



# ENSOLUM

## REVISED CLOSURE REPORT

Property:

**Sundance 1-3 CTB**

**Eddy County, New Mexico  
32.247216 N, 103.724486 W  
NMOCD Incident ID: nAPP2215132849**

August 9, 2023

Ensolum Project No. 03B1417045

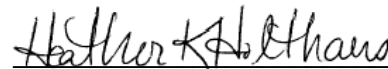
Prepared for:

**Oxy USA Inc.  
P.O. Box 4294  
Houston, TX 77210  
Attn: Mr. Wade Dittrich**

Prepared by:



Beaux Jennings  
Senior Project Manager



Heather Holthaus  
Senior Project Manager



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## REVISED CLOSURE REPORT

### Sundance 1-3 CTB

Eddy County, New Mexico  
32.247216 N, 103.724486 W  
NMOCD Incident ID: nAPP2215132849

Ensolum Project No. 03B1417045

## 1.0 INTRODUCTION

### 1.1 Executive Summary

- On May 9, 2022, a release of crude oil and produced water was reported from a produced water tank that overflowed due to a water transfer pump that tripped at the Sundance 1-3 CTB, hereinafter referred to as the "Site". Approximately 10 barrels (bbls) of crude oil and 45 bbls of produced water were released onto the ground surface and impacted an area approximately 55 feet long by 40 feet wide. During initial response actions, approximately 10 bbls of crude oil and 35 bbls of produced water were recovered. The Remediation Work Plan, prepared by Ensolum, LLC (Ensolum) on behalf of Oxy USA Inc. (Oxy), stated that a soil boring to confirm depth to water in the area would be installed. Subsequent to the results of the depth to water soil boring, the release area would be excavated to meet applicable Closure Criteria.
- On May 31, 2022, Ensolum arrived on-Site and collected a total of eight composite soil samples from two locations (CS-1 and CS-2), two from each location at one-foot intervals down to a depth of four feet below ground surface (bgs), within the release area.
- Due to the unknown depth to groundwater in the 0.5-mile vicinity, a depth to water soil boring (SB-1/C-04672-POD-1) was installed on September 1, 2022 by Ensolum personnel. The soil boring was installed on Oxy property approximately 0.3-mile southwest of the Site. The soil boring was installed to 110 feet bgs, and groundwater was not encountered 72-hours after the soil boring was installed. The applicable Closure Criteria were utilized based on the lack of groundwater observed within the first 110 feet bgs at the Site.
- Between December 22, 2022 and January 17, 2023, Ensolum arrived on-Site and collected a total of 13 composite soil samples from eight locations on the excavation floor (FS-1 through FS-8), and three composite soil samples from two locations on the excavation sidewalls (SW-1 and SW-2). The composite floor samples were collected at depths ranging from 1-3 feet bgs and the sidewall samples were collected at depths ranging from 0-3 feet bgs.
- The primary objective of the closure activities was to reduce chemical of concern (COC) concentrations in the on-Site soils to below the applicable New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD) Closure Criteria for Soils Impacted by a Release using the New Mexico Administrative Code (NMAC) 19.15.29 Releases as guidance.
- The final excavation area measured approximately 55 feet long by 40 feet wide. The maximum depth of the impacted area measured approximately three feet bgs.
- On February 15, 2023, a Closure Report was submitted to the New Mexico EMNRD OCD for approval.

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- On June 15, 2023, the New Mexico EMNRD OCD rejected the Closure Report. Steps were subsequently taken by Oxy to address the requirements needed for closure.
- Based on the request from the New Mexico EMNRD OCD, horizontal delineation samples (BG-N, BG-E, BG-S, and BG-W) were collected outside of the spill extent on August 8, 2023.
- Based on the laboratory analytical results, the final soil samples did not exhibit benzene, total benzene, toluene, ethylbenzene, and xylene (BTEX), total petroleum hydrocarbons (TPH), gasoline range organics (GRO), diesel range organics (DRO), motor oil range organics (MRO) or chloride concentrations above the applicable NMOCD Closure Criteria. Subsequent to the results of the confirmation soil sampling, the excavated soils were removed and taken off-Site for proper disposal and the excavated area was backfilled with clean fill material, and then contoured to the original surrounding grade.

**Based on field observations and laboratory analytical results, no additional investigation or corrective action appears warranted at this time.**

## 1.2 Site Description & Background

<b>Operator:</b>	Oxy USA Inc. (Oxy)
<b>Site Name:</b>	Sundance 1-3 CTB
<b>Location:</b>	Eddy County, New Mexico 32.247216 N, 103.724486 W
<b>Property:</b>	Bureau of Land Management (BLM)
<b>Regulatory:</b>	New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

The Topographic Map depicting the location of the Site is included as **Figure 1**, the Site Vicinity Map is included as **Figure 2**, the Site Map indicating the locations of composite soil samples is included as **Figure 3**, and the Closure Criteria Map is included as **Figure 4** in **Appendix A**.

## 1.3 Project Objective

The primary objective of the closure activities was to reduce COC concentrations in the on-Site soils to below the applicable New Mexico EMNRD OCD closure criteria concentrations.

## 2.0 CLOSURE CRITERIA

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. In order to address activities related to exempt oil and gas releases, the New Mexico EMNRD OCD references NMAC 19.15.29 *Releases*, which establishes investigation and abatement action requirements for sites subject to reporting and/or corrective action. Ensolum utilized information provided by Oxy, the general site characteristics, and information available from the New Mexico Office of the State Engineer (OSE) and the New Mexico EMNRD OCD Imaging database to determine the appropriate closure criteria for the Site.

- The Site is not located within 300 feet of a New Mexico EMNRD OCD-defined continuously flowing watercourse or any other significant watercourse.
- The Site is not located within 200 feet of a lakebed, sinkhole, or playa lake.
- The Site is not located within 300 feet from an occupied permanent residence, school, hospital, institution, or church.



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- According to the OSE WRSS database there are no private, domestic freshwater wells used by less than five (5) households for domestic or stock water purposes identified within 500 feet of the Site.
- According to the OSE WRSS database there are no freshwater wells identified within 1,000 feet of the Site as declared in the previous bullet.
- The Site is not located within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3.
- The Site is not located within 300 feet of a wetland.
- Based on information identified on the New Mexico Mining and Minerals Division's GIS, Maps and Mine Data database, the Site is not located within an area overlying a subsurface mine.
- Based on the Karst Occurrence Potential (.kmz) provided by the Bureau of Land Management (BLM), the Site is not located within an unstable area.
- The Site is noted to be located within an area of minimal flood hazard.

