



January 15, 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: Closure Request  
Sand Dunes South Corridor CTB  
Incident Number nAPP2225058146  
Eddy County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of Oxy USA Inc. (Oxy), has prepared this *Closure Request* to document assessment, delineation, excavation, and soil sampling activities performed at the Sand Dunes South Corridor CTB (Site). The purpose of the Site assessment, delineation, excavation, and soil sampling activities was to assess for the presence or absence of impacts to soil resulting from a produced water release at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, Oxy is submitting this *Closure Request*, describing Site assessment delineation, and excavation activities that have occurred and requesting closure for Incident Number nAPP2225058146.

**SITE DESCRIPTION AND RELEASE SUMMARY**

The Site is located in Unit B, Section 18, Township 24 South, Range 31 East, in Eddy County, New Mexico (32.22338°, -103.813103°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On August 15, 2022, a water inlet line failed due to corrosion, resulting in the release of approximately 30 barrels (bbls) of produced water on pad. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 10 bbls of produced water 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 September 22, 2022. The release was assigned Incident Number nAPP2225058146.

**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. The Site Closure Criteria is identified on Figure 4.

Depth to groundwater at the Site is reasonably estimated to be between 51 feet to 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 321310103482101, located approximately 0.4 miles southeast of the Site. The depth to water was most recently measured on

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January 17, 2013 and indicated to be 74.44 feet bgs. The associated well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a pond, located approximately 2,232 feet southeast 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
- TPH: 2,500 mg/kg
- Chloride: 10,000 mg/kg

## DELINEATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On June 25, 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. Five potholes (PH01 through PH05) were advanced via hydrovac within the release extent to assess the presence or absence of impacted soil. The delineation potholes were advanced to depths ranging from 3 feet to 4 feet bgs. Discrete delineation soil samples were collected from potholes PH01 through PH05 at depths ranging from 0.5 feet to 4 feet bgs. Additionally, seven soil samples (SS01 through SS07) were collected around the release area, at a depth of approximately 0.5 feet bgs to confirm the lateral extent of the release. The Delineation soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Field screening results and observations for the potholes were logged on lithologic soil sampling logs, which are included in 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-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method SM4500.

Laboratory analytical results for potholes PH01 through PH05 indicated all COCs were compliant with the Site Closure Criteria and the Site was vertically delineated to the most stringent Table I Closure Criteria. Laboratory analytical results for soil samples SS01 through SS07 indicated all COCs were compliant with the most stringent Table I Closure Criteria and successfully defined the lateral extent of the release.

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## COMPOSITE SAMPLING, EXCAVATION ACTIVITIES, AND LABORATORY ANALYTICAL RESULTS

Between August 20, 2024 and November 4, 2024, Ensolum personnel returned to the Site to collect 5-point composite soil samples every 200 square feet from the release extent. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Eighteen composite soil samples (CS01 through CS18) were collected at a depth of 0.5 feet bgs to confirm the absence of impacted soil. The soil samples were handled and analyzed following the same procedures as described above.

Laboratory analytical results for composite soil samples CS01, CS02, CS04, CS06 through CS09, CS11 through CS13, CS15, and CS16 indicated all COCs were compliant with the Site Closure Criteria. Laboratory analytical results for composite soil samples CS03, CS05, CS10, CS14, CS17, and CS18 indicated TPH and/or chloride concentrations exceeded the Site Closure Criteria. Soil in the vicinity was excavated via hydrovac to a depth of 1-foot bgs. Subsequent composite floor samples FS03 through FS05, FS10, FS14, FS17, and FS18 were collected from the floor of the excavations at a depth of 1-foot bgs. Four sidewall soil samples (SW01 through SW04) were collected from the sidewalls of the excavations at depths ranging from the ground surface to 1-foot bgs. The soil samples were handled and analyzed following the same procedures described above. 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 visits and a photographic log is included as Appendix C.

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 floor soil samples FS03, FS04, and FS05 were transported under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the following chemical of concern (COC): chloride following EPA Method SM4500. The floor soil samples FS14, FS17, and FS18 were analyzed for the following COCs: TPH-GRO, TPH-DRO, and TPH-ORO following EPA Method 8015M/D; and chloride following EPA Method SM4500. The sidewall samples SW01 through SW04 were analyzed for the following COCs: BTEX following United States EPA Method 8021B; TPH-GRO, TPH-DRO, TPH-ORO following EPA Method 8015M/D; and chloride following EPA Method SM4500.

Laboratory analytical results for soil samples FS03 through FS05, FS10, FS14, FS17, and FS18 indicated all COCs were compliant with the Site Closure Criteria. Laboratory analytical results for sidewall soil samples SW01 through SW04 indicated all COC concentrations were compliant with the most stringent Closure Criteria.

The Excavation areas measured approximately 3,246 square feet. A total of 74 cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported and properly disposed of at the Ramirez and Sons Facility in Lea County, New Mexico.

Subsequent to the results of the final confirmation soil sampling, the excavated areas were backfilled with clean fill material and contoured to the original surrounding grade. One representative 5-point composite soil sample (Ramirez & Sons Caliche Pit) was collected from the backfill material prior to use at the Site. Laboratory analytical results for the backfill soil sample confirmed compliance with the NMOCD requirements for the reclaimed area to be non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg and TPH concentrations less than 100 mg/kg. The laboratory analytical results are summarized in the attached Table 2 and the complete laboratory analytical report is included as Appendix D. Since the release area was on an active pad site, final reclamation or revegetation was not required at this time.

## CLOSURE REQUEST

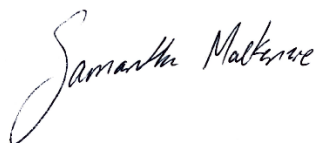
Oxy USA Inc.  
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Sand Dunes South Corridor CTB

Site assessment and remediation activities were conducted at the Site to address the August 2022 produced water release. Laboratory analytical results for the assessment and excavation activities indicated all COC concentrations were compliant with the Site Closure Criteria. Based on the laboratory analytical results, no further remediation is required at this time.

Depth to groundwater was determined to be between 51 feet to 100 feet bgs within 0.5 miles of the Site and no other sensitive receptors were identified near the release extent. Oxy believes the remedial actions completed are protective of human health, the environment, and groundwater. As such, Oxy respectfully requests closure for Incident Number nAPP2225058146.

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.  
Bureau of Land Management Office

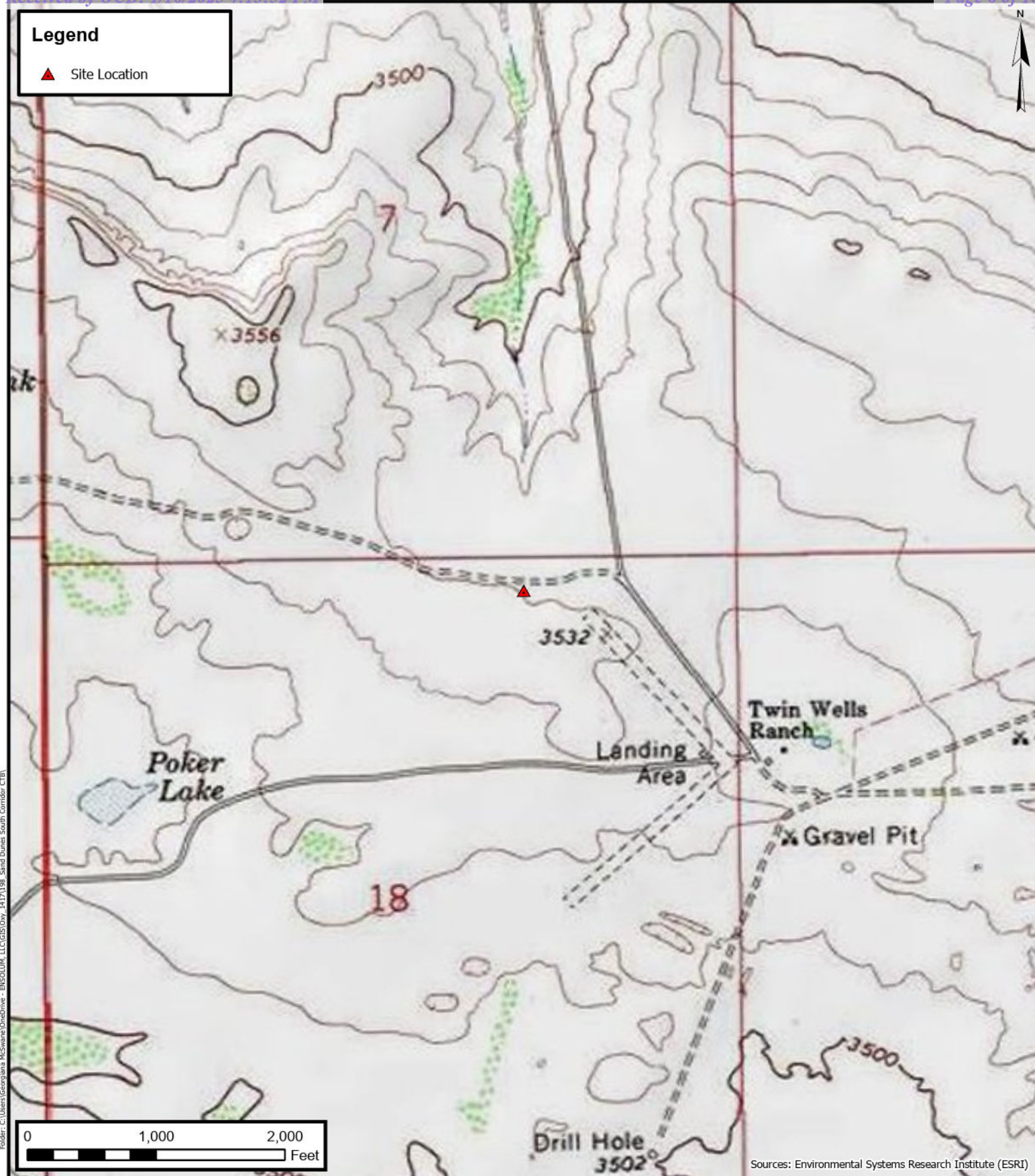
Appendices:

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





FIGURES



## Topographic Map

Oxy USA Inc.  
Sand Dunes South Corridor CTB  
32.22338° N, 103.813103° W  
Eddy County, New Mexico

PROJECT NUMBER: 03B1417198

**FIGURE**

**1**





## Site Vicinity Map

Oxy USA Inc.  
Sand Dunes South Corridor CTB  
32.22338° N, 103.813103° W  
Eddy County, New Mexico






