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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 10/07/2024  
 Reported: 10/11/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 10/07/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: CS 02 0.25 (H246080-02)**

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	10/07/2024	ND	2.05	102	2.00	2.15	
Toluene*	<0.050	0.050	10/07/2024	ND	2.06	103	2.00	2.04	
Ethylbenzene*	<0.050	0.050	10/07/2024	ND	2.12	106	2.00	2.98	
Total Xylenes*	<0.150	0.150	10/07/2024	ND	6.22	104	6.00	3.48	
Total BTEX	<0.300	0.300	10/07/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3600	16.0	10/07/2024	ND	400	100	400	3.92		

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	10/07/2024	ND	211	106	200	1.34	
DRO >C10-C28*	17.7	10.0	10/07/2024	ND	205	103	200	1.52	
EXT DRO >C28-C36	17.3	10.0	10/07/2024	ND					

Surrogate: 1-Chlorooctane 96.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.9 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 10/07/2024  
 Reported: 10/11/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 10/07/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: CS 03 0.25 (H246080-03)**

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	10/07/2024	ND	2.05	102	2.00	2.15	
Toluene*	<0.050	0.050	10/07/2024	ND	2.06	103	2.00	2.04	
Ethylbenzene*	<0.050	0.050	10/07/2024	ND	2.12	106	2.00	2.98	
Total Xylenes*	<0.150	0.150	10/07/2024	ND	6.22	104	6.00	3.48	
Total BTEX	<0.300	0.300	10/07/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2360	16.0	10/07/2024	ND	400	100	400	3.92	

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	10/07/2024	ND	211	106	200	1.34	
DRO >C10-C28*	62.8	10.0	10/07/2024	ND	205	103	200	1.52	
EXT DRO >C28-C36	57.0	10.0	10/07/2024	ND					

Surrogate: 1-Chlorooctane 91.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.8 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 10/07/2024  
 Reported: 10/11/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 10/07/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: CS 04 0.25 (H246080-04)**

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	10/07/2024	ND	2.05	102	2.00	2.15	
Toluene*	<0.050	0.050	10/07/2024	ND	2.06	103	2.00	2.04	
Ethylbenzene*	<0.050	0.050	10/07/2024	ND	2.12	106	2.00	2.98	
Total Xylenes*	<0.150	0.150	10/07/2024	ND	6.22	104	6.00	3.48	
Total BTEX	<0.300	0.300	10/07/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3320	16.0	10/07/2024	ND	400	100	400	3.92		

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	10/07/2024	ND	211	106	200	1.34	
DRO >C10-C28*	1660	10.0	10/07/2024	ND	205	103	200	1.52	
EXT DRO >C28-C36	989	10.0	10/07/2024	ND					

Surrogate: 1-Chlorooctane 95.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 120 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 10/07/2024  
 Reported: 10/11/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 10/07/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: CS 05 0.25 (H246080-05)**

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	10/07/2024	ND	2.05	102	2.00	2.15	
Toluene*	<0.050	0.050	10/07/2024	ND	2.06	103	2.00	2.04	
Ethylbenzene*	<0.050	0.050	10/07/2024	ND	2.12	106	2.00	2.98	
Total Xylenes*	<0.150	0.150	10/07/2024	ND	6.22	104	6.00	3.48	
Total BTEx	<0.300	0.300	10/07/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4560	16.0	10/07/2024	ND	400	100	400	3.92	

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	10/07/2024	ND	211	106	200	1.34	
DRO >C10-C28*	251	10.0	10/07/2024	ND	205	103	200	1.52	
EXT DRO >C28-C36	147	10.0	10/07/2024	ND					

Surrogate: 1-Chlorooctane 90.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.6 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 10/07/2024  
 Reported: 10/11/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 10/07/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: CS 06 0.25 (H246080-06)**

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	10/08/2024	ND	2.15	108	2.00	0.419	
Toluene*	<0.050	0.050	10/08/2024	ND	2.07	103	2.00	0.0860	
Ethylbenzene*	<0.050	0.050	10/08/2024	ND	2.09	105	2.00	0.0121	
Total Xylenes*	<0.150	0.150	10/08/2024	ND	6.25	104	6.00	0.119	
Total BTEX	<0.300	0.300	10/08/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5600	16.0	10/07/2024	ND	400	100	400	3.92		

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	10/07/2024	ND	211	106	200	1.34	
DRO >C10-C28*	<10.0	10.0	10/07/2024	ND	205	103	200	1.52	
EXT DRO >C28-C36	12.5	10.0	10/07/2024	ND					

Surrogate: 1-Chlorooctane 91.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.4 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager





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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 10/07/2024  
 Reported: 10/11/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 10/07/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: CS 07 0.25 (H246080-07)**

BTX 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	10/08/2024	ND	2.15	108	2.00	0.419	
Toluene*	<0.050	0.050	10/08/2024	ND	2.07	103	2.00	0.0860	
Ethylbenzene*	<0.050	0.050	10/08/2024	ND	2.09	105	2.00	0.0121	
Total Xylenes*	<0.150	0.150	10/08/2024	ND	6.25	104	6.00	0.119	
Total BTX	<0.300	0.300	10/08/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1630	16.0	10/07/2024	ND	400	100	400	3.92		

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	10/07/2024	ND	211	106	200	1.34	
DRO >C10-C28*	346	10.0	10/07/2024	ND	205	103	200	1.52	
EXT DRO >C28-C36	157	10.0	10/07/2024	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.5 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 10/07/2024  
 Reported: 10/11/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 10/07/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: CS 08 0.25 (H246080-08)**

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	10/08/2024	ND	2.15	108	2.00	0.419	
Toluene*	<0.050	0.050	10/08/2024	ND	2.07	103	2.00	0.0860	
Ethylbenzene*	<0.050	0.050	10/08/2024	ND	2.09	105	2.00	0.0121	
Total Xylenes*	<0.150	0.150	10/08/2024	ND	6.25	104	6.00	0.119	
Total BTEX	<0.300	0.300	10/08/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1840	16.0	10/07/2024	ND	400	100	400	3.92		

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	10/07/2024	ND	211	106	200	1.34	
DRO >C10-C28*	5170	10.0	10/07/2024	ND	205	103	200	1.52	
EXT DRO >C28-C36	2240	10.0	10/07/2024	ND					