Based on the identified siting criteria, cleanup goals for soils remaining in place at the Site include:

Closure Criteria for Soils Impacted by a Release			
Minimum depth below any point within horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	Constituent	Method	Limit
>100 feet	Chloride	EPA 300.0 or SM4500 Cl B	20,000 mg/kg
	TPH (GRO+DRO)	EPA SW-846 Method 8015M	1,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

### 3.0 SOIL REMEDIATION ACTIVITIES

On May 9, 2022, a release of crude oil and produced water was reported from a produced water tank that overflowed due to a water transfer pump that tripped at the Site. Approximately 10 bbls of crude oil and 45 bbls of produced water were released onto the ground surface and impacted an area approximately 55 feet long by 40 feet wide. During initial response actions, approximately 10 bbs of crude oil and 35 bbls of produced water were recovered. The Remediation Work Plan, prepared by Ensolum on behalf of Oxy, stated that a soil boring to confirm depth to water in the area would be installed. Subsequent to the results of the depth to water soil boring, the release area would be excavated to meet applicable Closure Criteria.

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Sundance 1-3 CTB  
August 9, 2023



On May 31, 2022, Ensolum arrived on-Site and collected a total of eight composite soil samples from two locations (CS-1 and CS-2), two from each location at one-foot intervals down to a depth of four feet bgs, within the release area.

Due to the unknown depth to groundwater in the 0.5-mile vicinity, a depth to water soil boring (SB-1/C-04672-POD-1) was installed on September 1, 2022 by Ensolum personnel. The soil boring was installed on Oxy property approximately 0.3-mile southwest of the Site. The soil boring was installed to 110 feet bgs, and groundwater was not encountered 72-hours after the soil boring was installed. The applicable Closure Criteria were utilized based on the lack of groundwater observed within the first 110 feet bgs at the Site.

Between December 22, 2022 and January 17, 2023, Ensolum arrived on-Site and collected a total of 13 composite soil samples from eight locations on the excavation floor (FS-1 through FS-8), and three composite soil samples from two locations on the excavation sidewalls (SW-1 and SW-2). The composite floor samples were collected at depths ranging from 1-3 feet bgs and the sidewall samples were collected at depths ranging from 0-3 feet bgs.

On February 15, 2023, a Closure Report was submitted to the New Mexico EMNRD OCD for approval.

On June 15, 2023, the New Mexico EMNRD OCD rejected the Closure Report. Steps were subsequently taken by Oxy to address the requirements needed for closure.

Based on the request from the New Mexico EMNRD OCD, horizontal delineation samples (BG-N, BG-E, BG-S, and BG-W) were collected outside of the spill extent on August 8, 2023, at depths of 0-0.25 feet bgs.

Based on the laboratory analytical data of the final excavation soil samples, no additional excavation was required. Subsequent to the results of the final composite soil sampling, the excavated soils were removed and taken off-Site for proper disposal.

The final excavation area measured approximately impacted area measured approximately 40 feet wide and 55 feet long. The maximum depth of the impacted area measured approximately three feet bgs.

The lithology encountered during the completion of sampling activities consisted primarily of a reddish yellow silty sand.

**Figure 3** identifies approximate soil sample locations and approximate dimensions of the impacted area with respect to the Site (**Appendix A**). Photographic documentation of the field activities is included in **Appendix C**.

#### 4.0 SOIL SAMPLING PROGRAM

Ensolum's composite soil sampling program included the collection of a total of 24 composite soil samples from 12 locations within the excavation area (CS-1, CS-2, FS-1 through FS-8, SW-1 and SW-2). The composite soil samples were collected at depths ranging from zero to four feet bgs. In addition, horizontal delineation samples (BG-1 through BG-4) were also collected outside of the spill extent at depths of 0-0.25 feet bgs.

The composite soil samples were collected and placed in laboratory prepared glassware, labeled/sealed using laboratory supplied labels and custody seals, and stored on ice in a cooler. The samples were relinquished to Cardinal Laboratories in Hobbs, New Mexico for standard laboratory analysis.

#### 5.0 SOIL LABORATORY ANALYTICAL METHODS

The composite soil samples were analyzed for BTEX utilizing Environmental Protection Agency (EPA) SW-846 Method 8021B, TPH GRO/DRO/MRO utilizing EPA SW-846 Method 8015M, and chloride utilizing EPA Method 4500-Cl B.

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Laboratory analytical results are summarized in **Table 1** in **Appendix D**. The executed chain-of-custody forms and laboratory analytical reports are provided in **Appendix E**.

## 6.0 DATA EVALUATION

Ensolum compared the benzene, total BTEX, TPH GRO/DRO/MRO, and chloride concentrations associated with the excavation floor (FS-1 through FS-8), the excavation sidewalls (SW-1 and SW-2), and horizontal delineation samples (BG-N, BG-E, BG-S, and BG-W) to the applicable NMOCD Closure Criteria.

- Laboratory analytical results indicate benzene concentrations for the final soil samples are below the laboratory sample detection limits (SDLs) and/or the applicable NMOCD Closure Criteria of 10 milligrams per kilogram (mg/kg).
- Laboratory analytical results indicate that total BTEX concentrations for the final soil samples below the laboratory SDLs and/or the applicable NMOCD Closure Criteria of 50 mg/kg.
- Laboratory analytical results indicate combined TPH GRO/DRO concentrations for the final soil samples are below the applicable NMOCD Closure Criteria of 1,000 mg/kg.
- Laboratory analytical results indicate combined TPH GRO/DRO/MRO concentrations for the final soil samples are below the applicable NMOCD Closure Criteria of 2,500 mg/kg.
- Laboratory analytical results indicate chloride concentrations for the final soil samples are below the applicable NMOCD Closure Criteria of 20,000 mg/kg.

Laboratory analytical results are summarized in **Table 1** in **Appendix D**.

## 7.0 RECLAMATION AND RE-VEGETATION

Subsequent to the results of the final confirmation soil sampling, the identified impacted soils were removed and taken off-Site for proper disposal. The excavated area was backfilled with clean fill material, and then contoured to the original surrounding grade. The spill area is a caliche pad and does not require reclamation or revegetation at this time.