PROJECT NUMBER: 03B1417198

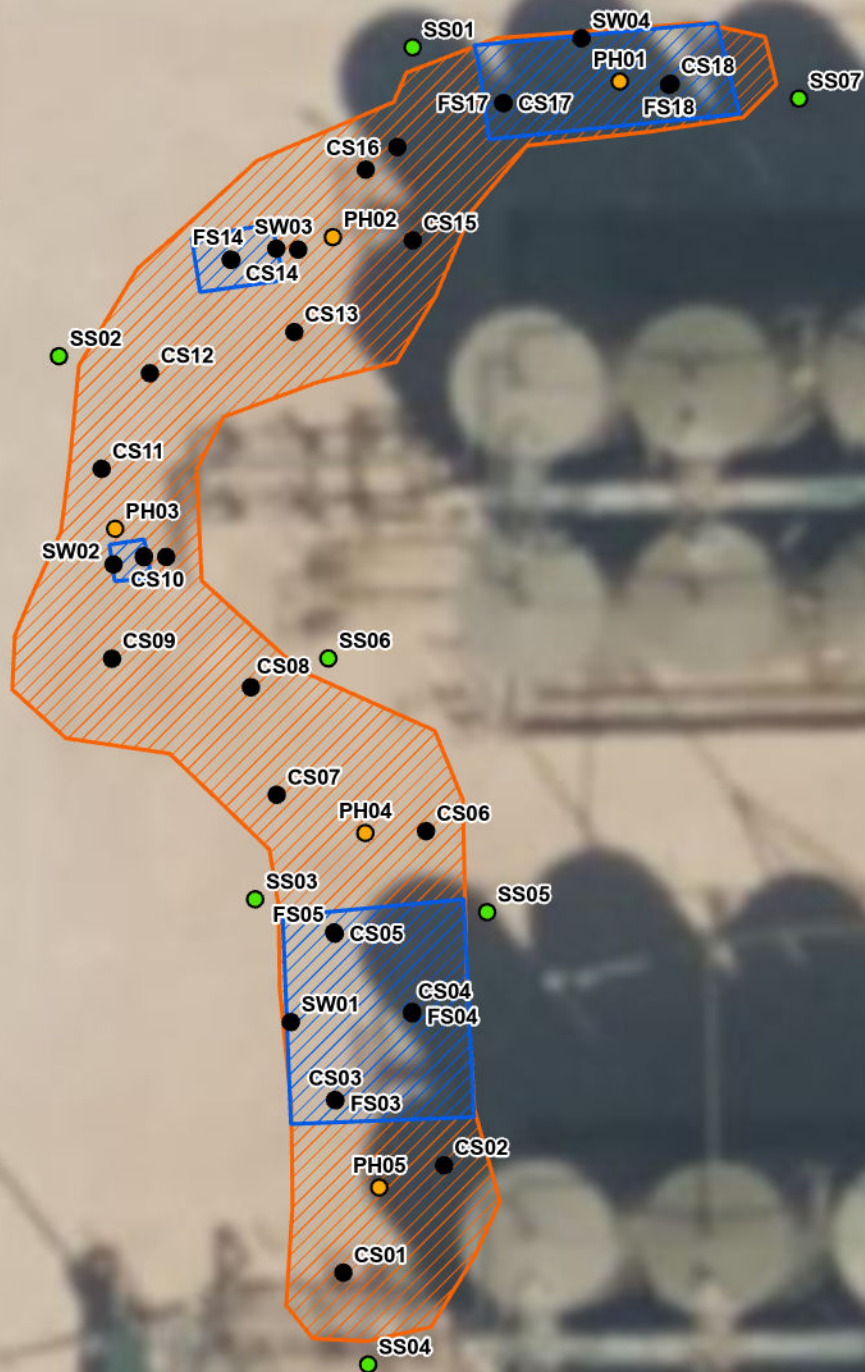
**FIGURE**

**2**



**Legend**

-  Assessment Soil Sample Location
-  Delineation Soil Sample Location
-  Confirmation Soil Sample Location
-  Excavation Extent selection
-  Release Extent



Sources: Environmental Systems Research Institute (ESRI)

**Site Map**

Oxy USA Inc.  
Sand Dunes South Corridor CTB  
32.22338° N, 103.813103° W  
Eddy County, New Mexico

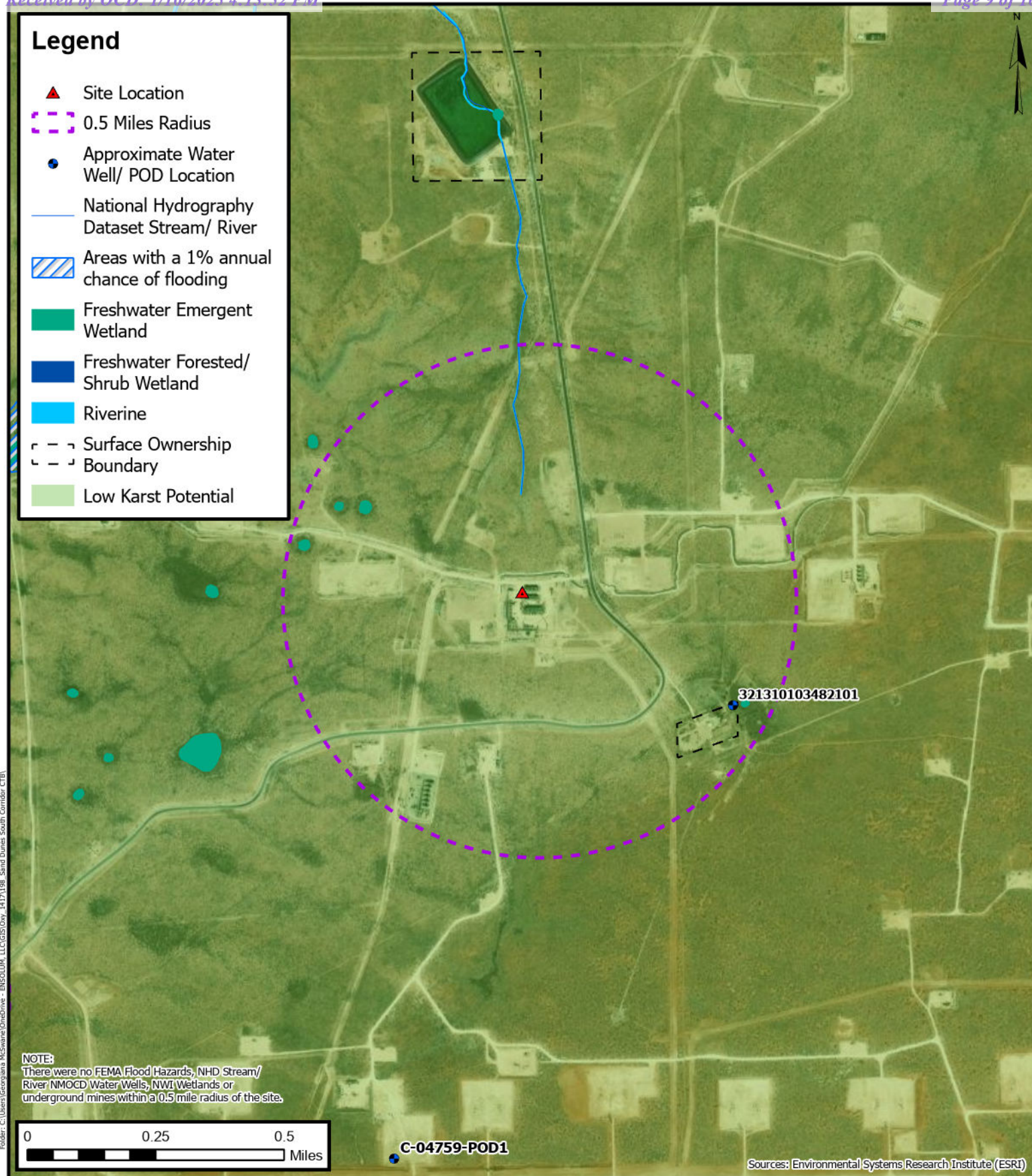
PROJECT NUMBER: 03B1417198

**FIGURE****3**



## Legend

- ▲ Site Location
- 0.5 Miles Radius
- Approximate Water Well/ POD Location
- National Hydrography Dataset Stream/ River
- Areas with a 1% annual chance of flooding
- Freshwater Emergent Wetland
- Freshwater Forested/ Shrub Wetland
- Riverine
- Surface Ownership
- Boundary
- Low Karst Potential



## Closure Criteria Map

Oxy USA Inc.  
 Sand Dunes South Corridor CTB  
 32.22338° N, 103.813103° W  
 Eddy County, New Mexico

PROJECT NUMBER: 03B1417198

FIGURE

4



**Legend**

- Composite Soil Sample Location

Ramirez & Sons Caliche Pit  
Backfill Composite Soil Sample

0 1,000 2,000  
Feet

Sources: Environmental Systems Research Institute (ESRI)



## Backfill Site Map

Ramirez & Sons Caliche Pit  
32.736937° N, 103.187229° W  
Lea County, New Mexico

ATTACHMENT

5





TABLES

**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
**Sand Dunes South Corridor CTB**  
Oxy USA, Inc.  
Eddy County, New Mexico  
Ensolum Project No. 03B1417198

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 C <sub>6</sub> -C <sub>12</sub> (mg/kg)	TPH DRO >C <sub>12</sub> -C <sub>28</sub> (mg/kg)	TPH MRO >C <sub>28</sub> -C <sub>35</sub> (mg/kg)	TPH GRO+DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg)	TPH Total C <sub>6</sub> -C <sub>35</sub> (mg/kg)	Chloride (mg/kg)
New Mexico Oil Conservation Division Closure Criteria for Soils Impacted by a Release			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	10,000
Delineation Soil Sample Analytical Results													
PH01	06/25/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,440
	06/25/2024	1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,280
	06/25/2024	2	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,550
	06/25/2024	3	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	512
PH02	06/25/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,200
	06/25/2024	1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	608
	06/25/2024	2	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256
	06/25/2024	3	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
	06/25/2024	4	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
PH03	06/25/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,400
	06/25/2024	2	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
	06/25/2024	3	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
PH04	06/25/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,960
	06/25/2024	1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208
	06/25/2024	3	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
PH05	06/25/2024	1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	73.7	<10.0	73.7	73.7	1,730
	06/25/2024	3	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	288
	06/25/2024	4	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112

**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
**Sand Dunes South Corridor CTB**  
Oxy USA, Inc.  
Eddy County, New Mexico  
Ensolum Project No. 03B1417198

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 C <sub>6</sub> -C <sub>12</sub> (mg/kg)	TPH DRO >C <sub>12</sub> -C <sub>28</sub> (mg/kg)	TPH MRO >C <sub>28</sub> -C <sub>35</sub> (mg/kg)	TPH GRO+DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg)	TPH Total C <sub>6</sub> -C <sub>35</sub> (mg/kg)	Chloride (mg/kg)
New Mexico Oil Conservation Division Closure Criteria for Soils Impacted by a Release			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	10,000
SS01	07/30/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<b>23.0</b>	<10.0	<b>23.0</b>	<b>23.0</b>	<b>32.0</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	<10.0	<b>32.0</b>
SS03	07/30/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<b>16.9</b>	<10.0	<b>16.9</b>	<b>16.9</b>	<b>16.0</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	<10.0	<16.0
SS05	07/30/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<b>32.0</b>
SS06	07/30/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<b>16.0</b>
SS07	07/30/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0

Concentrations in **bold** and yellow exceed the New Mexico Oil Conservation Division Closure Criteria for Soils Impacted by a Release

Concentrations filled in have been excavated

bgs: below ground surface

mg/kg: milligrams per kilogram

NE: Not Established

NS: Not Sampled

mg/kg: milligrams per kilogram

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

MRO: Motor Oil/Lube Oil Range Organics

TPH: Total Petroleum Hydrocarbons

**TABLE 2**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
**Sand Dunes South Corridor CTB**  
Oxy USA, Inc.  
Eddy County, New Mexico  
Ensolum Project No. 03B1417198

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 C <sub>6</sub> -C <sub>12</sub> (mg/kg)	TPH DRO >C <sub>12</sub> -C <sub>28</sub> (mg/kg)	TPH MRO >C <sub>28</sub> -C <sub>35</sub> (mg/kg)	TPH GRO+DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg)	TPH Total C <sub>6</sub> -C <sub>35</sub> (mg/kg)	Chloride (mg/kg)
New Mexico Oil Conservation Division Closure Criteria for Soils Impacted by a Release			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	10,000
Confirmation Soil Sample Analytical Results													
CS01	08/20/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	115	43.2	115	158	3,960
CS02	08/20/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	22.4	<10.0	22.4	22.4	8,000
CS03	08/20/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	28.5	<10.0	28.5	28.5	12,000
FS03	11/04/2024	1	NS										368
CS04	08/20/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	216	64.5	216	281	10,000
FS04	11/04/2024	1	NS										512
CS05	08/20/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	15.5	<10.0	15.5	15.5	12,600
FS05	11/04/2024	1	NS										160
CS06	08/20/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	11.8	<10.0	11.8	11.8	9,400
CS07	08/20/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	17.3	<10.0	17.3	17.3	5,330
CS08	08/20/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	48.5	18.0	48.5	66.5	3,200
CS09	08/20/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	9,200
CS10	08/20/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	10,700
FS10	11/04/2024	1	NS										816
CS11	08/20/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,760
CS12	08/20/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	18.4	<10.0	18.4	18.4	848
CS13	08/20/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	34.4	12.2	34.4	46.6	2,400

**TABLE 2**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
**Sand Dunes South Corridor CTB**  
 Oxy USA, Inc.  
 Eddy County, New Mexico  
 Ensolum Project No. 03B1417198

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 C <sub>6</sub> -C <sub>12</sub> (mg/kg)	TPH DRO >C <sub>12</sub> -C <sub>28</sub> (mg/kg)	TPH MRO >C <sub>28</sub> -C <sub>35</sub> (mg/kg)	TPH GRO+DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg)	TPH Total C <sub>6</sub> -C <sub>35</sub> (mg/kg)	Chloride (mg/kg)
New Mexico Oil Conservation Division Closure Criteria for Soils Impacted by a Release			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	10,000
CS14	08/20/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	3,940	1,040.0	3,940	4,980	3,640
FS14	11/04/2024	1	NS					<10.0	<10.0	<10.0	<10.0	<10.0	NS
CS15	08/20/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	40.8	<10.0	40.8	40.8	1,280
CS16	08/20/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	45.5	<10.0	45.5	45.5	224
CS17	08/20/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	1,810	1,030	1,810	2,840	256
FS17	11/04/2024	1	NS					<10.0	<10.0	<10.0	<10.0	<10.0	NS
CS18	08/20/2024	0.5	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	2,220	1,300	2,220	3,520	5,860
FS18	11/04/2024	1	NS					<10.0	<10.0	<10.0	<10.0	<10.0	NS
Sidewall Soil Sample Analytical Results													
SW01	11/04/2024	0-1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
SW02	11/04/2024	0-1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
SW03	11/04/2024	0-1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208
SW04	11/04/2024	0-1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160