Surrogate: 1-Chlorooctane 84.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 146 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 10/07/2024  
 Reported: 10/11/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 10/07/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: CS 09 0.25 (H246080-09)**

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	10/08/2024	ND	2.15	108	2.00	0.419	
Toluene*	<0.050	0.050	10/08/2024	ND	2.07	103	2.00	0.0860	
Ethylbenzene*	<0.050	0.050	10/08/2024	ND	2.09	105	2.00	0.0121	
Total Xylenes*	<0.150	0.150	10/08/2024	ND	6.25	104	6.00	0.119	
Total BTEX	<0.300	0.300	10/08/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	10/07/2024	ND	400	100	400	3.92		

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	10/07/2024	ND	211	106	200	1.34	
DRO >C10-C28*	12.4	10.0	10/07/2024	ND	205	103	200	1.52	
EXT DRO >C28-C36	16.7	10.0	10/07/2024	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.6 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 10/07/2024  
 Reported: 10/11/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 10/07/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: CS 10 0.25 (H246080-10)**

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	10/08/2024	ND	2.15	108	2.00	0.419	
Toluene*	<0.050	0.050	10/08/2024	ND	2.07	103	2.00	0.0860	
Ethylbenzene*	<0.050	0.050	10/08/2024	ND	2.09	105	2.00	0.0121	
Total Xylenes*	<0.150	0.150	10/08/2024	ND	6.25	104	6.00	0.119	
Total BTEX	<0.300	0.300	10/08/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3080	16.0	10/07/2024	ND	400	100	400	3.92		

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	10/07/2024	ND	211	106	200	1.34	
DRO >C10-C28*	47.3	10.0	10/07/2024	ND	205	103	200	1.52	
EXT DRO >C28-C36	34.6	10.0	10/07/2024	ND					

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 10/07/2024  
 Reported: 10/11/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 10/07/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: CS 11 0.25 (H246080-11)**

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	10/08/2024	ND	2.15	108	2.00	0.419	
Toluene*	<0.050	0.050	10/08/2024	ND	2.07	103	2.00	0.0860	
Ethylbenzene*	<0.050	0.050	10/08/2024	ND	2.09	105	2.00	0.0121	
Total Xylenes*	<0.150	0.150	10/08/2024	ND	6.25	104	6.00	0.119	
Total BTEX	<0.300	0.300	10/08/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2000	16.0	10/07/2024	ND	400	100	400	3.92		

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	10/07/2024	ND	211	106	200	1.34	
DRO >C10-C28*	1750	10.0	10/07/2024	ND	205	103	200	1.52	
EXT DRO >C28-C36	919	10.0	10/07/2024	ND					

Surrogate: 1-Chlorooctane 84.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager





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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 10/07/2024  
 Reported: 10/11/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 10/07/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: CS 12 0.25 (H246080-12)**

BTX 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	10/08/2024	ND	2.15	108	2.00	0.419	
Toluene*	<0.050	0.050	10/08/2024	ND	2.07	103	2.00	0.0860	
Ethylbenzene*	<0.050	0.050	10/08/2024	ND	2.09	105	2.00	0.0121	
Total Xylenes*	<0.150	0.150	10/08/2024	ND	6.25	104	6.00	0.119	
Total BTX	<0.300	0.300	10/08/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3200	16.0	10/07/2024	ND	400	100	400	3.92		

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	10/08/2024	ND	211	106	200	1.34	
DRO >C10-C28*	3790	10.0	10/08/2024	ND	205	103	200	1.52	
EXT DRO >C28-C36	1590	10.0	10/08/2024	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 125 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 10/07/2024  
 Reported: 10/11/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 10/07/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: CS 13 0.25 (H246080-13)**

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	10/08/2024	ND	2.15	108	2.00	0.419		
Toluene*	<0.050	0.050	10/08/2024	ND	2.07	103	2.00	0.0860		
Ethylbenzene*	<0.050	0.050	10/08/2024	ND	2.09	105	2.00	0.0121		
Total Xylenes*	<0.150	0.150	10/08/2024	ND	6.25	104	6.00	0.119		
Total BTEx	<0.300	0.300	10/08/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	10/07/2024	ND	400	100	400	3.92		

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	10/08/2024	ND	188	94.0	200	0.679	
DRO >C10-C28*	11.2	10.0	10/08/2024	ND	175	87.5	200	3.74	
EXT DRO >C28-C36	<10.0	10.0	10/08/2024	ND					

Surrogate: 1-Chlorooctane 90.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.0 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 10/07/2024  
 Reported: 10/11/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 10/07/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: CS 14 0.25 (H246080-14)**

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	10/08/2024	ND	2.15	108	2.00	0.419	
Toluene*	<0.050	0.050	10/08/2024	ND	2.07	103	2.00	0.0860	
Ethylbenzene*	<0.050	0.050	10/08/2024	ND	2.09	105	2.00	0.0121	
Total Xylenes*	<0.150	0.150	10/08/2024	ND	6.25	104	6.00	0.119	
Total BTEx	<0.300	0.300	10/08/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6800	16.0	10/08/2024	ND	400	100	400	11.3	QM-07	

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	10/08/2024	ND	188	94.0	200	0.679	
DRO >C10-C28*	<10.0	10.0	10/08/2024	ND	175	87.5	200	3.74	
EXT DRO >C28-C36	<10.0	10.0	10/08/2024	ND					

Surrogate: 1-Chlorooctane 94.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.3 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 10/07/2024  
 Reported: 10/11/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 10/07/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: CS 15 0.25 (H246080-15)**

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	10/08/2024	ND	2.15	108	2.00	0.419	
Toluene*	<0.050	0.050	10/08/2024	ND	2.07	103	2.00	0.0860	
Ethylbenzene*	<0.050	0.050	10/08/2024	ND	2.09	105	2.00	0.0121	
Total Xylenes*	<0.150	0.150	10/08/2024	ND	6.25	104	6.00	0.119	
Total BTEX	<0.300	0.300	10/08/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6960	16.0	10/08/2024	ND	400	100	400	11.3	