## 8.0 FINDINGS AND RECOMMENDATION

- On May 9, 2022, a release of crude oil and produced water was reported from a produced water tank that overflowed due to a water transfer pump that tripped at the Site. Approximately 10 bbls of crude oil and 45 bbls of produced water were released onto the ground surface and impacted an area approximately 55 feet long by 40 feet wide. During initial response actions, approximately 10 bbls of crude oil and 35 bbls of produced water were recovered. The Remediation Work Plan, prepared by Ensolum on behalf of Oxy, stated that a soil boring to confirm depth to water in the area would be installed. Subsequent to the results of the depth to water soil boring, the release area would be excavated to meet applicable Closure Criteria.
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- The final excavation area measured approximately 40 feet wide and 55 feet long. The maximum depth of the impacted area measured approximately three feet bgs.
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- On June 15, 2023, the New Mexico EMNRD OCD rejected the Closure Report. Steps were subsequently taken by Oxy to address the requirements needed for closure.
- Based on the request from the New Mexico EMNRD OCD, horizontal delineation samples (BG-N, BG-E, BG-S, and BG-W) were collected outside of the spill extent on August 8, 2023.
- Based on the laboratory analytical results, the final composite soil samples did not exhibit benzene, BTEX, TPH GRO/DRO/MRO or chloride concentrations above the applicable NMOCD Closure Criteria.
- Subsequent to the results of the final confirmation soil sampling, the identified impacted soils were removed and taken off-Site for proper disposal. The excavated area was backfilled with clean fill material, and then contoured to the original surrounding grade. The spill area is a caliche pad and does not require reclamation or revegetation at this time.

**Based on field observations and laboratory analytical results, no additional investigation or corrective action appears warranted at this time.**

## **9.0 STANDARDS OF CARE, LIMITATIONS, AND RELIANCE**

### **9.1 Standard of Care**

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

### **9.2 Limitations**

Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-Site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and Ensolum cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during the investigation. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. Ensolum's findings, and recommendations are based solely upon data available to Ensolum at the time of these services.

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Sundance 1-3 CTB  
August 9, 2023



### 9.3 Reliance

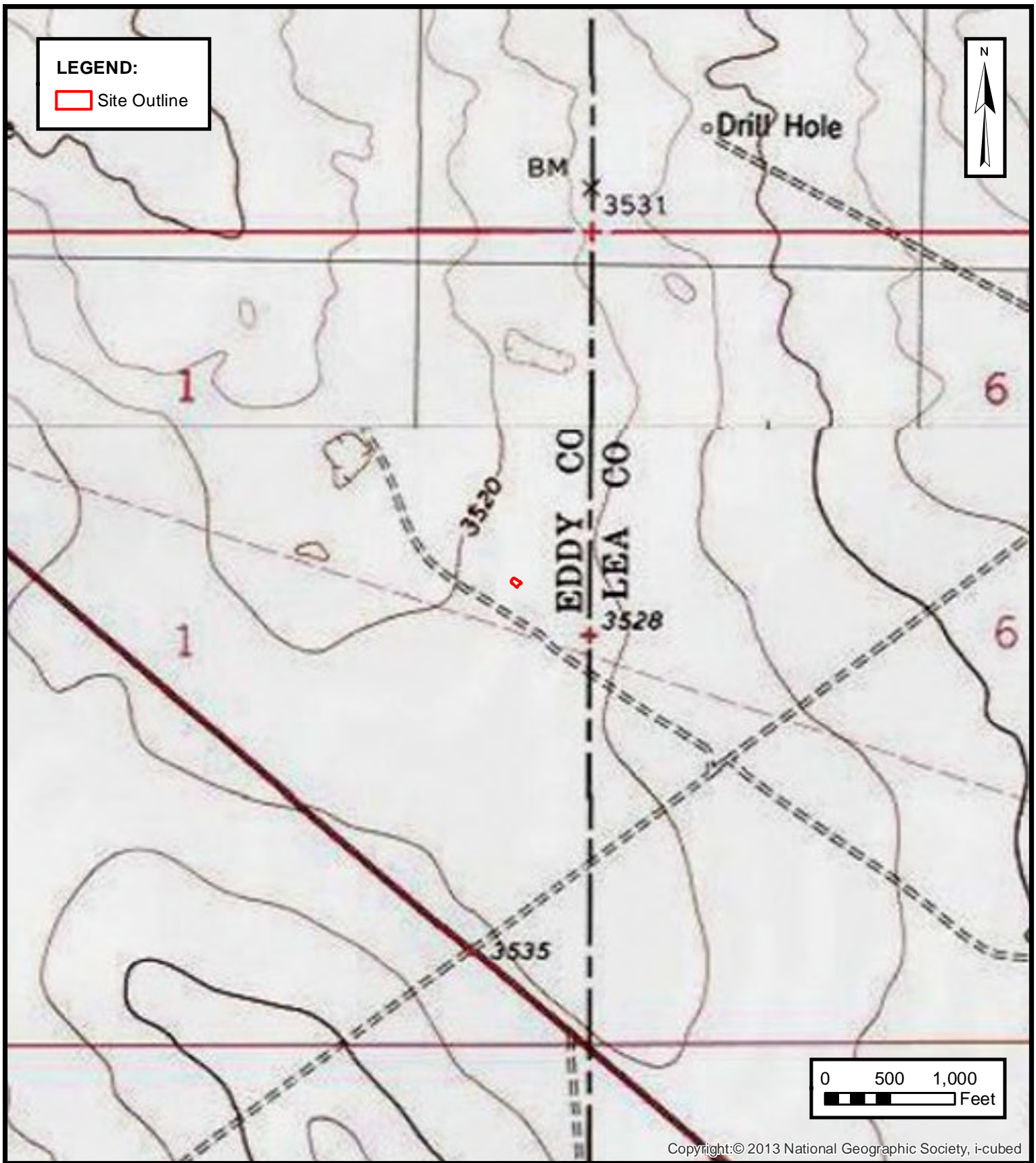
This report has been prepared for the exclusive use of Oxy USA, Inc., and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the express written authorization Oxy USA, Inc. and Ensolum. Any unauthorized distribution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