Concentrations in **bold** and yellow exceed the New Mexico Oil Conservation Division Closure Criteria for Soils Impacted by a Release

Concentrations filled in have been excavated

bgs: below ground surface

mg/kg: milligrams per kilogram

NE: Not Established

NS: Not Sampled

mg/kg: milligrams per kilogram

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

MRO: Motor Oil/Lube Oil Range Organics

TPH: Total Petroleum Hydrocarbons



## APPENDIX A

### Referenced Well Records

---





USGS Home  
Contact USGS  
Search USGS

National Water Information System: Web Interface


USGS Water Resources

Data Category:  
Groundwater

Geographic Area:  
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 =

- 321310103482101

Minimum number of levels = 1  
[Save file of selected sites](#) to local disk for future upload

USGS 321310103482101 24S.31E.17.13120

Eddy County, New Mexico  
Latitude 32°13'14.1", Longitude 103°48'23.4" NAD83  
Land-surface elevation 3,530.00 feet above NGVD29  
This well is completed in the Other aquifers (N9999OTHER) national aquifer.  
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>
<a href="#">Graph of data</a>
<a href="#">Reselect period</a>

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
1959-02-03			D62610		3459.50	NGVD29	P	Z			A
1959-02-03			D62611		3461.24	NAVD88	P	Z			A
1959-02-03			D72019	70.50			P	Z			A
1959-03-25			D62610		3462.33	NGVD29	1	Z			A
1959-03-25			D62611		3464.07	NAVD88	1	Z			A
1959-03-25			D72019	67.67			1	Z			A
1976-12-02			D62610		3463.98	NGVD29	1	Z			A
1976-12-02			D62611		3465.72	NAVD88	1	Z			A
1976-12-02			D72019	66.02			1	Z			A
2013-01-17	21:00 UTC	m	62610		3455.56	NGVD29	1	S	USGS	S	A
2013-01-17	21:00 UTC	m	62611		3457.30	NAVD88	1	S	USGS	S	A
2013-01-17	21:00 UTC	m	72019	74.44			1	S	USGS	S	A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
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	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement		Not determined

Section	Code	Description
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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[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: 2024-06-12 14:00:33 EDT


0.34   0.31 nadww01




## APPENDIX B


### Lithologic Soil Sampling Logs


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<div> <b>ENSOLUM</b></div>								Sample Name: PH01		Date: 6/25/2024	
								Site Name: Sand Dunes South Corridor CTB			
								Incident Number: nAPP2225058146			
								Job Number: 03B1417198			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Kaoru Shimada		Method: Hydrovac	
Coordinates: 32.224042, -103.813316								Hole Diameter: N/A		Total Depth: 3'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
D	2,895.2	1.3		PH01	0.5	0	GC	Gravel, some clay, noncohesive, low plasticity, beige fine, dry.			
D	2,049.6	4.2		PH01	1	1	CL	Clay, some sand and some gravel, non-cohesive, low plasticity, brown, dry, fine.			
D	1,439.2	1.3		PH01	2	2	CL	Clay, some sand and some gravel, non-cohesive, low plasticity, brown, dry, fine.			
D	610.4	1.2		PH01	3	3	GC	Clayey-gravel, non-cohesive, low plasticity, beige, dry,fine.			
TD @ 3 feet bgs											

<div> <b>ENSOLUM</b></div>								Sample Name: PH02		Date: 6/25/2024	
								Site Name: Sand Dunes South Corridor CTB			
								Incident Number: nAPP2225058146			
								Job Number: 03B1417198			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Kaoru Shimada		Method: Hydrovac	
Coordinates: 32.223990, -103.813441								Hole Diameter: N/A		Total Depth: 4'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
D	1,142.4	3.2		PH02		0					
D	739.2	4.3		PH02		0.5	SC	Clayey sand, some gravel, fine, non-cohesive, low plasticity, beige, dry			
D	610.4	1.4		PH02		1	SC	Clayey-sand, same gravel, fine, non-cohesive, low plasticity, brown, dry			
D	173.6	1		PH02		2	SC	Clayey-sand, some gravel, fine, non-cohesive, low plasticity, brown, dry.			
D	ND	3.2		PH02		3	SC	Clayey-sand, some gravel, fine, non-cohesive, low plasticity, brown, dry.			
						4	SC	Clayey sand, few gravel, fine, non-cohesive, medium plasticity, light beige, dry.			
TD @ 4 bgs											



<div> <b>ENSOLUM</b></div>								Sample Name: PH03		Date: 6/25/2024	
								Site Name: Sand Dunes South Corridor CTB			
								Incident Number: nAPP2225058146			
								Job Number: 03B1417198			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Kaoru Shimada		Method: Hydrovac	
Coordinates: 32.223906, -103.813505								Hole Diameter:		Total Depth: 3'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
D	1,786.4	3.7		PH03		0					
D	173.6	2.8		PH03		0.5	SC	Clay-sand, gravel,medium cohesive, low plasticity, light brown, dry.			
D	ND	2.3		PH03		1	SC	Clay-sand, gravel,medium cohesive, low plasticity, light brown, dry.			
D	ND	2.6		PH03		2	SC	Clay-sand, gravel,medium cohesive, low plasticity, light brown, dry.			
D	ND			PH03		3	SC	Clay-sand, gravel,medium cohesive, low plasticity, light brown, dry.			
TD @ 3 feet bgs											

					Sample Name: PH04		Date: 6/25/2024	
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>					Site Name: Sand Dunes South Corridor CTB			
					Incident Number: nAPP2225058146			
					Job Number: 03B1417198			
Coordinates: 32.223826, -103.813420					Logged By: Kaoru Shimada		Method: Hydrovac	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.					Hole Diameter:		Total Depth: 3'	
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	2,049.6	2.5		PH04		0		
D	201.6	1		PH04		0.5	SC	Clay-sand, fine, few gravel, non-cohesive, low plasticity, light brown, dry.
D	201.6	0.7		PH04		1	SC	Clay-sand, fine, few gravel, non-cohesive, medium plasticity, beige, dry.
D	201.6	0.6		PH04		2	SC	Clay-sand, fine, few gravel, non-cohesive, medium plasticity, beige, dry.
D	201.6	0.6		PH04		3	SC	Clay-sand, fine, few gravel, non-cohesive, medium plasticity, beige, dry.
TD @ 3 feet bgs								

<div> <b>ENSOLUM</b></div>								Sample Name: PH05		Date: 6/25/2024	
								Site Name: Sand Dunes South Corridor CTB			
								Incident Number: nAPP2225058146			
								Job Number: 03B1417198			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Kaoru Shimada		Method: Hydrovac	
Coordinates: 32.223725, -103.813421								Hole Diameter:		Total Depth: 4'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
D						0					
D	1,663.20	1.8		PH05		0.5	SC	Sandy-clay, some gravel, fine, non-cohesive, low plasticity, dry, beige.			
D						1	SC	Sandy-clay, some gravel, fine, non-cohesive, low plasticity, dry, dark brown.			
D	812	2.9		PH05		2	SC	Sandy-clay, some gravel, fine, non-cohesive, low plasticity, dry, dark brown.			
D	235.2	2.7		PH05		3	SC	Sandy-clay, some gravel, fine, non-cohesive, low plasticity, dry, dark brown.			
D	ND	1.9		PH05		4	SC	Sandy-clay, some gravel, fine, non-cohesive, low plasticity, dry, dark brown.			
TD @ 4 bgs											



## APPENDIX C

### Photographic Log

---

**Photographic Log**

Oxy USA Inc.

Sand Dunes South Corridor CTB

Incident Number nAPP2225058146

Date & Time: Thu, Jul 11, 2024 at 09:46:28 MDT  
 Position: 032.223691° N / 103.813466° W (±12.0ft)  
 Altitude: 3537ft (±57.9ft)  
 Datum: WGS-84  
 Azimuth/Bearing: 045° N45E 0800mils True (±10°)  
 Elevation Angle: +06.0°  
 Horizon Angle: -01.3°  
 Zoom: 0.5X  
 198



Photograph: 1 Date: 7/11/2024  
 Description: Release footprint  
 View: Northeast

Date & Time: Thu, Jul 11, 2024 at 09:47:57 MDT  
 Position: 032.223968° N / 103.813519° W (±15.6ft)  
 Altitude: 3660ft (±11.0ft)  
 Datum: WGS-84  
 Azimuth/Bearing: 056° N56E 0956mils True (±10°)  
 Elevation Angle: +15.2°  
 Horizon Angle: +08.6°  
 Zoom: 0.5X  
 198



Photograph: 2 Date: 7/11/2024  
 Description: Release footprint  
 View: Northeast

Date & Time: Tue, Nov 05, 2024 at 08:53:55 MST  
 Position: 032.224018° N / 103.813560° W (±15.6ft)  
 Altitude: 3624ft (±15.1ft)  
 Datum: WGS-84  
 Azimuth/Bearing: 002° N02E 0035mils True (±10°)  
 Elevation Angle: +21.3°  
 Horizon Angle: +02.6°  
 Zoom: 0.5X



Photograph: 3 Date: 11/5/2024  
 Description: Excavation Activities  
 View: Northeast

Date & Time: Tue, Nov 05, 2024 at 13:55:15 MST  
 Position: 032.223889° N / 103.813623° W (±15.6ft)  
 Altitude: 3535ft (±22.7ft)  
 Datum: WGS-84  
 Azimuth/Bearing: 322° N38W 5220mils True (±10°)  
 Elevation Angle: +37.6°  
 Horizon Angle: +01.0°  
 Zoom: 0.5X



Photograph: 4 Date: 11/5/2024  
 Description: Excavation Activities  
 View: Northwest



## APPENDIX D

### Laboratory Analytical Reports & Chain of Custody Documentation

---





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

July 02, 2024

BEAUX JENNINGS

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: SAND DUNES SOUTH CORRIDOR CTB

Enclosed are the results of analyses for samples received by the laboratory on 06/25/24 15:02.

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 style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
BEAUX JENNINGS  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received:	06/25/2024	Sampling Date:	06/25/2024
Reported:	07/02/2024	Sampling Type:	Soil
Project Name:	SAND DUNES SOUTH CORRIDOR CTB	Sampling Condition:	Cool & Intact
Project Number:	03B1417198	Sample Received By:	Shalyn Rodriguez
Project Location:	32.55793,-103.19143		

**Sample ID: PH01 0.5 (H243803-01)**

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	07/01/2024	ND	2.03	102	2.00	1.63	
Toluene*	<0.050	0.050	07/01/2024	ND	1.98	98.8	2.00	2.00	
Ethylbenzene*	<0.050	0.050	07/01/2024	ND	2.08	104	2.00	1.78	
Total Xylenes*	<0.150	0.150	07/01/2024	ND	6.09	102	6.00	1.64	
Total BTX	<0.300	0.300	07/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.9 % 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	3440	16.0	07/01/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2024	ND	181	90.3	200	2.57	
DRO >C10-C28*	<10.0	10.0	07/01/2024	ND	161	80.3	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	07/01/2024	ND					

Surrogate: 1-Chlorooctane 96.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.8 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
BEAUX JENNINGS  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received:	06/25/2024	Sampling Date:	06/25/2024
Reported:	07/02/2024	Sampling Type:	Soil
Project Name:	SAND DUNES SOUTH CORRIDOR CTB	Sampling Condition:	Cool & Intact
Project Number:	03B1417198	Sample Received By:	Shalyn Rodriguez
Project Location:	32.55793,-103.19143		

**Sample ID: PH01 1 (H243803-02)**

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	07/01/2024	ND	2.03	102	2.00	1.63		
Toluene*	<0.050	0.050	07/01/2024	ND	1.98	98.8	2.00	2.00		
Ethylbenzene*	<0.050	0.050	07/01/2024	ND	2.08	104	2.00	1.78		
Total Xylenes*	<0.150	0.150	07/01/2024	ND	6.09	102	6.00	1.64		
Total BTEX	<0.300	0.300	07/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 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	2280	16.0	07/01/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2024	ND	213	107	200	0.415	
DRO >C10-C28*	<10.0	10.0	07/01/2024	ND	191	95.4	200	3.54	
EXT DRO >C28-C36	<10.0	10.0	07/01/2024	ND					