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	10/08/2024	ND	188	94.0	200	0.679	
DRO >C10-C28*	153	10.0	10/08/2024	ND	175	87.5	200	3.74	
EXT DRO >C28-C36	70.6	10.0	10/08/2024	ND					

Surrogate: 1-Chlorooctane 90.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.4 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 10/07/2024  
 Reported: 10/11/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 10/07/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: CS 16 0.25 (H246080-16)**

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	10/08/2024	ND	2.15	108	2.00	0.419		
Toluene*	<0.050	0.050	10/08/2024	ND	2.07	103	2.00	0.0860		
Ethylbenzene*	<0.050	0.050	10/08/2024	ND	2.09	105	2.00	0.0121		
Total Xylenes*	<0.150	0.150	10/08/2024	ND	6.25	104	6.00	0.119		
Total BTEX	<0.300	0.300	10/08/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.9 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5200	16.0	10/08/2024	ND	400	100	400	11.3		

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<50.0	50.0	10/09/2024	ND	188	94.0	200	0.679	
DRO >C10-C28*	6080	50.0	10/09/2024	ND	175	87.5	200	3.74	
EXT DRO >C28-C36	2280	50.0	10/09/2024	ND					

Surrogate: 1-Chlorooctane 112 % 48.2-134

Surrogate: 1-Chlorooctadecane 236 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager





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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 10/07/2024  
 Reported: 10/11/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 10/07/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: CS 17 0.25 (H246080-17)**

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	10/08/2024	ND	2.15	108	2.00	0.419	
Toluene*	<0.050	0.050	10/08/2024	ND	2.07	103	2.00	0.0860	
Ethylbenzene*	<0.050	0.050	10/08/2024	ND	2.09	105	2.00	0.0121	
Total Xylenes*	<0.150	0.150	10/08/2024	ND	6.25	104	6.00	0.119	
Total BTEX	<0.300	0.300	10/08/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	10/08/2024	ND	400	100	400	11.3		

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	10/08/2024	ND	188	94.0	200	0.679	
DRO >C10-C28*	<10.0	10.0	10/08/2024	ND	175	87.5	200	3.74	
EXT DRO >C28-C36	<10.0	10.0	10/08/2024	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.9 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 10/07/2024  
 Reported: 10/11/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 10/07/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: CS 18 0.25 (H246080-18)**

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	10/08/2024	ND	2.15	108	2.00	0.419	
Toluene*	<0.050	0.050	10/08/2024	ND	2.07	103	2.00	0.0860	
Ethylbenzene*	<0.050	0.050	10/08/2024	ND	2.09	105	2.00	0.0121	
Total Xylenes*	<0.150	0.150	10/08/2024	ND	6.25	104	6.00	0.119	
Total BTEX	<0.300	0.300	10/08/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	10/08/2024	ND	400	100	400	11.3	

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	10/08/2024	ND	188	94.0	200	0.679	
DRO >C10-C28*	<10.0	10.0	10/08/2024	ND	175	87.5	200	3.74	
EXT DRO >C28-C36	<10.0	10.0	10/08/2024	ND					

Surrogate: 1-Chlorooctane 99.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.9 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 10/07/2024  
 Reported: 10/11/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 10/07/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: CS 19 0.25 (H246080-19)**

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	10/08/2024	ND	2.15	108	2.00	0.419		
Toluene*	<0.050	0.050	10/08/2024	ND	2.07	103	2.00	0.0860		
Ethylbenzene*	<0.050	0.050	10/08/2024	ND	2.09	105	2.00	0.0121		
Total Xylenes*	<0.150	0.150	10/08/2024	ND	6.25	104	6.00	0.119		
Total BTEX	<0.300	0.300	10/08/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	10/08/2024	ND	400	100	400	11.3		

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	10/08/2024	ND	188	94.0	200	0.679	
DRO >C10-C28*	<10.0	10.0	10/08/2024	ND	175	87.5	200	3.74	
EXT DRO >C28-C36	<10.0	10.0	10/08/2024	ND					

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.4 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 10/07/2024  
 Reported: 10/11/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 10/07/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: CS 20 0.25 (H246080-20)**

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	10/08/2024	ND	2.15	108	2.00	0.419	
Toluene*	<0.050	0.050	10/08/2024	ND	2.07	103	2.00	0.0860	
Ethylbenzene*	<0.050	0.050	10/08/2024	ND	2.09	105	2.00	0.0121	
Total Xylenes*	<0.150	0.150	10/08/2024	ND	6.25	104	6.00	0.119	
Total BTEX	<0.300	0.300	10/08/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	624	16.0	10/08/2024	ND	400	100	400	11.3	

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	10/08/2024	ND	188	94.0	200	0.679	
DRO >C10-C28*	457	10.0	10/08/2024	ND	175	87.5	200	3.74	
EXT DRO >C28-C36	174	10.0	10/08/2024	ND					

Surrogate: 1-Chlorooctane 98.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.8 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

### Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
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

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 whatsoever 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.

A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager





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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