## APPENDIX A

### Figures





**ENSOLUM**  
Environmental & Hydrogeologic Consultants

### TOPOGRAPHIC MAP

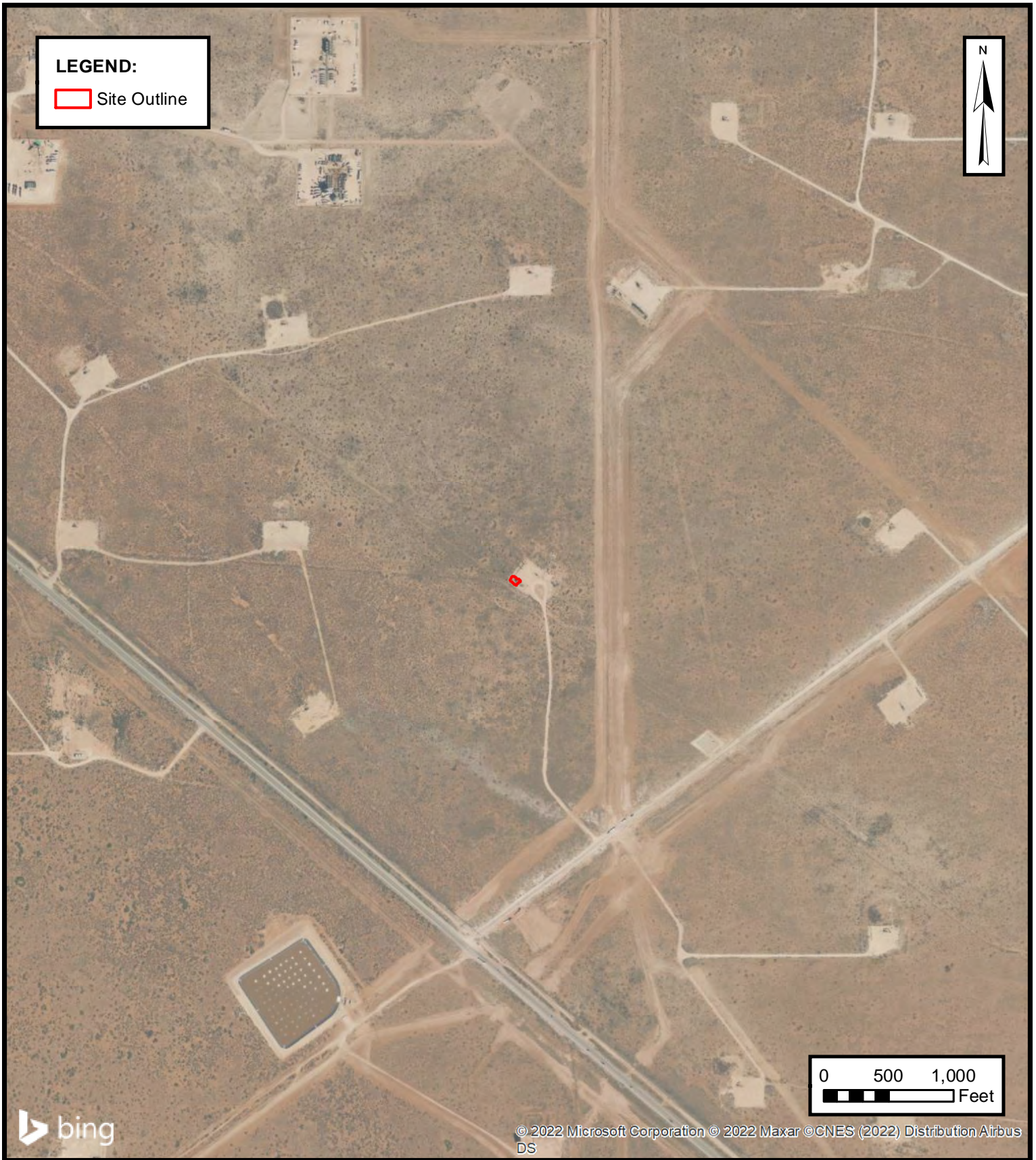
OXY USA INC.  
SUNDANCE 1-3 CTB  
Eddy County, New Mexico  
32.247216° N, 103.724486° W

PROJECT NUMBER: 03B1417045

**FIGURE**

**1**





**SITE VICINITY MAP**

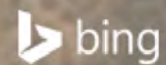
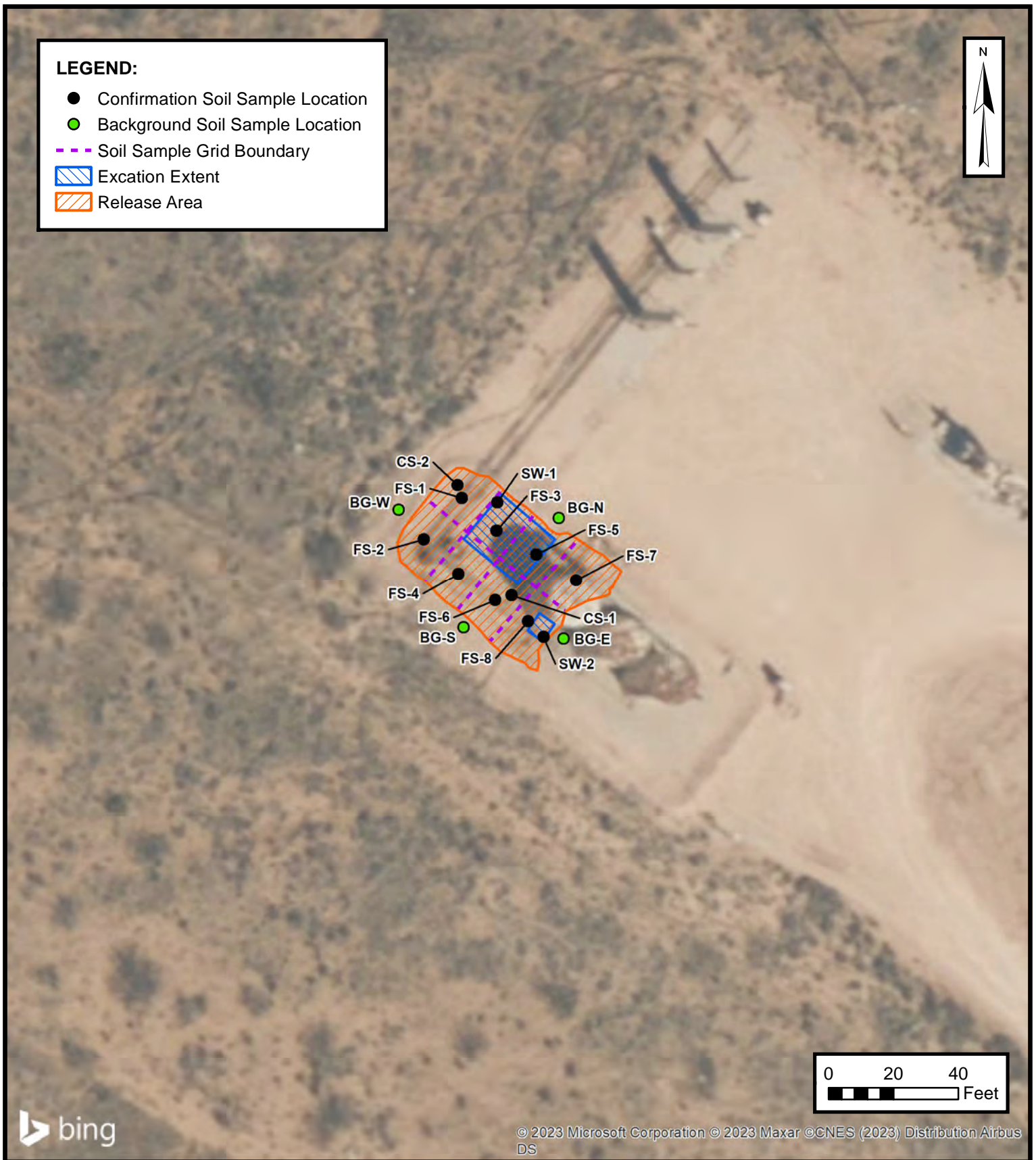
OXY USA INC.  
SUNDANCE 1-3 CTB  
Eddy County, New Mexico  
32.247216° N, 103.724486° W