Surrogate: 1-Chlorooctane 94.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.9 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
BEAUX JENNINGS  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received:	06/25/2024	Sampling Date:	06/25/2024
Reported:	07/02/2024	Sampling Type:	Soil
Project Name:	SAND DUNES SOUTH CORRIDOR CTB	Sampling Condition:	Cool & Intact
Project Number:	03B1417198	Sample Received By:	Shalyn Rodriguez
Project Location:	32.55793,-103.19143		

**Sample ID: PH01 2 (H243803-03)**

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	07/01/2024	ND	2.03	102	2.00	1.63		
Toluene*	<0.050	0.050	07/01/2024	ND	1.98	98.8	2.00	2.00		
Ethylbenzene*	<0.050	0.050	07/01/2024	ND	2.08	104	2.00	1.78		
Total Xylenes*	<0.150	0.150	07/01/2024	ND	6.09	102	6.00	1.64		
Total BTEX	<0.300	0.300	07/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.0 % 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	1550	16.0	07/01/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2024	ND	213	107	200	0.415	
DRO >C10-C28*	<10.0	10.0	07/01/2024	ND	191	95.4	200	3.54	
EXT DRO >C28-C36	<10.0	10.0	07/01/2024	ND					

Surrogate: 1-Chlorooctane 94.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
BEAUX JENNINGS  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received:	06/25/2024	Sampling Date:	06/25/2024
Reported:	07/02/2024	Sampling Type:	Soil
Project Name:	SAND DUNES SOUTH CORRIDOR CTB	Sampling Condition:	Cool & Intact
Project Number:	03B1417198	Sample Received By:	Shalyn Rodriguez
Project Location:	32.55793,-103.19143		

**Sample ID: PH01 3 (H243803-04)**

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	07/01/2024	ND	2.03	102	2.00	1.63		
Toluene*	<0.050	0.050	07/01/2024	ND	1.98	98.8	2.00	2.00		
Ethylbenzene*	<0.050	0.050	07/01/2024	ND	2.08	104	2.00	1.78		
Total Xylenes*	<0.150	0.150	07/01/2024	ND	6.09	102	6.00	1.64		
Total BTEx	<0.300	0.300	07/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.2 % 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	512	16.0	07/01/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2024	ND	213	107	200	0.415	
DRO >C10-C28*	<10.0	10.0	07/01/2024	ND	191	95.4	200	3.54	
EXT DRO >C28-C36	<10.0	10.0	07/01/2024	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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**Analytical Results For:**

ENSOLUM  
BEAUX JENNINGS  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received:	06/25/2024	Sampling Date:	06/25/2024
Reported:	07/02/2024	Sampling Type:	Soil
Project Name:	SAND DUNES SOUTH CORRIDOR CTB	Sampling Condition:	Cool & Intact
Project Number:	03B1417198	Sample Received By:	Shalyn Rodriguez
Project Location:	32.55793,-103.19143		

**Sample ID: PH02 0.5 (H243803-05)**

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	07/01/2024	ND	2.03	102	2.00	1.63		
Toluene*	<0.050	0.050	07/01/2024	ND	1.98	98.8	2.00	2.00		
Ethylbenzene*	<0.050	0.050	07/01/2024	ND	2.08	104	2.00	1.78		
Total Xylenes*	<0.150	0.150	07/01/2024	ND	6.09	102	6.00	1.64		
Total BTEX	<0.300	0.300	07/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 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	1200	16.0	07/01/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2024	ND	213	107	200	0.415	
DRO >C10-C28*	<10.0	10.0	07/01/2024	ND	191	95.4	200	3.54	
EXT DRO >C28-C36	<10.0	10.0	07/01/2024	ND					

Surrogate: 1-Chlorooctane 99.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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**Analytical Results For:**

ENSOLUM  
BEAUX JENNINGS  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received:	06/25/2024	Sampling Date:	06/25/2024
Reported:	07/02/2024	Sampling Type:	Soil
Project Name:	SAND DUNES SOUTH CORRIDOR CTB	Sampling Condition:	Cool & Intact
Project Number:	03B1417198	Sample Received By:	Shalyn Rodriguez
Project Location:	32.55793,-103.19143		

**Sample ID: PH02 1 (H243803-06)**

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	07/01/2024	ND	2.03	102	2.00	1.63		
Toluene*	<0.050	0.050	07/01/2024	ND	1.98	98.8	2.00	2.00		
Ethylbenzene*	<0.050	0.050	07/01/2024	ND	2.08	104	2.00	1.78		
Total Xylenes*	<0.150	0.150	07/01/2024	ND	6.09	102	6.00	1.64		
Total BTEX	<0.300	0.300	07/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 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	608	16.0	07/01/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2024	ND	213	107	200	0.415	
DRO >C10-C28*	<10.0	10.0	07/01/2024	ND	191	95.4	200	3.54	
EXT DRO >C28-C36	<10.0	10.0	07/01/2024	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
BEAUX JENNINGS  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 06/25/2024  
Reported: 07/02/2024  
Project Name: SAND DUNES SOUTH CORRIDOR CTB  
Project Number: 03B1417198  
Project Location: 32.55793,-103.19143

Sampling Date: 06/25/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: PH02 2 (H243803-07)**

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	07/01/2024	ND	2.03	102	2.00	1.63		
Toluene*	<0.050	0.050	07/01/2024	ND	1.98	98.8	2.00	2.00		
Ethylbenzene*	<0.050	0.050	07/01/2024	ND	2.08	104	2.00	1.78		
Total Xylenes*	<0.150	0.150	07/01/2024	ND	6.09	102	6.00	1.64		
Total BTEX	<0.300	0.300	07/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.2 % 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	256	16.0	07/01/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2024	ND	213	107	200	0.415	
DRO >C10-C28*	<10.0	10.0	07/01/2024	ND	191	95.4	200	3.54	
EXT DRO >C28-C36	<10.0	10.0	07/01/2024	ND					

Surrogate: 1-Chlorooctane 112 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

ENSOLUM  
BEAUX JENNINGS  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received:	06/25/2024	Sampling Date:	06/25/2024
Reported:	07/02/2024	Sampling Type:	Soil
Project Name:	SAND DUNES SOUTH CORRIDOR CTB	Sampling Condition:	Cool & Intact
Project Number:	03B1417198	Sample Received By:	Shalyn Rodriguez
Project Location:	32.55793,-103.19143		

**Sample ID: PH02 3 (H243803-08)**

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	07/01/2024	ND	2.03	102	2.00	1.63		
Toluene*	<0.050	0.050	07/01/2024	ND	1.98	98.8	2.00	2.00		
Ethylbenzene*	<0.050	0.050	07/01/2024	ND	2.08	104	2.00	1.78		
Total Xylenes*	<0.150	0.150	07/01/2024	ND	6.09	102	6.00	1.64		
Total BTEX	<0.300	0.300	07/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.0 % 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	144	16.0	07/01/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2024	ND	213	107	200	0.415	
DRO >C10-C28*	<10.0	10.0	07/01/2024	ND	191	95.4	200	3.54	
EXT DRO >C28-C36	<10.0	10.0	07/01/2024	ND					

Surrogate: 1-Chlorooctane 113 % 48.2-134

Surrogate: 1-Chlorooctadecane 113 % 49.1-148

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**Analytical Results For:**

ENSOLUM  
BEAUX JENNINGS  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 06/25/2024  
Reported: 07/02/2024  
Project Name: SAND DUNES SOUTH CORRIDOR CTB  
Project Number: 03B1417198  
Project Location: 32.55793,-103.19143

Sampling Date: 06/25/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: PH02 4 (H243803-09)**

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	07/01/2024	ND	2.03	102	2.00	1.63		
Toluene*	<0.050	0.050	07/01/2024	ND	1.98	98.8	2.00	2.00		
Ethylbenzene*	<0.050	0.050	07/01/2024	ND	2.08	104	2.00	1.78		
Total Xylenes*	<0.150	0.150	07/01/2024	ND	6.09	102	6.00	1.64		
Total BTEX	<0.300	0.300	07/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.9 % 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	07/01/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2024	ND	213	107	200	0.415	
DRO >C10-C28*	<10.0	10.0	07/01/2024	ND	191	95.4	200	3.54	
EXT DRO >C28-C36	<10.0	10.0	07/01/2024	ND					

Surrogate: 1-Chlorooctane 93.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.9 % 49.1-148

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**Analytical Results For:**

ENSOLUM  
BEAUX JENNINGS  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 06/25/2024  
Reported: 07/02/2024  
Project Name: SAND DUNES SOUTH CORRIDOR CTB  
Project Number: 03B1417198  
Project Location: 32.55793,-103.19143

Sampling Date: 06/25/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: PH03 0.5 (H243803-10)**

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	07/01/2024	ND	2.03	102	2.00	1.63		
Toluene*	<0.050	0.050	07/01/2024	ND	1.98	98.8	2.00	2.00		
Ethylbenzene*	<0.050	0.050	07/01/2024	ND	2.08	104	2.00	1.78		
Total Xylenes*	<0.150	0.150	07/01/2024	ND	6.09	102	6.00	1.64		
Total BTEx	<0.300	0.300	07/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 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	2400	16.0	07/01/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2024	ND	213	107	200	0.415	
DRO >C10-C28*	<10.0	10.0	07/01/2024	ND	191	95.4	200	3.54	
EXT DRO >C28-C36	<10.0	10.0	07/01/2024	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
BEAUX JENNINGS  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 06/25/2024  
Reported: 07/02/2024  
Project Name: SAND DUNES SOUTH CORRIDOR CTB  
Project Number: 03B1417198  
Project Location: 32.55793,-103.19143

Sampling Date: 06/25/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: PH03 2 (H243803-11)**

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	07/01/2024	ND	2.03	102	2.00	1.63		
Toluene*	<0.050	0.050	07/01/2024	ND	1.98	98.8	2.00	2.00		
Ethylbenzene*	<0.050	0.050	07/01/2024	ND	2.08	104	2.00	1.78		
Total Xylenes*	<0.150	0.150	07/01/2024	ND	6.09	102	6.00	1.64		
Total BTEx	<0.300	0.300	07/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 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	96.0	16.0	07/01/2024	ND	416	104	400	3.77		

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	07/01/2024	ND	213	107	200	0.415	
DRO >C10-C28*	<10.0	10.0	07/01/2024	ND	191	95.4	200	3.54	
EXT DRO >C28-C36	<10.0	10.0	07/01/2024	ND					

Surrogate: 1-Chlorooctane 111 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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**Analytical Results For:**

ENSOLUM  
BEAUX JENNINGS  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received:	06/25/2024	Sampling Date:	06/25/2024
Reported:	07/02/2024	Sampling Type:	Soil
Project Name:	SAND DUNES SOUTH CORRIDOR CTB	Sampling Condition:	Cool & Intact
Project Number:	03B1417198	Sample Received By:	Shalyn Rodriguez
Project Location:	32.55793,-103.19143		

**Sample ID: PH03 3 (H243803-12)**

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	07/01/2024	ND	2.03	102	2.00	1.63		
Toluene*	<0.050	0.050	07/01/2024	ND	1.98	98.8	2.00	2.00		
Ethylbenzene*	<0.050	0.050	07/01/2024	ND	2.08	104	2.00	1.78		
Total Xylenes*	<0.150	0.150	07/01/2024	ND	6.09	102	6.00	1.64		
Total BTEx	<0.300	0.300	07/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.3 % 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	112	16.0	07/01/2024	ND	416	104	400	3.77		

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	07/01/2024	ND	213	107	200	0.415	
DRO >C10-C28*	<10.0	10.0	07/01/2024	ND	191	95.4	200	3.54	
EXT DRO >C28-C36	<10.0	10.0	07/01/2024	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
BEAUX JENNINGS  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received:	06/25/2024	Sampling Date:	06/25/2024
Reported:	07/02/2024	Sampling Type:	Soil
Project Name:	SAND DUNES SOUTH CORRIDOR CTB	Sampling Condition:	Cool & Intact
Project Number:	03B1417198	Sample Received By:	Shalyn Rodriguez
Project Location:	32.55793,-103.19143		

**Sample ID: PH05 1 (H243803-13)**

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	07/01/2024	ND	2.03	102	2.00	1.63		
Toluene*	<0.050	0.050	07/01/2024	ND	1.98	98.8	2.00	2.00		
Ethylbenzene*	<0.050	0.050	07/01/2024	ND	2.08	104	2.00	1.78		
Total Xylenes*	<0.150	0.150	07/01/2024	ND	6.09	102	6.00	1.64		
Total BTEX	<0.300	0.300	07/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 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	1730	16.0	07/01/2024	ND	416	104	400	3.77		