<b>Company Name:</b> Ensolum, LLC		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>																											
<b>Project Manager:</b> Samantha Mackenzie		<b>P.O. #:</b>																													
<b>Address:</b> 601 N. Mainfield St. STE 400		<b>Company:</b> Oxy USA, Inc.																													
<b>City:</b> Midland		<b>Attn:</b> Wade Dittich																													
<b>Phone #:</b> 703-357-3545		<b>Address:</b>																													
<b>State:</b> TX		<b>City:</b>																													
<b>Zip:</b> 79701		<b>State:</b>																													
<b>Project #:</b> 0381417197		<b>Project Owner:</b>																													
<b>Project Name:</b> Sand Paves Feal 28 #1 SWP		<b>City:</b>																													
<b>Project Location:</b>		<b>State:</b>																													
<b>Phone #:</b>		<b>Zip:</b>																													
<b>Sample Name:</b> Kaoru Shimada		<b>Phone #:</b> 575-390-2828																													
<b>Fax #:</b>		<b>Fax #:</b>																													
<b>FOR LAB USE ONLY</b>		<b>PRESERV.</b>		<b>SAMPLING</b>																											
<b>Lab I.D.</b>		<b>MATRIX</b>		<b>DATE</b>		<b>TIME</b>																									
<b>Sample I.D.</b>		<b>(G)RAB OR (C)OMP.</b>		<b>BTX 8021B</b>		<b>TPH 8015M</b>		<b>Chloride 4500CI</b>		<b>Hold</b>																					
<b>Sample Depth (feet)</b>		<b># CONTAINERS</b>		<b>GROUNDWATER</b>		<b>WASTEWATER</b>		<b>SOIL</b>		<b>OIL</b>		<b>SLUDGE</b>		<b>OTHER :</b>		<b>ACID/BASE:</b>		<b>ICE / COOL</b>		<b>OTHER :</b>											
<b>13C01</b>		<b>0.25</b>		<b>1</b>		<b>X</b>		<b>10-7-21</b>		<b>1012</b>		<b>X</b>		<b>X</b>		<b>X</b>		<b>X</b>		<b>X</b>											
<b>13C02</b>		<b>0.25</b>		<b>1</b>		<b>X</b>		<b>10-7-21</b>		<b>1014</b>		<b>X</b>		<b>X</b>		<b>X</b>		<b>X</b>		<b>X</b>											
<b>13C03</b>		<b>0.25</b>		<b>1</b>		<b>X</b>		<b>10-7-21</b>		<b>1018</b>		<b>X</b>		<b>X</b>		<b>X</b>		<b>X</b>		<b>X</b>											
<b>13C04</b>		<b>0.25</b>		<b>1</b>		<b>X</b>		<b>10-7-21</b>		<b>1018</b>		<b>X</b>		<b>X</b>		<b>X</b>		<b>X</b>		<b>X</b>											
<b>13C05</b>		<b>0.25</b>		<b>1</b>		<b>X</b>		<b>10-7-21</b>		<b>1018</b>		<b>X</b>		<b>X</b>		<b>X</b>		<b>X</b>		<b>X</b>											
<b>13C06</b>		<b>0.25</b>		<b>1</b>		<b>X</b>		<b>10-7-21</b>		<b>1018</b>		<b>X</b>		<b>X</b>		<b>X</b>		<b>X</b>		<b>X</b>											
<b>13C07</b>		<b>0.25</b>		<b>1</b>		<b>X</b>		<b>10-7-21</b>		<b>1018</b>		<b>X</b>		<b>X</b>		<b>X</b>		<b>X</b>		<b>X</b>											
<b>13C08</b>		<b>0.25</b>		<b>1</b>		<b>X</b>		<b>10-7-21</b>		<b>1018</b>		<b>X</b>		<b>X</b>		<b>X</b>		<b>X</b>		<b>X</b>											
<b>13C09</b>		<b>0.25</b>		<b>1</b>		<b>X</b>		<b>10-7-21</b>		<b>1018</b>		<b>X</b>		<b>X</b>		<b>X</b>		<b>X</b>		<b>X</b>											
<b>13C10</b>		<b>0.25</b>		<b>1</b>		<b>X</b>		<b>10-7-21</b>		<b>1018</b>		<b>X</b>		<b>X</b>		<b>X</b>		<b>X</b>		<b>X</b>											
<b>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 analysis. 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 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 services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.</b>		<b>Relinquished By:</b>		<b>Date:</b> 10-7-21		<b>Received By:</b>		<b>Verbal Result:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Add'l Phone #:		<b>All Results are emailed. Please provide Email address:</b>		<b>REMARKS:</b>																			
<b>Relinquished By:</b> K. Shimada		<b>Date:</b> 10-7-21		<b>Received By:</b> [Signature]		<b>Verbal Result:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Add'l Phone #:		<b>All Results are emailed. Please provide Email address:</b>		<b>REMARKS:</b>																					
<b>Delivered By: (Circle One)</b>		<b>Observed Temp. °C</b>		<b>Sample Condition</b>		<b>CHECKED BY:</b>		<b>Turnaround Time:</b>		<b>Standard</b>		<b>Bacteria (only)</b>		<b>Sample Condition</b>																	
<b>Sampler - UPS - Bus - Other:</b>		<b>Corrected Temp. °C</b>		<b>Cool Intact</b>		<b>(Initials)</b>		<b>Rush</b>		<b>Thermometer ID #113</b>		<b>Cool Intact</b>		<b>Observed Temp. °C</b>																	
		<b>38.2</b>		<b>Yes</b>		<b>[Signature]</b>		<b>140</b>		<b>55°C-0.66</b>		<b>Yes</b>		<b>Corrected Temp. °C</b>																	
				<b>No</b>								<b>No</b>																			



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

<b>Company Name:</b> Ensolum, LLC		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>													
<b>Project Manager:</b> Samantha Mackenzie		<b>P.O. #:</b>															
<b>Address:</b> 601 N. Marientfeld St. STE 400		<b>Company:</b> Oxy USA, Inc.															
<b>City:</b> Midland		<b>Attn:</b> Wade Dittich															
<b>Phone #:</b> 703-357-3545		<b>Address:</b>															
<b>Project #:</b> 03B1417197		<b>City:</b>															
<b>Project Name:</b> Sand Dunes Fecl 28 #1 SWD		<b>State:</b>															
<b>Project Location:</b>		<b>Zip:</b>															
<b>Sampler Name:</b> Kaoru Shinada		<b>Phone #:</b> 575-390-2828															
<b>FOR LAB USE ONLY</b>		<b>Fax #:</b>															
<b>Lab I.D.</b>	<b>Sample I.D.</b>	<b>Sample Depth (feet)</b>	<b>(G)RAB OR (C)OMP.</b>	<b># CONTAINERS</b>	<b>MATRIX</b>	<b>PRESERV.</b>	<b>SAMPLING</b>	<b>DATE</b>	<b>TIME</b>	<b>BTEX 8021B</b>	<b>TPH 8015M</b>	<b>Chloride 4500Cl</b>	<b>Hold</b>				
11	CS11	0.25	C	1	GROUNDWATER			10-7-24	1036	X	X						
12	CS12	7			WASTEWATER			10-7-24	1035								
13	CS13	7			SOIL			10-7-24	1034								
14	CS14	7			OIL			10-7-24	1032								
15	CS15	7			SLUDGE			10-7-24	1031								
16	CS16	7			OTHER :			10-7-24	1030								
17	CS17	7			ACID/BASE:			10-7-24	1027								
18	CS18	7			ICE / COOL			10-7-24	1026								
19	CS19	7			OTHER :			10-7-24	1024								
20	CS20	0.25	C	1				10-7-24	1023	X	X						