PROJECT NUMBER: 03B1417045

**FIGURE**

**2**





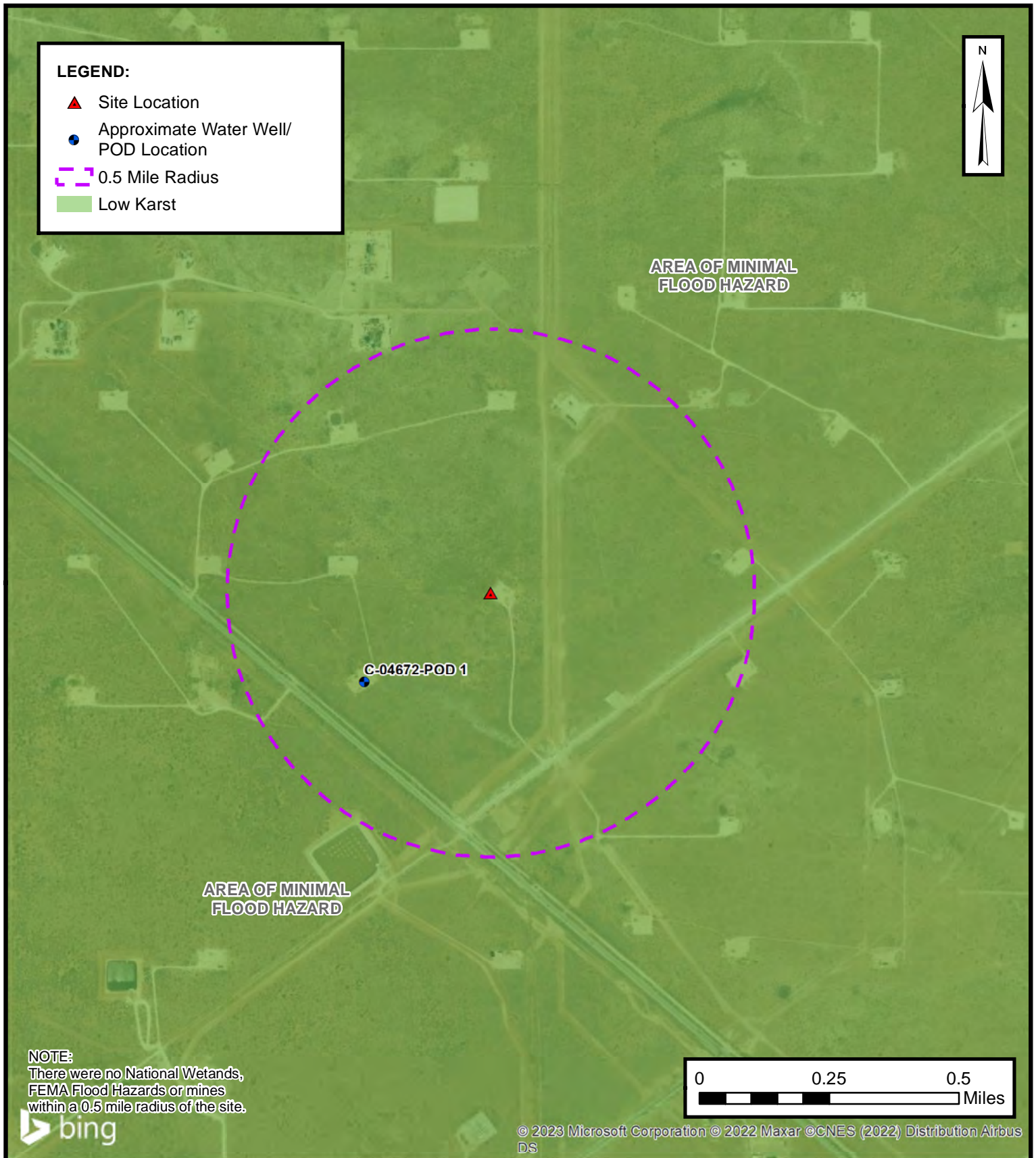
### SITE MAP

OXY USA INC.  
SUNDANCE 1-3 CTB  
Eddy County, New Mexico  
32.247216° N, 103.724486° W

PROJECT NUMBER: 03B1417045

### FIGURE

3

**CLOSURE CRITERIA MAP**

OXY USA INC.  
SUNDANCE 1-3 CTB  
Eddy County, New Mexico  
32.247216° N, 103.724486° W

PROJECT NUMBER: 03B1417045

**FIGURE****4**

**ENSOLUM**  
Environmental, Engineering and  
Hydrogeologic Consultants



## APPENDIX B

### Supporting Documentation



Client: Oxy USA Inc.  
 Project Name: Mesa Verde 8 Federal #2H FACI  
 Project Location: Eddy County, New Mexico  
 Project Manager: Beaux Jennings