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	07/01/2024	ND	213	107	200	0.415	
DRO >C10-C28*	73.7	10.0	07/01/2024	ND	191	95.4	200	3.54	
EXT DRO >C28-C36	<10.0	10.0	07/01/2024	ND					

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
BEAUX JENNINGS  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 06/25/2024  
Reported: 07/02/2024  
Project Name: SAND DUNES SOUTH CORRIDOR CTB  
Project Number: 03B1417198  
Project Location: 32.55793,-103.19143

Sampling Date: 06/25/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: PH05 3 (H243803-14)**

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	07/01/2024	ND	2.03	102	2.00	1.63		
Toluene*	<0.050	0.050	07/01/2024	ND	1.98	98.8	2.00	2.00		
Ethylbenzene*	<0.050	0.050	07/01/2024	ND	2.08	104	2.00	1.78		
Total Xylenes*	<0.150	0.150	07/01/2024	ND	6.09	102	6.00	1.64		
Total BTEX	<0.300	0.300	07/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.3 % 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	288	16.0	07/01/2024	ND	416	104	400	3.77		

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	07/01/2024	ND	213	107	200	0.415	
DRO >C10-C28*	<10.0	10.0	07/01/2024	ND	191	95.4	200	3.54	
EXT DRO >C28-C36	<10.0	10.0	07/01/2024	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
BEAUX JENNINGS  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received:	06/25/2024	Sampling Date:	06/25/2024
Reported:	07/02/2024	Sampling Type:	Soil
Project Name:	SAND DUNES SOUTH CORRIDOR CTB	Sampling Condition:	Cool & Intact
Project Number:	03B1417198	Sample Received By:	Shalyn Rodriguez
Project Location:	32.55793,-103.19143		

**Sample ID: PH05 4 (H243803-15)**

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	07/01/2024	ND	2.03	102	2.00	1.63		
Toluene*	<0.050	0.050	07/01/2024	ND	1.98	98.8	2.00	2.00		
Ethylbenzene*	<0.050	0.050	07/01/2024	ND	2.08	104	2.00	1.78		
Total Xylenes*	<0.150	0.150	07/01/2024	ND	6.09	102	6.00	1.64		
Total BTEX	<0.300	0.300	07/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 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	112	16.0	07/01/2024	ND	416	104	400	3.77		

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	07/01/2024	ND	213	107	200	0.415	
DRO >C10-C28*	<10.0	10.0	07/01/2024	ND	191	95.4	200	3.54	
EXT DRO >C28-C36	<10.0	10.0	07/01/2024	ND					

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

ENSOLUM  
BEAUX JENNINGS  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 06/25/2024  
Reported: 07/02/2024  
Project Name: SAND DUNES SOUTH CORRIDOR CTB  
Project Number: 03B1417198  
Project Location: 32.55793,-103.19143

Sampling Date: 06/25/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Shalyn Rodriguez

**Sample ID: PH04 0.5 (H243803-16)**

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	07/01/2024	ND	2.03	102	2.00	1.63		
Toluene*	<0.050	0.050	07/01/2024	ND	1.98	98.8	2.00	2.00		
Ethylbenzene*	<0.050	0.050	07/01/2024	ND	2.08	104	2.00	1.78		
Total Xylenes*	<0.150	0.150	07/01/2024	ND	6.09	102	6.00	1.64		
Total BTEX	<0.300	0.300	07/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 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	1960	16.0	07/01/2024	ND	416	104	400	3.77		

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	07/01/2024	ND	213	107	200	0.415	
DRO >C10-C28*	<10.0	10.0	07/01/2024	ND	191	95.4	200	3.54	
EXT DRO >C28-C36	<10.0	10.0	07/01/2024	ND					

Surrogate: 1-Chlorooctane 114 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
BEAUX JENNINGS  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received:	06/25/2024	Sampling Date:	06/25/2024
Reported:	07/02/2024	Sampling Type:	Soil
Project Name:	SAND DUNES SOUTH CORRIDOR CTB	Sampling Condition:	Cool & Intact
Project Number:	03B1417198	Sample Received By:	Shalyn Rodriguez
Project Location:	32.55793,-103.19143		

**Sample ID: PH04 1 (H243803-17)**

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	07/01/2024	ND	2.03	102	2.00	1.63		
Toluene*	<0.050	0.050	07/01/2024	ND	1.98	98.8	2.00	2.00		
Ethylbenzene*	<0.050	0.050	07/01/2024	ND	2.08	104	2.00	1.78		
Total Xylenes*	<0.150	0.150	07/01/2024	ND	6.09	102	6.00	1.64		
Total BTEX	<0.300	0.300	07/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.3 % 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	208	16.0	07/01/2024	ND	416	104	400	3.77		

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	07/01/2024	ND	213	107	200	0.415	
DRO >C10-C28*	<10.0	10.0	07/01/2024	ND	191	95.4	200	3.54	
EXT DRO >C28-C36	<10.0	10.0	07/01/2024	ND					

Surrogate: 1-Chlorooctane 113 % 48.2-134

Surrogate: 1-Chlorooctadecane 114 % 49.1-148

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**Analytical Results For:**

ENSOLUM  
BEAUX JENNINGS  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received:	06/25/2024	Sampling Date:	06/25/2024
Reported:	07/02/2024	Sampling Type:	Soil
Project Name:	SAND DUNES SOUTH CORRIDOR CTB	Sampling Condition:	Cool & Intact
Project Number:	03B1417198	Sample Received By:	Shalyn Rodriguez
Project Location:	32.55793,-103.19143		

**Sample ID: PH04 3 (H243803-18)**

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	07/01/2024	ND	2.03	102	2.00	1.63		
Toluene*	<0.050	0.050	07/01/2024	ND	1.98	98.8	2.00	2.00		
Ethylbenzene*	<0.050	0.050	07/01/2024	ND	2.08	104	2.00	1.78		
Total Xylenes*	<0.150	0.150	07/01/2024	ND	6.09	102	6.00	1.64		
Total BTEx	<0.300	0.300	07/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.2 % 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	192	16.0	07/01/2024	ND	416	104	400	3.77		

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	07/01/2024	ND	213	107	200	0.415	
DRO >C10-C28*	<10.0	10.0	07/01/2024	ND	191	95.4	200	3.54	
EXT DRO >C28-C36	<10.0	10.0	07/01/2024	ND					

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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### Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in cursive script, 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

Project Manager: Beaux Jennings Address: 601 N. Marlenfield St. STE 400 City: Midland State: TX Zip: 79701 Phone #: (210)219-8858 Email: bjennings@ensolum.com Project #: 0331419148 Project Owner: Savel Dunes South Corridor CTB Project Location:										<b>BILL TO</b> P.O. #: Company: OXY USA Attn: Wade Dietrich Address: City: State: Zip: Phone #: Email:										<b>ANALYSIS REQUEST</b>									
Sample Name: Kaoru Shimada FOR LAB USE ONLY										Lab I.D. Sample I.D. Sample Depth (feet) (G)RAB OR (C)OMP. # CONTAINERS										MATRIX PRESERV. SAMPLING									
										GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER: ACID/BASE: ICE / COOL OTHER: DATE TIME										BTEX 8021B TPH 8015M Chloride 4500									
Delivered By: (Circle One) Sampler - UPS - Bus - Other:										Observed Temp. °C Corrected Temp. °C										Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No									
Relinquished By: Kaoru Shimada Date: 11/5/24 Time: 1503 Received By: Shedd Kenney Date: Time: Received By:										CHECKED BY: (Initials) 82										Turnaround Time: Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/> Backfill (only) Sample Condition									
Verbal Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No All Results are emailed. Please provide Email address: bjennings@ensolum.com, hgreen@ensolum.com REMARKS: Paykey/AFF/NonAFF:										Add'l Phone #:										Thermometer ID: #140 Correction Factor: 0.0°C <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No Corrected Temp. °C									





## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

<b>Company Name:</b> Ensolum, LLC										<b>BILL TO</b>										<b>ANALYSIS REQUEST</b>									
<b>Project Manager:</b> Beaux Jennings										<b>P.O. #:</b>																			
<b>Address:</b> 601 N. Marlenfield St. STE 400										<b>Company:</b> OXY USA																			
<b>City:</b> Midland										<b>Attn:</b> Wade Dietrich																			
<b>Phone #:</b> (210)219-8858										<b>Address:</b>																			
<b>State:</b> TX										<b>City:</b>																			
<b>Zip:</b> 79701										<b>State:</b>																			
<b>Project #:</b> 03B1412178										<b>Project Owner:</b>																			
<b>Project Name:</b> Savel Dunes South Corridor CTS										<b>City:</b>																			
<b>Project Location:</b>										<b>State:</b>																			
<b>Sample Name:</b> Kaoru Shinada										<b>Phone #:</b>																			
<b>FOR LAB USE ONLY</b>										<b>Email:</b>																			

Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	BTEX 8021B	TPH 8015M	Chloride 4500						
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER : ACID/BASE:											
17243803																					
11	PH03	2	6	1								8:05:24	11:14	X	X	X					
12	PH03	3	1										11:14	X	X	X					
13	PH05	1	1										11:32	X	X	X					
14	PH05	3	1										11:41	X	X	X					
15	PH05	4	1										11:49	X	X	X					
16	PH04	4.5	1										12:56	X	X	X					
17	PH04	1	1										13:03	X	X	X					
18	PH04	3	1										13:11	X	X	X					

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<b>Relinquished By:</b> Kaoru Shinada <b>Date:</b> 1/25/24 <b>Time:</b> 15:03	<b>Received By:</b> [Signature] <b>Date:</b> 1/25/24 <b>Time:</b> 15:03	<b>Observed Temp. °C:</b> 5.32 <b>Corrected Temp. °C:</b>	<b>Sample Condition:</b> <input checked="" type="checkbox"/> Intact <input type="checkbox"/> No <input type="checkbox"/> No	<b>CHECKED BY:</b> [Signature] <b>(Initials)</b>	<b>Turnaround Time:</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush <b>Thermometer ID:</b> #173 <b>Correction Factor:</b> -0.0°C	<b>Standard:</b> <input checked="" type="checkbox"/> <b>Bacteria (only) Sample Condition:</b> <input type="checkbox"/> Observed Temp. °C	<b>Verbal Result:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Add'l Phone #:</b>	<b>REMARKS:</b> Paykey/AFFENONAFE:
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**Delivered By:** (Circle One)  
 Sampler - UPS - Bus - Other:

**FORM-006 R 3.2 10/07/21**



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---

August 02, 2024

KELLY LOWERY

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: SAND DUNES SOUTH CORRIDOR CTB

Enclosed are the results of analyses for samples received by the laboratory on 07/30/24 12:53.