PLEASE NOTE: Liability and Damages. Cardinal's liability and clients exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. 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 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 services rendered by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

<b>Relinquished By:</b> K. Shinada	<b>Date:</b> 10-7-24	<b>Received By:</b> A. Davis	<b>Date:</b> 10-7-24
<b>Relinquished By:</b>	<b>Date:</b>	<b>Received By:</b>	<b>Date:</b>

<b>Delivered By: (Circle One)</b>	<b>Observed Temp. °C</b>	<b>Corrected Temp. °C</b>	<b>Sample Condition</b>	<b>CHECKED BY:</b>	<b>Turnaround Time:</b>	<b>Standard</b>	<b>Bacteria (only)</b>	<b>Sample Condition</b>
Sampler - UPS - Bus - Other:	44.2	38.2	Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(Initials) AD	As #140	<input checked="" type="checkbox"/> Rush	Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	Observed Temp. °C

REMARKS:

Verbal Result: ☐ Yes ☒ No Add'l Phone #:

All Results are emailed. Please provide Email address: smackenzie@ensolum.com

Thermometer ID #413 #140 Correction Factor .05°C -0.04°C

FORM-006 R 3.2 10/07/21

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



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

November 12, 2024

SAMANTHA MACKENZIE

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: SAND DUNES FED 28 #1 SWD

Enclosed are the results of analyses for samples received by the laboratory on 11/06/24 15:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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 [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited 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.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager





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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 11/06/2024  
 Reported: 11/12/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 11/05/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 03 0.5' (H246776-01)**

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	11/09/2024	ND	1.67	83.7	2.00	21.5	
Toluene*	<0.050	0.050	11/09/2024	ND	1.75	87.3	2.00	17.0	
Ethylbenzene*	<0.050	0.050	11/09/2024	ND	1.89	94.6	2.00	13.4	
Total Xylenes*	<0.150	0.150	11/09/2024	ND	5.69	94.9	6.00	13.4	
Total BTEX	<0.300	0.300	11/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500Cl-B		mg/kg	Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	928	16.0	11/08/2024	ND	432	108	400	0.00	

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	11/07/2024	ND	201	100	200	0.524	
DRO >C10-C28*	764	10.0	11/07/2024	ND	188	93.8	200	0.0245	
EXT DRO >C28-C36	277	10.0	11/07/2024	ND					

Surrogate: 1-Chlorooctane 113 % 48.2-134

Surrogate: 1-Chlorooctadecane 126 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 11/06/2024  
 Reported: 11/12/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 11/05/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 04 0.5' (H246776-02)**

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	11/08/2024	ND	2.29	115	2.00	6.50		
Toluene*	<0.050	0.050	11/08/2024	ND	2.21	110	2.00	5.57		
Ethylbenzene*	<0.050	0.050	11/08/2024	ND	2.29	115	2.00	5.71		
Total Xylenes*	<0.150	0.150	11/08/2024	ND	6.78	113	6.00	5.76		
Total BTEX	<0.300	0.300	11/08/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	528	16.0	11/08/2024	ND	432	108	400	0.00	

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	11/07/2024	ND	201	100	200	0.524	
DRO >C10-C28*	273	10.0	11/07/2024	ND	188	93.8	200	0.0245	
EXT DRO >C28-C36	104	10.0	11/07/2024	ND					

Surrogate: 1-Chlorooctane 118 % 48.2-134

Surrogate: 1-Chlorooctadecane 133 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager





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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 11/06/2024  
 Reported: 11/12/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 11/05/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 05 0.5' (H246776-03)**

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	11/08/2024	ND	2.29	115	2.00	6.50	
Toluene*	<0.050	0.050	11/08/2024	ND	2.21	110	2.00	5.57	
Ethylbenzene*	<0.050	0.050	11/08/2024	ND	2.29	115	2.00	5.71	
Total Xylenes*	<0.150	0.150	11/08/2024	ND	6.78	113	6.00	5.76	
Total BTEX	<0.300	0.300	11/08/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1410	16.0	11/08/2024	ND	384	96.0	400	4.08	

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	11/07/2024	ND	201	100	200	0.524	
DRO >C10-C28*	62.2	10.0	11/07/2024	ND	188	93.8	200	0.0245	
EXT DRO >C28-C36	21.5	10.0	11/07/2024	ND					

Surrogate: 1-Chlorooctane 123 % 48.2-134

Surrogate: 1-Chlorooctadecane 132 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 11/06/2024  
 Reported: 11/12/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 11/05/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 06 0.5' (H246776-04)**

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	11/08/2024	ND	2.29	115	2.00	6.50	
Toluene*	<0.050	0.050	11/08/2024	ND	2.21	110	2.00	5.57	
Ethylbenzene*	<0.050	0.050	11/08/2024	ND	2.29	115	2.00	5.71	
Total Xylenes*	<0.150	0.150	11/08/2024	ND	6.78	113	6.00	5.76	
Total BTEX	<0.300	0.300	11/08/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	11/08/2024	ND	384	96.0	400	4.08		

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	11/07/2024	ND	201	100	200	0.524	
DRO >C10-C28*	24.3	10.0	11/07/2024	ND	188	93.8	200	0.0245	
EXT DRO >C28-C36	<10.0	10.0	11/07/2024	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 11/06/2024  
 Reported: 11/12/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 11/05/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 07 1' (H246776-05)**

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	11/08/2024	ND	2.29	115	2.00	6.50		
Toluene*	<0.050	0.050	11/08/2024	ND	2.21	110	2.00	5.57		
Ethylbenzene*	<0.050	0.050	11/08/2024	ND	2.29	115	2.00	5.71		
Total Xylenes*	<0.150	0.150	11/08/2024	ND	6.78	113	6.00	5.76		
Total BTEX	<0.300	0.300	11/08/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	11/08/2024	ND	384	96.0	400	4.08		