## SOIL BORING / WELL LOG

### DRILLING & SAMPLING INFORMATION

Date Started: 9/1/2022  
 Date Completed: 9/1/2022  
 Drilling Company: West Texas Water Well Services  
 Driller: Russell Southerland

Soil Boring / Well Number: SB-1 (C-04672-POD-1)

Project #: 03B1417051

Drawn By: Beaux Jennings

Approved By: Heather Holthaus

Geologist: Shane Diller Sampler: Shane Diller  
 Boring Method: AR Logged By: Shane Diller  
 Sampler Type: AR  
 Bore Hole Diameter: 5 7/8" Screen: N/A  
 Casing Diameter: N/A Total Depth: 110'  
 Well Materials: N/A  
 Surface Completion: N/A

**BORING METHOD**      **SAMPLER TYPE**      **GROUNDWATER DEPTH**  
 HSA - HOLLOW STEM AUGERS      CB - FIVE FOOT CORE BARREL      ▽ AT COMPLETION  
 CFA - CONTINUOUS FLIGHT AUGERS      SS - DRIVEN SPLIT SPOON      ▽ AT WELL STABILIZATION  
 GP - GEOPROBE      ST - PRESSED SHELBY TUBE  
 AR - AIR ROTARY

### BORING AND SAMPLING NOTES

Soil Boring Detail	SOIL CLASSIFICATION	Stratum Depth	Depth Scale	Sample No.	Sample Interval	% Recovery	Groundwater Depth	FID/PID Readings (ppm)
--------------------	---------------------	---------------	-------------	------------	-----------------	------------	-------------------	------------------------

Drill Cuttings-

Drill Cuttings-

Drill Cuttings-

0'-9.5' - Silty sand, reddish yellow, slightly moist, no odor

10' - Sand, very fine grained, pink, dry, no odor

20' - Silty sand, very fine grained, small caliche fragments, reddish brown, dry, no odor

39'-40' - Thin sandstone, reddish brown, dry, no odor

40' - Silty sand, weak red, dry, no odor

NR - No Recovery

Client: Oxy USA Inc.  
 Project Name: Mesa Verde 8 Federal #2H FACI  
 Project Location: Eddy County, New Mexico  
 Project Manager: Beaux Jennings

## SOIL BORING / WELL LOG

### DRILLING & SAMPLING INFORMATION

Date Started: 9/1/2022  
 Date Completed: 9/1/2022  
 Drilling Company: West Texas Water Well Services  
 Driller: Russell Southerland

Soil Boring / Well Number: SB-1 (C-04672-POD-1)  
 Project #: 03B1417051  
 Drawn By: Beaux Jennings  
 Approved By: Heather Holthaus

Geologist: Shane Diller Sampler: Shane Diller  
 Boring Method: AR Logged By: Shane Diller  
 Sampler Type: AR  
 Bore Hole Diameter: 5 7/8" Screen: N/A  
 Casing Diameter: N/A Total Depth: 110'  
 Well Materials: N/A  
 Surface Completion: N/A

**BORING METHOD**      **SAMPLER TYPE**      **GROUNDWATER DEPTH**  
 HSA - HOLLOW STEM AUGERS      CB - FIVE FOOT CORE BARREL      ▽ AT COMPLETION  
 CFA - CONTINUOUS FLIGHT AUGERS      SS - DRIVEN SPLIT SPOON      ▽ AT WELL STABILIZATION  
 GP - GEOPROBE      ST - PRESSED SHELBY TUBE  
 AR - AIR ROTARY

### BORING AND SAMPLING NOTES

Soil Boring Detail	SOIL CLASSIFICATION	Stratum Depth	Depth Scale	Sample No.	Sample Interval	% Recovery	Groundwater Depth	FID/PID Readings (ppm)
--------------------	---------------------	---------------	-------------	------------	-----------------	------------	-------------------	------------------------

Drill Cuttings-

Drill Cuttings-

80' - Changing to reddish brown

90' - Changing to light reddish brown

110' - Total Depth

NR - No Recovery

**Beaux Jennings**

---

**From:** Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>  
**Sent:** Thursday, January 12, 2023 4:47 PM  
**To:** Beaux Jennings  
**Cc:** Bratcher, Michael, EMNRD  
**Subject:** RE: [EXTERNAL] Sundance 1-3 CTB (Incident ID # nAPP2215132849)

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

Beaux,

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

JH

**Jocelyn Harimon** • Environmental Specialist  
Environmental Bureau  
EMNRD - Oil Conservation Division  
1220 South St. Francis Drive | Santa Fe, NM 87505  
(505)469-2821 | [Jocelyn.Harimon@emnrd.nm.gov](mailto:Jocelyn.Harimon@emnrd.nm.gov)  
<http://www.emnrd.nm.gov>



---

**From:** Beaux Jennings <bjenning@ensolum.com>  
**Sent:** Thursday, January 12, 2023 2:21 PM  
**To:** Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>  
**Subject:** [EXTERNAL] Sundance 1-3 CTB (Incident ID # nAPP2215132849)

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

Good Afternoon,

On behalf of Oxy USA Inc, Ensolum, LLC would like to provide notification for sampling activities that will be conducted at the Sundance 1-3 CTB (Incident ID # nAPP2215132849) on Tuesday, January 17<sup>th</sup> at 11am. The samples may be used for closure, provided that they meet applicable closure limits.

Thank you,



**Beaux Jennings**  
Senior Project Manager  
210-219-8858  
**Ensolum, LLC**  
in f

**PLEASE NOTE OUR NEW CORPORATE ADDRESS:**

Ensolum, LLC

8330 LBJ Freeway, Ste. 830

Dallas, TX 75243

**Beaux Jennings**

---

**From:** Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>  
**Sent:** Monday, December 19, 2022 10:06 AM  
**To:** Beaux Jennings  
**Cc:** Bratcher, Michael, EMNRD; Harimon, Jocelyn, EMNRD  
**Subject:** RE: [EXTERNAL] Sundance 1-3 CTB (Incident ID # nAPP2215132849)

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

Beaux,

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

**Jocelyn Harimon** • Environmental Specialist  
Environmental Bureau  
EMNRD - Oil Conservation Division  
1220 South St. Francis Drive | Santa Fe, NM 87505  
(505)469-2821 | [Jocelyn.Harimon@emnrd.nm.gov](mailto:Jocelyn.Harimon@emnrd.nm.gov)  
[http:// www.emnrd.nm.gov](http://www.emnrd.nm.gov)



---

**From:** Beaux Jennings <bjennings@ensolum.com>  
**Sent:** Monday, December 19, 2022 8:37 AM  
**To:** Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>  
**Subject:** [EXTERNAL] Sundance 1-3 CTB (Incident ID # nAPP2215132849)

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

Good Morning,

On behalf of Oxy USA Inc, Ensolum, LLC would like to provide notification for sampling activities that will be conducted at the Sundance 1-3 CTB (Incident ID # nAPP2215132849) on Wednesday, December 21<sup>st</sup> at 10am. The samples may be used for closure, provided that they meet applicable closure limits.