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 style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/30/2024  
 Reported: 08/02/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 07/30/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: SS 01 0.5' (H244524-01)**

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	1.90	95.0	2.00	0.283	
Toluene*	<0.050	0.050	07/30/2024	ND	1.87	93.6	2.00	0.559	
Ethylbenzene*	<0.050	0.050	07/30/2024	ND	1.92	96.2	2.00	2.18	
Total Xylenes*	<0.150	0.150	07/30/2024	ND	5.67	94.4	6.00	2.47	
Total BTEX	<0.300	0.300	07/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 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	07/31/2024	ND	448	112	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	07/30/2024	ND	194	96.9	200	1.26	
DRO >C10-C28*	23.0	10.0	07/30/2024	ND	193	96.5	200	6.74	
EXT DRO >C28-C36	<10.0	10.0	07/30/2024	ND					

Surrogate: 1-Chlorooctane 117 % 48.2-134

Surrogate: 1-Chlorooctadecane 119 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/30/2024  
 Reported: 08/02/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 07/30/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: SS 02 0.5' (H244524-02)**

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	1.90	95.0	2.00	0.283	
Toluene*	<0.050	0.050	07/30/2024	ND	1.87	93.6	2.00	0.559	
Ethylbenzene*	<0.050	0.050	07/30/2024	ND	1.92	96.2	2.00	2.18	
Total Xylenes*	<0.150	0.150	07/30/2024	ND	5.67	94.4	6.00	2.47	
Total BTEx	<0.300	0.300	07/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.4 % 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	32.0	16.0	07/31/2024	ND	448	112	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	07/30/2024	ND	194	96.9	200	1.26	
DRO >C10-C28*	<10.0	10.0	07/30/2024	ND	193	96.5	200	6.74	
EXT DRO >C28-C36	<10.0	10.0	07/30/2024	ND					

Surrogate: 1-Chlorooctane 117 % 48.2-134

Surrogate: 1-Chlorooctadecane 117 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/30/2024  
 Reported: 08/02/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 07/30/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: SS 03 0.5' (H244524-03)**

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	1.90	95.0	2.00	0.283		
Toluene*	<0.050	0.050	07/30/2024	ND	1.87	93.6	2.00	0.559		
Ethylbenzene*	<0.050	0.050	07/30/2024	ND	1.92	96.2	2.00	2.18		
Total Xylenes*	<0.150	0.150	07/30/2024	ND	5.67	94.4	6.00	2.47		
Total BTEx	<0.300	0.300	07/30/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 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	07/31/2024	ND	448	112	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	07/30/2024	ND	194	96.9	200	1.26	
DRO >C10-C28*	16.9	10.0	07/30/2024	ND	193	96.5	200	6.74	
EXT DRO >C28-C36	<10.0	10.0	07/30/2024	ND					

Surrogate: 1-Chlorooctane 120 % 48.2-134

Surrogate: 1-Chlorooctadecane 120 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/30/2024  
 Reported: 08/02/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 07/30/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: SS 04 0.5' (H244524-04)**

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	1.90	95.0	2.00	0.283	
Toluene*	<0.050	0.050	07/30/2024	ND	1.87	93.6	2.00	0.559	
Ethylbenzene*	<0.050	0.050	07/30/2024	ND	1.92	96.2	2.00	2.18	
Total Xylenes*	<0.150	0.150	07/30/2024	ND	5.67	94.4	6.00	2.47	
Total BTEx	<0.300	0.300	07/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.7 % 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	<16.0	16.0	07/31/2024	ND	448	112	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	07/30/2024	ND	194	96.9	200	1.26	
DRO >C10-C28*	<10.0	10.0	07/30/2024	ND	193	96.5	200	6.74	
EXT DRO >C28-C36	<10.0	10.0	07/30/2024	ND					

Surrogate: 1-Chlorooctane 114 % 48.2-134

Surrogate: 1-Chlorooctadecane 115 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/30/2024  
 Reported: 08/02/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 07/30/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: SS 05 0.5' (H244524-05)**

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	07/30/2024	ND	1.90	95.0	2.00	0.283		
Toluene*	<0.050	0.050	07/30/2024	ND	1.87	93.6	2.00	0.559		
Ethylbenzene*	<0.050	0.050	07/30/2024	ND	1.92	96.2	2.00	2.18		
Total Xylenes*	<0.150	0.150	07/30/2024	ND	5.67	94.4	6.00	2.47		
Total BTEX	<0.300	0.300	07/30/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.9 % 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	32.0	16.0	07/31/2024	ND	448	112	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	07/30/2024	ND	194	96.9	200	1.26	
DRO >C10-C28*	<10.0	10.0	07/30/2024	ND	193	96.5	200	6.74	
EXT DRO >C28-C36	<10.0	10.0	07/30/2024	ND					

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/30/2024  
 Reported: 08/02/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 07/30/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: SS 06 0.5' (H244524-06)**

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	07/30/2024	ND	1.90	95.0	2.00	0.283		
Toluene*	<0.050	0.050	07/30/2024	ND	1.87	93.6	2.00	0.559		
Ethylbenzene*	<0.050	0.050	07/30/2024	ND	1.92	96.2	2.00	2.18		
Total Xylenes*	<0.150	0.150	07/30/2024	ND	5.67	94.4	6.00	2.47		
Total BTEx	<0.300	0.300	07/30/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.5 % 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	07/31/2024	ND	448	112	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	07/31/2024	ND	216	108	200	3.03	
DRO >C10-C28*	<10.0	10.0	07/31/2024	ND	189	94.3	200	11.9	
EXT DRO >C28-C36	<10.0	10.0	07/31/2024	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 07/30/2024  
 Reported: 08/02/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 07/30/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: SS 07 0.5' (H244524-07)**

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	07/31/2024	ND	1.93	96.6	2.00	1.02		
Toluene*	<0.050	0.050	07/31/2024	ND	1.89	94.6	2.00	1.64		
Ethylbenzene*	<0.050	0.050	07/31/2024	ND	1.91	95.6	2.00	2.06		
Total Xylenes*	<0.150	0.150	07/31/2024	ND	5.66	94.3	6.00	1.67		
Total BTX	<0.300	0.300	07/31/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	<16.0	16.0	07/31/2024	ND	448	112	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	07/31/2024	ND	216	108	200	3.03	
DRO >C10-C28*	<10.0	10.0	07/31/2024	ND	189	94.3	200	11.9	
EXT DRO >C28-C36	<10.0	10.0	07/31/2024	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 113 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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---

### Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

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\*=Accredited Analyte

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A handwritten signature in cursive script, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



**Company Name:** Ensolum, LLC

[illegible]

Relinquished By: 

Received By: Spodionerz  
Received By: \_\_\_\_\_

2000

(Initials)

82

Verbal Result: ☐ Yes ☐ No Add'l Phone #:  
All Results are emailed. Please provide Email address:  
Emailings@ensolum.com hygreen@ensolum.com  
REMARKS:

Smackenzie@enslunm.com and ~~doe~~



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

---

August 26, 2024

KELLY LOWERY

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: SAND DUNES SOUTH CORRIDOR CTB

Enclosed are the results of analyses for samples received by the laboratory on 08/20/24 12:53.

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 "Mike Snyder".

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 08/20/2024  
 Reported: 08/26/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 08/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS 01 0.5 (H245053-01)**

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	08/21/2024	ND	2.18	109	2.00	5.63	
Toluene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	5.93	
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	6.47	
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.15	103	6.00	6.32	
Total BTEX	<0.300	0.300	08/21/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.6 % 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	3960	16.0	08/22/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/21/2024	ND	220	110	200	2.01	
DRO >C10-C28*	115	10.0	08/21/2024	ND	220	110	200	1.56	
EXT DRO >C28-C36	43.2	10.0	08/21/2024	ND					

Surrogate: 1-Chlorooctane 72.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.3 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 08/20/2024  
 Reported: 08/26/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 08/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS 02 0.5 (H245053-02)**

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	08/21/2024	ND	2.18	109	2.00	5.63		
Toluene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	5.93		
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	6.47		
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.15	103	6.00	6.32		
Total BTEX	<0.300	0.300	08/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.8 % 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	8000	16.0	08/22/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/21/2024	ND	220	110	200	2.01	
DRO >C10-C28*	22.4	10.0	08/21/2024	ND	220	110	200	1.56	
EXT DRO >C28-C36	<10.0	10.0	08/21/2024	ND					

Surrogate: 1-Chlorooctane 86.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 08/20/2024  
 Reported: 08/26/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 08/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS 03 0.5 (H245053-03)**

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	08/21/2024	ND	2.18	109	2.00	5.63		
Toluene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	5.93		
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	6.47		
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.15	103	6.00	6.32		
Total BTEX	<0.300	0.300	08/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.4 % 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	12000	16.0	08/22/2024	ND	432	108	400	3.64	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	08/21/2024	ND	220	110	200	2.01	
DRO >C10-C28*	28.5	10.0	08/21/2024	ND	220	110	200	1.56	
EXT DRO >C28-C36	<10.0	10.0	08/21/2024	ND					

Surrogate: 1-Chlorooctane 82.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 08/20/2024  
 Reported: 08/26/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 08/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS 04 0.5 (H245053-04)**

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	08/21/2024	ND	2.18	109	2.00	5.63		
Toluene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	5.93		
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	6.47		
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.15	103	6.00	6.32		
Total BTEX	<0.300	0.300	08/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 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	10000	16.0	08/22/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/21/2024	ND	220	110	200	2.01	
DRO >C10-C28*	216	10.0	08/21/2024	ND	220	110	200	1.56	
EXT DRO >C28-C36	64.5	10.0	08/21/2024	ND					

Surrogate: 1-Chlorooctane 77.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 08/20/2024  
 Reported: 08/26/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 08/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS 05 0.5 (H245053-05)**

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	08/21/2024	ND	2.18	109	2.00	5.63		
Toluene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	5.93		
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	6.47		
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.15	103	6.00	6.32		
Total BTEX	<0.300	0.300	08/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.0 % 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	12600	16.0	08/22/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/21/2024	ND	220	110	200	2.01	
DRO >C10-C28*	15.5	10.0	08/21/2024	ND	220	110	200	1.56	
EXT DRO >C28-C36	<10.0	10.0	08/21/2024	ND					

Surrogate: 1-Chlorooctane 98.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 120 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 08/20/2024  
 Reported: 08/26/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 08/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS 06 0.5 (H245053-06)**

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	08/21/2024	ND	2.18	109	2.00	5.63		
Toluene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	5.93		
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	6.47		
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.15	103	6.00	6.32		
Total BTEX	<0.300	0.300	08/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.2 % 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	9400	16.0	08/22/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/21/2024	ND	220	110	200	2.01	
DRO >C10-C28*	11.8	10.0	08/21/2024	ND	220	110	200	1.56	
EXT DRO >C28-C36	<10.0	10.0	08/21/2024	ND					

Surrogate: 1-Chlorooctane 89.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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\*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 08/20/2024  
 Reported: 08/26/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 08/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS 07 0.5 (H245053-07)**

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	08/21/2024	ND	2.18	109	2.00	5.63		
Toluene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	5.93		
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	6.47		
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.15	103	6.00	6.32		
Total BTEX	<0.300	0.300	08/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.3 % 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	5330	16.0	08/22/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/21/2024	ND	220	110	200	2.01	
DRO >C10-C28*	17.3	10.0	08/21/2024	ND	220	110	200	1.56	
EXT DRO >C28-C36	<10.0	10.0	08/21/2024	ND					

Surrogate: 1-Chlorooctane 91.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 08/20/2024  
 Reported: 08/26/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 08/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS 08 0.5 (H245053-08)**

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	08/21/2024	ND	2.18	109	2.00	5.63		
Toluene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	5.93		
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	6.47		
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.15	103	6.00	6.32		
Total BTEX	<0.300	0.300	08/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.0 % 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	3200	16.0	08/22/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/21/2024	ND	220	110	200	2.01	
DRO >C10-C28*	48.5	10.0	08/21/2024	ND	220	110	200	1.56	
EXT DRO >C28-C36	18.0	10.0	08/21/2024	ND					

Surrogate: 1-Chlorooctane 86.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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\*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 08/20/2024  
 Reported: 08/26/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 08/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS 09 0.5 (H245053-09)**

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	08/21/2024	ND	2.18	109	2.00	5.63		
Toluene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	5.93		
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	6.47		
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.15	103	6.00	6.32		
Total BTX	<0.300	0.300	08/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.4 % 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	9200	16.0	08/22/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/21/2024	ND	220	110	200	2.01	
DRO >C10-C28*	<10.0	10.0	08/21/2024	ND	220	110	200	1.56	
EXT DRO >C28-C36	<10.0	10.0	08/21/2024	ND					

Surrogate: 1-Chlorooctane 86.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 08/20/2024  
 Reported: 08/26/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 08/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS 10 0.5 (H245053-10)**

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	08/21/2024	ND	2.18	109	2.00	5.63		
Toluene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	5.93		
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	6.47		
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.15	103	6.00	6.32		
Total BTEX	<0.300	0.300	08/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.8 % 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	10700	16.0	08/22/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/21/2024	ND	220	110	200	2.01	
DRO >C10-C28*	<10.0	10.0	08/21/2024	ND	220	110	200	1.56	
EXT DRO >C28-C36	<10.0	10.0	08/21/2024	ND					

Surrogate: 1-Chlorooctane 77.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.6 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 08/20/2024  
 Reported: 08/26/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 08/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS 11 0.5 (H245053-11)**

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	08/21/2024	ND	2.18	109	2.00	5.63		
Toluene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	5.93		
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	6.47		
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.15	103	6.00	6.32		
Total BTEX	<0.300	0.300	08/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.5 % 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	3760	16.0	08/22/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/22/2024	ND	220	110	200	2.01	
DRO >C10-C28*	<10.0	10.0	08/22/2024	ND	220	110	200	1.56	
EXT DRO >C28-C36	<10.0	10.0	08/22/2024	ND					

Surrogate: 1-Chlorooctane 70.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.5 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 08/20/2024  
 Reported: 08/26/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 08/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS 12 0.5 (H245053-12)**

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	08/21/2024	ND	2.18	109	2.00	5.63		
Toluene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	5.93		
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.08	104	2.00	6.47		
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.15	103	6.00	6.32		
Total BTEX	<0.300	0.300	08/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.2 % 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	848	16.0	08/22/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/22/2024	ND	220	110	200	2.01	
DRO >C10-C28*	18.4	10.0	08/22/2024	ND	220	110	200	1.56	
EXT DRO >C28-C36	<10.0	10.0	08/22/2024	ND					