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	11/07/2024	ND	201	100	200	0.524	
DRO >C10-C28*	17.9	10.0	11/07/2024	ND	188	93.8	200	0.0245	
EXT DRO >C28-C36	<10.0	10.0	11/07/2024	ND					

Surrogate: 1-Chlorooctane 118 % 48.2-134

Surrogate: 1-Chlorooctadecane 124 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 11/06/2024  
 Reported: 11/12/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 11/05/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW 03 0-0.5' (H246776-06)**

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	11/08/2024	ND	2.29	115	2.00	6.50		
Toluene*	<0.050	0.050	11/08/2024	ND	2.21	110	2.00	5.57		
Ethylbenzene*	<0.050	0.050	11/08/2024	ND	2.29	115	2.00	5.71		
Total Xylenes*	<0.150	0.150	11/08/2024	ND	6.78	113	6.00	5.76		
Total BTEx	<0.300	0.300	11/08/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	11/08/2024	ND	384	96.0	400	4.08		

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	11/07/2024	ND	201	100	200	0.524	
DRO >C10-C28*	<10.0	10.0	11/07/2024	ND	188	93.8	200	0.0245	
EXT DRO >C28-C36	<10.0	10.0	11/07/2024	ND					

Surrogate: 1-Chlorooctane 125 % 48.2-134

Surrogate: 1-Chlorooctadecane 133 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 11/06/2024  
 Reported: 11/12/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 11/05/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW 04 0-0.5' (H246776-07)**

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	11/08/2024	ND	2.29	115	2.00	6.50		
Toluene*	<0.050	0.050	11/08/2024	ND	2.21	110	2.00	5.57		
Ethylbenzene*	<0.050	0.050	11/08/2024	ND	2.29	115	2.00	5.71		
Total Xylenes*	<0.150	0.150	11/08/2024	ND	6.78	113	6.00	5.76		
Total BTEX	<0.300	0.300	11/08/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500Cl-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	11/08/2024	ND	384	96.0	400	4.08		

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	11/07/2024	ND	201	100	200	0.524	
DRO >C10-C28*	<10.0	10.0	11/07/2024	ND	188	93.8	200	0.0245	
EXT DRO >C28-C36	<10.0	10.0	11/07/2024	ND					

Surrogate: 1-Chlorooctane 119 % 48.2-134

Surrogate: 1-Chlorooctadecane 127 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager





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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 11/06/2024  
 Reported: 11/12/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 11/05/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW 05 0-0.5' (H246776-08)**

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	11/08/2024	ND	2.29	115	2.00	6.50		
Toluene*	<0.050	0.050	11/08/2024	ND	2.21	110	2.00	5.57		
Ethylbenzene*	<0.050	0.050	11/08/2024	ND	2.29	115	2.00	5.71		
Total Xylenes*	<0.150	0.150	11/08/2024	ND	6.78	113	6.00	5.76		
Total BTEX	<0.300	0.300	11/08/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	11/08/2024	ND	384	96.0	400	4.08		

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	11/07/2024	ND	201	100	200	0.524	
DRO >C10-C28*	<10.0	10.0	11/07/2024	ND	188	93.8	200	0.0245	
EXT DRO >C28-C36	<10.0	10.0	11/07/2024	ND					

Surrogate: 1-Chlorooctane 122 % 48.2-134

Surrogate: 1-Chlorooctadecane 130 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 11/06/2024  
 Reported: 11/12/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 11/05/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW 06 0-1' (H246776-09)**

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	11/08/2024	ND	2.29	115	2.00	6.50		
Toluene*	<0.050	0.050	11/08/2024	ND	2.21	110	2.00	5.57		
Ethylbenzene*	<0.050	0.050	11/08/2024	ND	2.29	115	2.00	5.71		
Total Xylenes*	<0.150	0.150	11/08/2024	ND	6.78	113	6.00	5.76		
Total BTEX	<0.300	0.300	11/08/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	11/08/2024	ND	384	96.0	400	4.08		

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	11/07/2024	ND	201	100	200	0.524	
DRO >C10-C28*	<10.0	10.0	11/07/2024	ND	188	93.8	200	0.0245	
EXT DRO >C28-C36	<10.0	10.0	11/07/2024	ND					

Surrogate: 1-Chlorooctane 115 % 48.2-134

Surrogate: 1-Chlorooctadecane 120 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 11/06/2024  
 Reported: 11/12/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 11/05/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: DS 01 0.25' (H246776-10)**

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	11/08/2024	ND	2.29	115	2.00	6.50		
Toluene*	<0.050	0.050	11/08/2024	ND	2.21	110	2.00	5.57		
Ethylbenzene*	<0.050	0.050	11/08/2024	ND	2.29	115	2.00	5.71		
Total Xylenes*	<0.150	0.150	11/08/2024	ND	6.78	113	6.00	5.76		
Total BTEX	<0.300	0.300	11/08/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

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	11/08/2024	ND	384	96.0	400	4.08		

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	11/07/2024	ND	201	100	200	0.524	
DRO >C10-C28*	<10.0	10.0	11/07/2024	ND	188	93.8	200	0.0245	
EXT DRO >C28-C36	<10.0	10.0	11/07/2024	ND					

Surrogate: 1-Chlorooctane 119 % 48.2-134

Surrogate: 1-Chlorooctadecane 127 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 SAMANTHA MACKENZIE  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 11/06/2024  
 Reported: 11/12/2024  
 Project Name: SAND DUNES FED 28 #1 SWD  
 Project Number: 03B1417197  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 11/05/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: DS 02 0.25' (H246776-11)**

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	11/08/2024	ND	2.29	115	2.00	6.50	
Toluene*	<0.050	0.050	11/08/2024	ND	2.21	110	2.00	5.57	
Ethylbenzene*	<0.050	0.050	11/08/2024	ND	2.29	115	2.00	5.71	
Total Xylenes*	<0.150	0.150	11/08/2024	ND	6.78	113	6.00	5.76	
Total BTEX	<0.300	0.300	11/08/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500Cl-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	11/08/2024	ND	384	96.0	400	4.08	

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	11/08/2024	ND	217	109	200	4.43	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	187	93.7	200	5.05	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager



---

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

---

### Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-04	The RPD for the BS/BSD was outside of historical limits.
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

---

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 whatsoever 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.