Thank you,



**Beaux Jennings**  
Senior Project Manager  
210-219-8858  
**Ensolum, LLC**  
in f

**PLEASE NOTE OUR NEW CORPORATE ADDRESS:**



Ensolum, LLC  
8330 LBJ Freeway, Ste. 830  
Dallas, TX 75243

**Beaux Jennings**

---

**From:** Dittrich, John W <Wade\_Dittrich@oxy.com>  
**Sent:** Monday, June 19, 2023 5:41 PM  
**To:** Beaux Jennings  
**Subject:** FW: The Oil Conservation Division (OCD) has rejected the application, Application ID: 186431

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

REJECTED-Sundance 1-3 CTB

---

**From:** OCDOnline@state.nm.us <OCDOnline@state.nm.us>  
**Sent:** Thursday, June 15, 2023 2:43 PM  
**To:** Dittrich, John W <Wade\_Dittrich@oxy.com>  
**Subject:** [EXTERNAL] The Oil Conservation Division (OCD) has rejected the application, Application ID: 186431

**WARNING - This message is from an EXTERNAL SENDER - be CAUTIOUS, particularly with links and attachments.**

---

To whom it may concern (c/o Wade Dittrich for OXY USA INC),

The OCD has rejected the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nAPP2215132849, for the following reasons:

- **The Closure Report is Denied. Sidewall samples should be delineated/excavated to 600 mg/kg for chlorides and 100 mg/kg for TPH to define the edge of the release. Sidewall sample location "SW-2" needs to be further delineated to 600 mg/kg for chlorides. Also, please verify if a chloride result was analyzed for 1/6/2023 on the "SW-1" sidewall sample. If not, "SW-1" will need to be delineated to 600 mg/kg for chlorides.**

The rejected C-141 can be found in the OCD Online: Permitting - Action Status, under the Application ID: 186431.

Please review and make the required correction(s) prior to resubmitting.

If you have any questions why this application was rejected or believe it was rejected in error, please contact me prior to submitting an additional C-141.

Thank you,  
Robert Hamlet  
575-748-1283  
[Robert.Hamlet@emnrd.nm.gov](mailto:Robert.Hamlet@emnrd.nm.gov)

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

## National Flood Hazard Layer FIRMette



103°43'47"W 32°15'5"N



## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
MAP PANELS		Profile Baseline
		Hydrographic Feature
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/13/2022 at 4:57 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

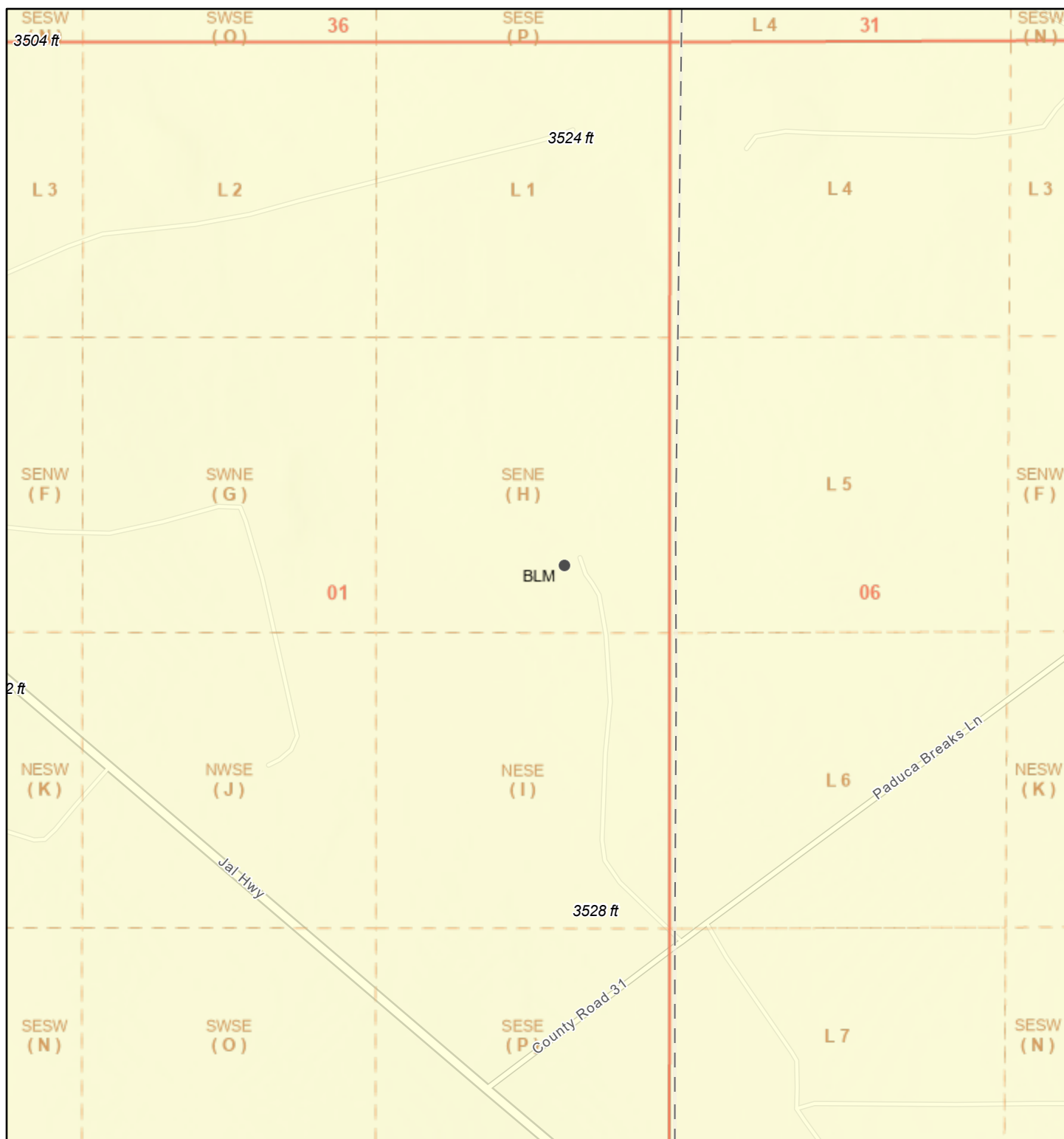
This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Released to Imaging: 2/12/2024 11:09:45 AM 1,500 2,000 Feet 1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