Surrogate: 1-Chlorooctane 78.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.7 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 08/20/2024  
 Reported: 08/26/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 08/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS 13 0.5 (H245053-13)**

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	08/21/2024	ND	2.02	101	2.00	0.745	
Toluene*	<0.050	0.050	08/21/2024	ND	2.10	105	2.00	0.614	
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.14	107	2.00	0.326	
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.66	111	6.00	0.244	
Total BTEX	<0.300	0.300	08/21/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	2400	16.0	08/22/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/21/2024	ND	239	120	200	1.67	
DRO >C10-C28*	34.4	10.0	08/21/2024	ND	229	114	200	2.64	
EXT DRO >C28-C36	12.2	10.0	08/21/2024	ND					

Surrogate: 1-Chlorooctane 81.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.2 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 08/20/2024  
 Reported: 08/26/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 08/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS 14 0.5 (H245053-14)**

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	08/21/2024	ND	2.02	101	2.00	0.745		
Toluene*	<0.050	0.050	08/21/2024	ND	2.10	105	2.00	0.614		
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.14	107	2.00	0.326		
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.66	111	6.00	0.244		
Total BTEX	<0.300	0.300	08/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	3640	16.0	08/22/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/21/2024	ND	239	120	200	1.67	
DRO >C10-C28*	3940	10.0	08/21/2024	ND	229	114	200	2.64	
EXT DRO >C28-C36	1040	10.0	08/21/2024	ND					

Surrogate: 1-Chlorooctane 84.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 152 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 08/20/2024  
 Reported: 08/26/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 08/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS 15 0.5 (H245053-15)**

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	08/21/2024	ND	2.02	101	2.00	0.745		
Toluene*	<0.050	0.050	08/21/2024	ND	2.10	105	2.00	0.614		
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.14	107	2.00	0.326		
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.66	111	6.00	0.244		
Total BTEX	<0.300	0.300	08/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 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	1280	16.0	08/22/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/21/2024	ND	239	120	200	1.67	
DRO >C10-C28*	40.8	10.0	08/21/2024	ND	229	114	200	2.64	
EXT DRO >C28-C36	<10.0	10.0	08/21/2024	ND					

Surrogate: 1-Chlorooctane 79.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.8 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 08/20/2024  
 Reported: 08/26/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 08/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS 16 0.5 (H245053-16)**

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	08/21/2024	ND	2.02	101	2.00	0.745		
Toluene*	<0.050	0.050	08/21/2024	ND	2.10	105	2.00	0.614		
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.14	107	2.00	0.326		
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.66	111	6.00	0.244		
Total BTEX	<0.300	0.300	08/21/2024	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	224	16.0	08/22/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/21/2024	ND	239	120	200	1.67	
DRO >C10-C28*	45.5	10.0	08/21/2024	ND	229	114	200	2.64	
EXT DRO >C28-C36	<10.0	10.0	08/21/2024	ND					

Surrogate: 1-Chlorooctane 89.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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\*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 08/20/2024  
 Reported: 08/26/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 08/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS 17 0.5 (H245053-17)**

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	08/22/2024	ND	2.02	101	2.00	0.745		
Toluene*	<0.050	0.050	08/22/2024	ND	2.10	105	2.00	0.614		
Ethylbenzene*	<0.050	0.050	08/22/2024	ND	2.14	107	2.00	0.326		
Total Xylenes*	<0.150	0.150	08/22/2024	ND	6.66	111	6.00	0.244		
Total BTEX	<0.300	0.300	08/22/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	256	16.0	08/22/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/21/2024	ND	239	120	200	1.67	
DRO >C10-C28*	1810	10.0	08/21/2024	ND	229	114	200	2.64	
EXT DRO >C28-C36	1030	10.0	08/21/2024	ND					

Surrogate: 1-Chlorooctane 93.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 164 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 08/20/2024  
 Reported: 08/26/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 08/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS 18 0.5 (H245053-18)**

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	08/21/2024	ND	2.02	101	2.00	0.745		
Toluene*	<0.050	0.050	08/21/2024	ND	2.10	105	2.00	0.614		
Ethylbenzene*	<0.050	0.050	08/21/2024	ND	2.14	107	2.00	0.326		
Total Xylenes*	<0.150	0.150	08/21/2024	ND	6.66	111	6.00	0.244		
Total BTEX	<0.300	0.300	08/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	5860	16.0	08/22/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/21/2024	ND	239	120	200	1.67	
DRO >C10-C28*	2220	10.0	08/21/2024	ND	229	114	200	2.64	
EXT DRO >C28-C36	1300	10.0	08/21/2024	ND					

Surrogate: 1-Chlorooctane 85.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 131 % 49.1-148

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

S-05	The surrogate recovery is outside of lab established statistical control limits but still within method limits. Data is not adversely affected.
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

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A handwritten signature in black ink, appearing to read "Mike Snyder".

Mike Snyder For 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

Company Name: Ensolum, LLC				<b>BILL TO</b>				ANALYSIS REQUEST											
Project Manager: Beaux Jennings				P.O. #:															
Address: 601 N. Marland St. STE 400				Company: OXY USA															
City: Midland State: TX Zip: 79701				Attn: Wade Dietrich															
Phone #: (210)219-8858 Email: bjennings@ensolum.com				Address:															
Project #: 038141398 Project Owner:				City:															
Project Name: Sand Dunes South Cavalier CTS				State: Zip:															
Project Location:				Phone #:															
Sample Name: Kaoru Shimada				Email:															
FOR LAB USE ONLY				PRESERV.				SAMPLING											
Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	DATE	TIME	BTEX 8021B	TPH 8015M	Chloride 4500	Hold								
1845053	CS01	0.5	1	1	GROUNDWATER	2-20-24	916	X	X	X									
2	CS02	7	1	1	WASTEWATER		917	X	X	X									
3	CS03	7	1	1	SOIL		918	X	X	X									
4	CS04	7	1	1	OIL		919	X	X	X									
5	CS05	7	1	1	SLUDGE		920	X	X	X									
6	CS06	7	1	1	OTHER :		921	X	X	X									
7	CS07	7	1	1	ACID/BASE:		922	X	X	X									
8	CS08	7	1	1	ICE / COOL		923	X	X	X									
9	CS09	7	1	1	OTHER :		924	X	X	X									
10	CS10	0.5	1	1			925	X	X	X									
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Relinquished By: Kaoru Shimada				Date: 2-20-24				Received By: S. Proctor				Time: 1:53							
Relinquished By:				Date:				Received By:				Time:							
Delivered By: (Circle One) Sampler - UPS - Blue - Other:				Observed Temp. °C: 41.1 Corrected Temp. °C: 35.1				Sample Condition Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/>				CHECKED BY: (Initials) SR							
Thermometer ID: #1140				Standard <input checked="" type="checkbox"/> Rough <input type="checkbox"/>				Bacteria (only) Sample Condition Observed Temp. °C: -0.0				Add'l Phone #: <input type="checkbox"/> Yes <input type="checkbox"/> No							
Correction Factor: -0.0				Thermometer ID: #1140				Standard <input checked="" type="checkbox"/> Rough <input type="checkbox"/>				Bacteria (only) Sample Condition Observed Temp. °C: -0.0				Add'l Phone #: <input type="checkbox"/> Yes <input type="checkbox"/> No			
Correction Factor: -0.0				Thermometer ID: #1140				Standard <input checked="" type="checkbox"/> Rough <input type="checkbox"/>				Bacteria (only) Sample Condition Observed Temp. °C: -0.0				Add'l Phone #: <input type="checkbox"/> Yes <input type="checkbox"/> No			

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

FORM-006 R 3.2 10/07/21





CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Ensolum, LLC		P.O. #:		BILL TO		ANALYSIS REQUEST	
Project Manager: Beaux Jennings		Company: OXY USA					
Address: 601 N. Marland St. STE 400		Attn: Wade Dittrich					
City: Midland State: TX Zip: 79701		Address:					
Phone #: (210)219-8858 Email:bjennings@ensolum.com		City:					
Project #: 03841198 Project Owner:		State:					
Project Location: Sam Daves South Corridor 478		Zip:					
Sampler Name: Kaoru Shimada		Email:					
FOR LAB USE ONLY		PRESERV.		SAMPLING			
Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	DATE	TIME
					GROUNDWATER		
					WASTEWATER		
					SOIL		
					OIL		
					SLUDGE		
					OTHER :		
					ACID/BASE:		
					ICE / COOL		
					OTHER :		
11	CS11	0.5				8-20-14	923
13	12	7				924	924
13	13	7				925	925
14	14	7				926	926
15	15	7				927	927
16	16	7				928	928
17	17	7				929	929
18	18	7				930	930
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Relinquished By: Kaoru Shimada		Received By: Steelkings		Verbal Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Phone #:	
Relinquished By: Time: 12:53		Received By: Date: 8-20-14		All Results are emailed. Please provide Email address: bjennings@ensolum.com, smackenzie@ensolum.com			
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Observed Temp. °C Corrected Temp. °C		Sample Condition Cool Intact <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No		CHECKED BY: (Initials) 88	
FORM-006 R.3.2 10/07/21		† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com		Thermometer ID #413 Correction Factor -0.02		Thermometer ID #413 Correction Factor -0.02	





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---

November 13, 2024

SAMANTHA MACKENZIE

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: SAND DUNES SOUTH CORRIDOR CTB

Enclosed are the results of analyses for samples received by the laboratory on 11/07/24 14:10.

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: 11/07/2024  
 Reported: 11/13/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 11/04/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 03 1' (H246799-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	11/11/2024	ND	416	104	400	3.77	

**Sample ID: FS 04 1' (H246799-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	11/11/2024	ND	416	104	400	3.77	

**Sample ID: FS 05 1' (H246799-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	11/11/2024	ND	416	104	400	3.77	

**Sample ID: FS 10 1' (H246799-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	816	16.0	11/11/2024	ND	416	104	400	3.77	

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 11/07/2024  
 Reported: 11/13/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 11/04/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS 14 1' (H246799-05)**

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	172	86.2	200	15.9	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	183	91.4	200	2.54	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					
<hr/>									
Surrogate: 1-Chlorooctane	130 %	48.2-134							
Surrogate: 1-Chlorooctadecane	136 %	49.1-148							

**Sample ID: FS 17 1' (H246799-06)**

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	172	86.2	200	15.9	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	183	91.4	200	2.54	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					
Surrogate: 1-Chlorooctane	122 %	48.2-134							
Surrogate: 1-Chlorooctadecane	126 %	49.1-148							

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 11/07/2024  
Reported: 11/13/2024  
Project Name: SAND DUNES SOUTH CORRIDOR CTB  
Project Number: 03B1417198  
Project Location: OXY 32.223643, -103.812787

Sampling Date: 11/04/2024  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: FS 18 1' (H246799-07)**

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	11/08/2024	ND	172	86.2	200	15.9	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	183	91.4	200	2.54	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					
<hr/>									
Surrogate: 1-Chlorooctane	120 %	48.2-134							
Surrogate: 1-Chlorooctadecane	123 %	49.1-148							

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 11/07/2024  
 Reported: 11/13/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 11/04/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW 01 0-1' (H246799-08)**

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	11/10/2024	ND	2.09	104	2.00	5.53	
Toluene*	<0.050	0.050	11/10/2024	ND	1.99	99.3	2.00	5.30	
Ethylbenzene*	<0.050	0.050	11/10/2024	ND	1.98	99.1	2.00	4.93	
Total Xylenes*	<0.150	0.150	11/10/2024	ND	5.87	97.9	6.00	4.88	
Total BTEx	<0.300	0.300	11/10/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.9 % 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	192	16.0	11/11/2024	ND	416	104	400	3.77	

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	11/11/2024	ND	172	86.2	200	15.9	
DRO >C10-C28*	<10.0	10.0	11/11/2024	ND	183	91.4	200	2.54	
EXT DRO >C28-C36	<10.0	10.0	11/11/2024	ND					

Surrogate: 1-Chlorooctane 114 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.0 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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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: 11/07/2024  
 Reported: 11/13/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 11/04/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW 02 0-1' (H246799-09)**

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	11/10/2024	ND	2.09	104	2.00	5.53	
Toluene*	<0.050	0.050	11/10/2024	ND	1.99	99.3	2.00	5.30	
Ethylbenzene*	<0.050	0.050	11/10/2024	ND	1.98	99.1	2.00	4.93	
Total Xylenes*	<0.150	0.150	11/10/2024	ND	5.87	97.9	6.00	4.88	
Total BTEX	<0.300	0.300	11/10/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 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	192	16.0	11/11/2024	ND	416	104	400	3.77		