A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC										<b>BILL TO</b>										<b>ANALYSIS REQUEST</b>									
Project Manager: Samantha M. Allen										P.O. #:																			
Address: 601 N Marienfeld Street, Suite 400										ATTN: Wade P. Harkins																			
City: Midland										State: TX										Zip: 79701									
Phone #: 763-357-3545										Fax #:																			
Project #: 038147197										Project Owner:																			
Project Name: Social Pumps Fed 28 at 5WJ										City:																			
Project Location: Eddy County, NM										State:										Zip:									
Sample Name: Nech Paker										Phone #																			
FOR LAB USE ONLY										Fax #:																			
Lab I.D.										Sample I.D.										Depth (feet)									
										(G)RAB OR (C)OMP.										# CONTAINERS									
										GROUNDWATER										WASTEWATER									
										SOIL										OIL									
										SLUDGE										OTHER :									
										ACID/BASE:										ICE / COOL									
										OTHER :										DATE									
										TIME																			
H340-714										F03										0.5'									
										F04										0.5'									
										F05										0.5'									
										F06										0.5'									
										F07										1'									
										F03										0-0.5'									
										F04										0-0.5'									
										F05										0-0.5'									
										F06										0-1'									
										F07										0-2.5'									
										F03										0.5'									
										F04										0.5'									
										F05										0.5'									
										F06										0.5'									
										F07										1'									
										F03										0-0.5'									
										F04										0-0.5'									
										F05										0-0.5'									
										F06										0-1'									
										F07										0-2.5'									
										F03										0.5'									
										F04										0.5'									
										F05										0.5'									
										F06										0.5'									
										F07										1'									
										F03										0-0.5'									
										F04										0-0.5'									
										F05										0-0.5'									
										F06										0-1'									
										F07										0-2.5'									
										F03										0.5'									
										F04										0.5'									
										F05										0.5'									
										F06										0.5'									
										F07										1'									
										F03										0-0.5'									
										F04										0-0.5'									
										F05										0-0.5'									
										F06										0-1'									
										F07										0-2.5'									
										F03										0.5'									
										F04										0.5'									
										F05										0.5'									
										F06										0.5'									
										F07										1'									
										F03										0-0.5'									
										F04										0-0.5'									
										F05										0-0.5'									
										F06										0-1'									
										F07										0-2.5'									
										F03										0.5'									
										F04										0.5'									
										F05										0.5'									
										F06										0.5'									
										F07										1'									
										F03										0-0.5'									
										F04										0-0.5'									
										F05										0-0.5'									
										F06										0-1'									
										F07										0-2.5'									
										F03										0.5'									
										F04										0.5'									
										F05										0.5'									
										F06										0.5'									
										F07										1'									
										F03										0-0.5'									
										F04										0-0.5'									
										F05										0-0.5'									
										F06										0-1'									
										F07										0-2.5'									
										F03										0.5'									
										F04										0.5'									
										F05										0.5'									
										F06										0.5'									
										F07										1'									
										F03										0-0.5'									
										F04										0-0.5'									
										F05										0-0.5'									
										F06										0-1'									
										F07										0-2.5'									
										F03										0.5'									
										F04										0.5'									
										F05										0.5'									
										F06										0.5'									
										F07										1'									
										F03										0-0.5'									
										F04										0-0.5'									
										F05										0-0.5'									
										F06										0-1'									
										F07										0-2.5'									
										F03										0.5'									
										F																			





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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC		<b>BILL TO</b>		ANALYSIS REQUEST					
Project Manager: <i>Shirley MacKenzie</i>		P.O. #:							
Address: 601 N Marientfield Street, Suite 400		City: <i>Albuquerque, NM</i>							
City: Midland		State: TX		Zip: 79701					
Phone #: 703-357-3845		Fax #:							
Project #: 038417197		Project Owner:							
Project Name: <i>Good River Feeder 28 #1 SWD</i>		City:							
Project Location: <i>Elbow County, NM</i>		State:		Zip:					
Sampler Name: <i>North Puffer</i>		Phone #							
FOR LAB USE ONLY		Fax #:							
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV.	SAMPLING		
<i>H240779</i>	<i>D902</i>	<i>0.25</i>	<input checked="" type="checkbox"/>	<i>1</i>	GROUNDWATER WASTEWATER <input checked="" type="checkbox"/> SOIL OIL SLUDGE OTHER:	<input checked="" type="checkbox"/>	DATE <i>11/5/24</i>	TIME <i>0830</i>	<i>BTEX 8021</i> <i>TPH 8015</i> <i>(4 cables 4500)</i>
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 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 services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.									
Relinquished By: <i>Melvin Davis</i>		Date: <i>11-6-24</i>		Received By: <i>Shirley MacKenzie</i>		Verbal Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Phone #:	
Relinquished By: <i>Melvin Davis</i>		Time: <i>1535</i>		Received By: <i>Shirley MacKenzie</i>		All Results are emailed. Please provide Email address: <i>shirley@cardinalnm.com</i>			
Date: <i>11-6-24</i>		Time: <i>1535</i>		Received By: <i>Shirley MacKenzie</i>		REMARKS:			
Delivered By: (Circle One)		Observed Temp. °C: <i>4.1</i>		Sample Condition: <input checked="" type="checkbox"/> Cool <input type="checkbox"/> Intact		CHECKED BY: <i>SD</i>		Turnaround Time: <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush	
Sampler - UPS - Bus - Other:		Corrected Temp. °C: <i>3.5</i>		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				Bacteria (only) <input type="checkbox"/> Cool <input type="checkbox"/> Intact	
				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				Sample Condition: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
								Observed Temp. °C	
								Corrected Temp. °C	

† Cardinal cannot accept verbal changes. Please email changes to [celey.keene@cardinallabsnm.com](mailto:celey.keene@cardinallabsnm.com)



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

---

September 19, 2024

BEAUX JENNINGS  
ENSOLUM, LLC  
705 W WADLEY AVE.  
MIDLAND, TX 79705

RE: LEA LAND CALICHE PIT

Enclosed are the results of analyses for samples received by the laboratory on 09/16/24 14:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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 [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited 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.

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,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene  
Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 BEAUX JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 09/16/2024  
 Reported: 09/19/2024  
 Project Name: LEA LAND CALICHE PIT  
 Project Number: 03B1417160  
 Project Location: OXY

Sampling Date: 09/13/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: LEA LAND CALICHE PIT 0.5' (H245619-01)**

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	09/17/2024	ND	2.04	102	2.00	2.40	
Toluene*	<0.050	0.050	09/17/2024	ND	1.91	95.7	2.00	2.59	
Ethylbenzene*	<0.050	0.050	09/17/2024	ND	1.93	96.4	2.00	2.47	
Total Xylenes*	<0.150	0.150	09/17/2024	ND	5.72	95.4	6.00	2.68	
Total BTEX	<0.300	0.300	09/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.3 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	560	16.0	09/17/2024	ND	416	104	400	0.00		

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	09/17/2024	ND	204	102	200	0.238	
DRO >C10-C28*	98.6	10.0	09/17/2024	ND	202	101	200	5.70	
EXT DRO >C28-C36	<10.0	10.0	09/17/2024	ND					

Surrogate: 1-Chlorooctane 70.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.3 % 49.1-148

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 whatsoever 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, Lab Director/Quality Manager

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

---

### 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

---

Cardinal Laboratories

\*=Accredited Analyte

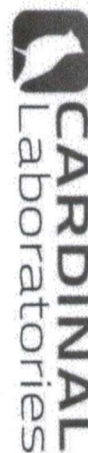
PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived 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.

A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager





### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

[illegible]

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

General Information  
Phone: (505) 629-6116

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

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

QUESTIONS

Action 421822

**QUESTIONS**

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 421822
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

<b>Prerequisites</b>	
Incident ID (n#)	nAPP2220160296
Incident Name	NAPP2220160296 SAND DUNES 28 FED 1 SWD @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Received
Incident Facility	[fAPP2126655376] SAND DUNES FED 28 #1 SWD

**Location of Release Source**

Please answer all the questions in this group.

Site Name	SAND DUNES 28 FED 1 SWD
Date Release Discovered	07/19/2022
Surface Owner	Federal

**Incident Details**

Please answer all the questions in this group.

Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

**Nature and Volume of Release**

Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.

Crude Oil Released (bbls) Details	Cause: Equipment Failure   Pump   Crude Oil   Released: 10 BBL   Recovered: 10 BBL   Lost: 0 BBL.
Produced Water Released (bbls) Details	Cause: Equipment Failure   Pump   Produced Water   Released: 30 BBL   Recovered: 30 BBL   Lost: 0 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.



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

General Information  
Phone: (505) 629-6116

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

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

QUESTIONS, Page 2

Action 421822

**QUESTIONS (continued)**

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 421822
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

<b>Nature and Volume of Release (continued)</b>	
Is this a gas only submission (i.e. only significant Mcf values reported)	<b>No, according to supplied volumes this does not appear to be a "gas only" report.</b>
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	<b>Yes</b>
Reasons why this would be considered a submission for a notification of a major release	<b>From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.</b>
<i>With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.</i>	

**Initial Response**

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.*

The source of the release has been stopped	<b>True</b>
The impacted area has been secured to protect human health and the environment	<b>True</b>
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	<b>True</b>
All free liquids and recoverable materials have been removed and managed appropriately	<b>True</b>
If all the actions described above have not been undertaken, explain why	<b>Not answered.</b>

*Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.*

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.

I hereby agree and sign off to the above statement	Name: Wade Dittrich Title: Environmental Coordinator Email: wade_dittrich@oxy.com Date: 01/16/2025
--	---

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

General Information  
Phone: (505) 629-6116

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

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

QUESTIONS, Page 3

Action 421822

**QUESTIONS (continued)**

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 421822
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

<b>Site Characterization</b>	
<i>Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
<b>What is the minimum distance, between the closest lateral extents of the release and the following surface areas:</b>	
A continuously flowing watercourse or any other significant watercourse	Between 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Greater than 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between 1 and 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Between 1 and 5 (mi.)
An (non-karst) unstable area	Between 1 and 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

<b>Remediation Plan</b>	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
<b>Soil Contamination Sampling:</b> (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	8320
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	8360
GRO+DRO (EPA SW-846 Method 8015M)	6080
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
On what estimated date will the remediation commence	06/24/2024
On what date will (or did) the final sampling or liner inspection occur	11/05/2024
On what date will (or was) the remediation complete(d)	11/05/2024
What is the estimated surface area (in square feet) that will be reclaimed	9146
What is the estimated volume (in cubic yards) that will be reclaimed	6
What is the estimated surface area (in square feet) that will be remediated	9146
What is the estimated volume (in cubic yards) that will be remediated	6
<i>These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.</i>	
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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

General Information  
Phone: (505) 629-6116

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

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

QUESTIONS, Page 4

Action 421822

**QUESTIONS (continued)**

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 421822
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

<b>Remediation Plan (continued)</b>	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
<b>This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:</b>	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and <b>off-site</b> disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for <b>off-site</b> disposal	LEA LAND LANDFILL [fEEM0112342028]
<b>OR</b> which OCD approved well (API) will be used for <b>off-site</b> disposal	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, out-of-state	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and <b>on-site</b> remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Not answered.
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
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.	
I hereby agree and sign off to the above statement	Name: Wade Dittrich Title: Environmental Coordinator Email: wade_dittrich@oxy.com Date: 01/16/2025
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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

General Information  
Phone: (505) 629-6116

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

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

QUESTIONS, Page 5

Action 421822

QUESTIONS (continued)

Operator:  OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID:  16696
	Action Number:  421822
	Action Type:  [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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

General Information  
Phone: (505) 629-6116

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

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

QUESTIONS, Page 6

Action 421822

QUESTIONS (continued)

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 421822
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	397613
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	11/05/2024
What was the (estimated) number of samples that were to be gathered	6
What was the sampling surface area in square feet	9145

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	No

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

General Information  
Phone: (505) 629-6116

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

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

CONDITIONS

Action 421822

CONDITIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 421822
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

CONDITIONS

Created By	Condition	Condition Date
crystal.walker	Remediation Plan and variance request approved.	1/23/2025