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	172	86.2	200	15.9	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	183	91.4	200	2.54	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane 130 % 48.2-134

Surrogate: 1-Chlorooctadecane 136 % 49.1-148

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\*=Accredited Analyte

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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: 11/07/2024  
 Reported: 11/13/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 11/04/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW 03 0-1' (H246799-10)**

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	11/10/2024	ND	2.09	104	2.00	5.53	
Toluene*	<0.050	0.050	11/10/2024	ND	1.99	99.3	2.00	5.30	
Ethylbenzene*	<0.050	0.050	11/10/2024	ND	1.98	99.1	2.00	4.93	
Total Xylenes*	<0.150	0.150	11/10/2024	ND	5.87	97.9	6.00	4.88	
Total BTEX	<0.300	0.300	11/10/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 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	208	16.0	11/11/2024	ND	416	104	400	3.77		

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	172	86.2	200	15.9	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	183	91.4	200	2.54	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane 127 % 48.2-134

Surrogate: 1-Chlorooctadecane 132 % 49.1-148

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\*=Accredited Analyte

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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: 11/07/2024  
 Reported: 11/13/2024  
 Project Name: SAND DUNES SOUTH CORRIDOR CTB  
 Project Number: 03B1417198  
 Project Location: OXY 32.223643, -103.812787

Sampling Date: 11/04/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW 04 0-1' (H246799-11)**

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	11/10/2024	ND	2.09	104	2.00	5.53		
Toluene*	<0.050	0.050	11/10/2024	ND	1.99	99.3	2.00	5.30		
Ethylbenzene*	<0.050	0.050	11/10/2024	ND	1.98	99.1	2.00	4.93		
Total Xylenes*	<0.150	0.150	11/10/2024	ND	5.87	97.9	6.00	4.88		
Total BTEx	<0.300	0.300	11/10/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.3 % 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	160	16.0	11/11/2024	ND	416	104	400	3.77	

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	172	86.2	200	15.9	
DRO >C10-C28*	<10.0	10.0	11/08/2024	ND	183	91.4	200	2.54	
EXT DRO >C28-C36	<10.0	10.0	11/08/2024	ND					

Surrogate: 1-Chlorooctane 129 % 48.2-134

Surrogate: 1-Chlorooctadecane 134 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- 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.
- ND      Analyte NOT DETECTED at or above the reporting limit
- RPD      Relative Percent Difference
- \*\*      Samples not received at proper temperature of 6°C or below.
- \*\*\*      Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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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

Project Manager: ~~Beau Jennings~~ Samantha Mackenzie

Address: 601 N Marientfield Street, Suite 400

City: Midland

State: TX Zip: 79701

Phone #: 210-219-8858

Fax #:

Project #: 03B1417198

Project Owner:

Project Name: Sand Dunes South Corridor CTB

Project Location: Eddy County

Sampler Name: Tabitha Gueden

P.O. #:

Company: Oxy USA Inc.

Attn: Wade Dittrich

Address:

City:

State: Zip:

Phone #: 575-390-2828

Fax #:

BILL TO

ANALYSIS REQUEST

1/2

Project Manager: <del>Beatrix Jennings</del> <i>tg Samantha Hadden</i> <i>212</i>													P.O. #.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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Sampler Name: <i>Tabitha Gueden</i>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.	SAMPLING																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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Relinquished By:

Date: 11/5/24

Received By:

Verbal Result: ☐ Yes ☐ No

Add'l Phone #:

Refiniquished By:

Date: 11/7/24

Received By:

All Results are emailed. Please provide Email address:

REMARKS: smackenzie@ensolum.com

Delivered By: (Circle One)

Observed Temp.: 83

Sample Condition

Turnaround Time:

Standard ☒ Bacteria (only) Sample Condition

Sampler - UPS - Bus - Other:

Corrected Temp.: 1.9

Cool Intact ☐ Yes ☐ No

Thermometer ID #434140

Correction Factor -0.6°C

Observed Temp.: 83

Corrected Temp.: 1.9

Cool Intact ☐ Yes ☐ No

Thermometer ID #434140

Correction Factor -0.6°C

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





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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2/2

<b>Company Name:</b> Ensolum, LLC							<b>BILL TO</b>							<b>ANALYSIS REQUEST</b>											
<b>Project Manager:</b> Beau Jennings Samantha Mackenzie							<b>P.O. #:</b>																		
<b>Address:</b> 601 N. Marlenfeld St. STE 400							<b>Company:</b> Oxy USA, Inc.																		
<b>City:</b> Midland							<b>Attn:</b> Wade Dittich																		
<b>State:</b> TX <b>Zip:</b> 79701							<b>Address:</b>																		
<b>Phone #:</b> 210-219-8858							<b>Fax #:</b>																		
<b>Project #:</b> 03B1417198							<b>Project Owner:</b>																		
<b>Project Location:</b> Sand Dunes South Corridor CTB							<b>City:</b>																		
<b>Eddy County</b>							<b>State:</b>							<b>Zip:</b>											
<b>Sampler Name:</b> Tabitha Guadian							<b>Phone #:</b> 575-390-2828																		
<b>FOR LAB USE ONLY</b>							<b>Fax #:</b>																		
Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					PRESERV	SAMPLING														
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME										
H246799	SWCH	0-1'	C1	X			X							11/14/24	1118	X	X	X							
<p><b>PLEASE NOTE:</b> 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.</p>																									
<b>Relinquished By:</b> [Signature]							<b>Date:</b> 11/5/24							<b>Received By:</b>											
<b>Time:</b> 12:00																									
<b>Relinquished By:</b> [Signature]							<b>Date:</b> 11-7-24							<b>Received By:</b> [Signature]											
<b>Time:</b> 14:10																									
<b>Delivered By:</b> (Circle One) <input checked="" type="checkbox"/> UPS <input type="checkbox"/> Bus <input type="checkbox"/> Other:							<b>Observed Temp. °C:</b> 2.3							<b>Corrected Temp. °C:</b> 1.9											
							<b>Cool Intact</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							<b>CHECKED BY:</b> [Signature] (Initials)											
<b>Turnaround Time:</b>							<b>Standard</b> <input type="checkbox"/>							<b>Rush</b> <input checked="" type="checkbox"/>											
<b>Thermometer ID - #448</b>							<b>Bacteria (only)</b> <input type="checkbox"/>							<b>Cool Intact</b> <input type="checkbox"/>											
<b>Correction Factor - 0.5°C</b>							<b>Yes</b> <input type="checkbox"/> <b>No</b> <input type="checkbox"/>							<b>Observed Temp. °C</b>											
							<b>Yes</b> <input type="checkbox"/> <b>No</b> <input type="checkbox"/>							<b>Corrected Temp. °C</b>											
<b>REMARKS:</b> Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No   Add'l Phone #: _____ All Results are emailed. Please provide Email address: <a href="mailto:bjennings@ensolum.com">bjennings@ensolum.com</a> <a href="mailto:smackenzie@ensolum.com">smackenzie@ensolum.com</a>																									



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

September 25, 2024

KELLY LOWERY

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: RAMIREZ & SONS CALICHE PIT

Enclosed are the results of analyses for samples received by the laboratory on 09/20/24 13:03.

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 style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager





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**Analytical Results For:**

ENSOLUM, LLC  
 KELLY LOWERY  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 09/20/2024  
 Reported: 09/25/2024  
 Project Name: RAMIREZ & SONS CALICHE PIT  
 Project Number: 03B1417168  
 Project Location: OXY - LEA COUNTY, NM

Sampling Date: 09/19/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: RAMIREZ & SONS CALICHE PIT (H245739-01)**

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	09/23/2024	ND	1.94	96.9	2.00	9.04		
Toluene*	<0.050	0.050	09/23/2024	ND	1.92	95.9	2.00	8.44		
Ethylbenzene*	<0.050	0.050	09/23/2024	ND	1.99	99.4	2.00	7.64		
Total Xylenes*	<0.150	0.150	09/23/2024	ND	5.95	99.2	6.00	7.49		
Total BTX	<0.300	0.300	09/23/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	09/23/2024	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	09/20/2024	ND	220	110	200	2.49	
DRO >C10-C28*	<10.0	10.0	09/20/2024	ND	218	109	200	2.01	
EXT DRO >C28-C36	<10.0	10.0	09/20/2024	ND					

Surrogate: 1-Chlorooctane 87.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.3 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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### Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

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\*=Accredited Analyte

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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



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

QUESTIONS

Action 421812

**QUESTIONS**

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 421812
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

<b>Prerequisites</b>	
Incident ID (n#)	nAPP2225058146
Incident Name	NAPP2225058146 SAND DUNES SOUTH CORRIDOR CTB @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Received
Incident Facility	[fAPP2127048458] Sand Dunes South Corridor CTB

**Location of Release Source**

Please answer all the questions in this group.

Site Name	SAND DUNES SOUTH CORRIDOR CTB
Date Release Discovered	08/15/2022
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	Not answered.
Produced Water Released (bbls) Details	Cause: Equipment Failure   Flow Line - Production   Produced Water   Released: 30 BBL   Recovered: 10 BBL   Lost: 20 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.

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QUESTIONS, Page 2

Action 421812

**QUESTIONS (continued)**

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 421812
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**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: <a href="mailto:wade_dittrich@oxy.com">wade_dittrich@oxy.com</a> Date: 01/16/2025
--	--

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QUESTIONS, Page 3

Action 421812

**QUESTIONS (continued)**

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 421812
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**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 51 and 75 (ft.)
What method was used to determine the depth to ground water	U.S. Geological Survey
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 1000 (ft.) and ½ (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between ½ and 1 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1000 (ft.) and ½ (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1000 (ft.) and ½ (mi.)
Any other fresh water well or spring	Between 1000 (ft.) and ½ (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1000 (ft.) and ½ (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between ½ and 1 (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)	12600
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	4980
GRO+DRO (EPA SW-846 Method 8015M)	3940
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	11/04/2024
On what date will (or was) the remediation complete(d)	11/04/2024
What is the estimated surface area (in square feet) that will be reclaimed	3246
What is the estimated volume (in cubic yards) that will be reclaimed	74
What is the estimated surface area (in square feet) that will be remediated	3246
What is the estimated volume (in cubic yards) that will be remediated	74
<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>	



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QUESTIONS, Page 4

Action 421812

**QUESTIONS (continued)**

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 421812
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**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	R360 ARTESIA LLC LANDFARM [EEM0112340644]
<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: <a href="mailto:wade_dittrich@oxy.com">wade_dittrich@oxy.com</a> 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>	

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QUESTIONS, Page 5

Action 421812

QUESTIONS (continued)

Operator:  OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID:  16696
	Action Number:  421812
	Action Type:  [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

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

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QUESTIONS, Page 6

Action 421812

**QUESTIONS (continued)**

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 421812
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

Sampling Event Information	
Last sampling notification (C-141N) recorded	397620
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	10
What was the sampling surface area in square feet	3772

Remediation Closure Request	
<i>Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.</i>	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	3246
What was the total volume (cubic yards) remediated	74
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	3246
What was the total volume (in cubic yards) reclaimed	74
Summarize any additional remediation activities not included by answers (above)	NA
<i>The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (in .pdf format) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.</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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.	
I hereby agree and sign off to the above statement	Name: Wade Dittrich Title: Environmental Coordinator Email: <a href="mailto:wade_dittrich@oxy.com">wade_dittrich@oxy.com</a> Date: 01/16/2025

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QUESTIONS, Page 7  
  
Action 421812

QUESTIONS (continued)

Operator:  OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID:  16696
	Action Number:  421812
	Action Type:  [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Action 421812

**CONDITIONS**

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 421812
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**CONDITIONS**

Created By	Condition	Condition Date
crystal.walker	A reclamation report will not be accepted until reclamation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	1/22/2025
crystal.walker	The reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. The OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	1/22/2025
crystal.walker	A revegetation report will not be accepted until revegetation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	1/22/2025
crystal.walker	All revegetation activities will need to be documented and included in the revegetation report. The revegetation report will need to include: An executive summary of the revegetation activities including: Seed mix, Method of seeding, dates of when the release area was reseeded, information pertinent to inspections, information about any amendments added to the soil, information on how the vegetative cover established meets the life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds per 19.15.29.13 D.(3) NMAC, and any additional information; a scaled Site Map including area that was revegetated in square feet; and pictures of the revegetated areas during reseeding activities, inspections, and final pictures when revegetation is achieved.	1/22/2025