103°43'9"W 32°14'35"N

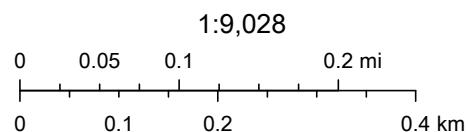
## Active Mines in New Mexico



1/27/2023, 1:43:16 PM

## Land Ownership

- BLM
- PLSS Second Division
- PLSS First Division



U.S. BLM, Esri, NASA, NGA, USGS, FEMA, Esri Community Maps Contributors, New Mexico State University, Texas Parks & Wildlife, © OpenStreetMap, Microsoft, CONANP, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau,





EMNRD MMD GIS Coordinator



# Sundance 1-3 CTB

Write a description for your map.

## Legend

-  32.247216, -103.724486
-  High
-  Low
-  Medium

32.247216, -103.724486













800 ft



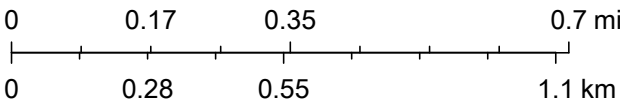
# OSE POD Locations Map



1/27/2023, 1:21:24 PM

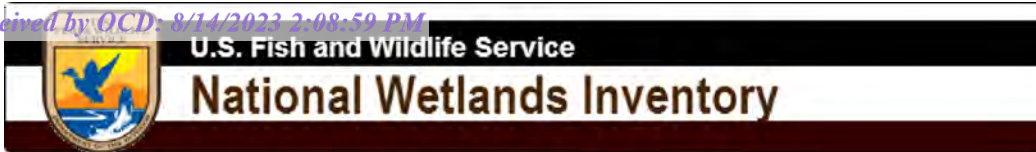
-  Recently Edited PODs
  OSE District Boundary
  New Mexico State Trust Lands
- GIS WATERS PODs
  Water Right Regulations
  Subsurface Estate
-  Active
  Closure Area
  Both Estates
-  Pending
  SiteBoundaries

1:18,056



Esri, HERE, iPC, U.S. Department of Energy Office of  
Legacy Management, Esri, HERE, Garmin, iPC, Maxar





## Sundance 1-3 CTB



July 13, 2022

**Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

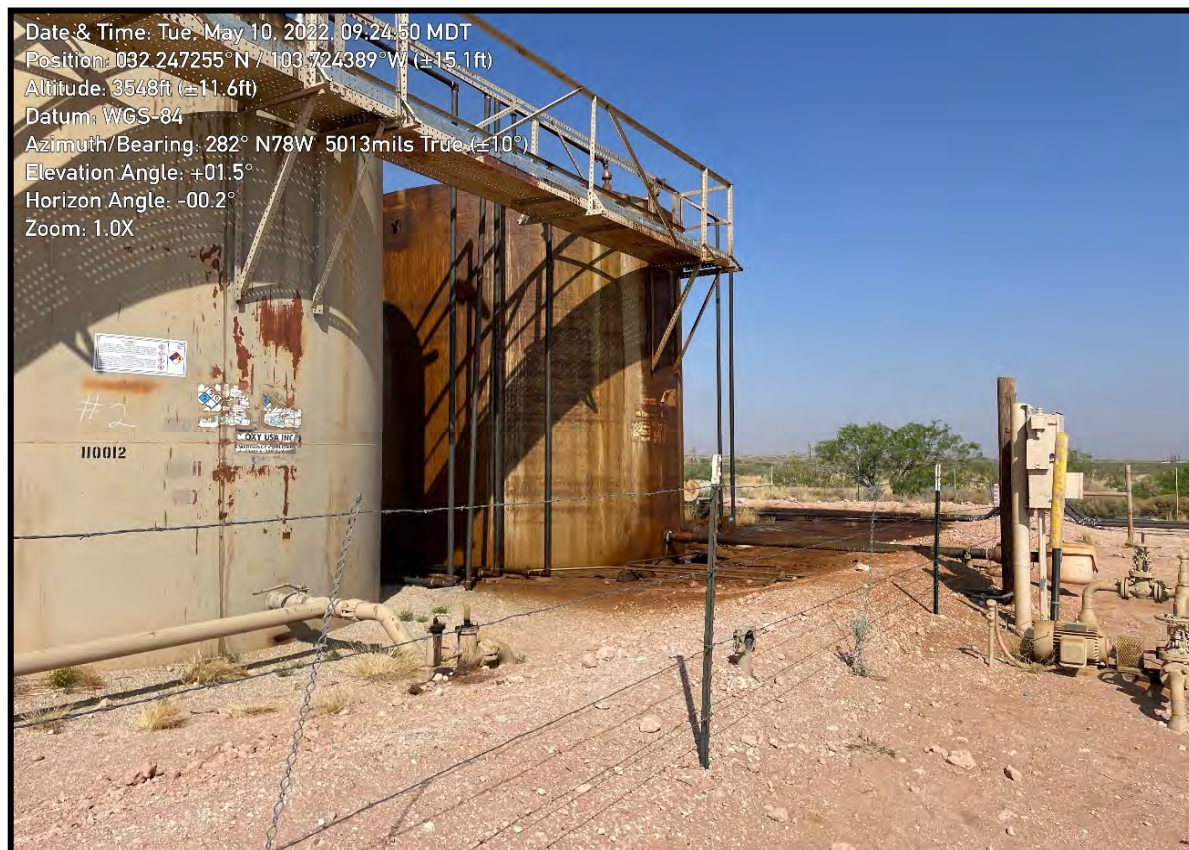
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



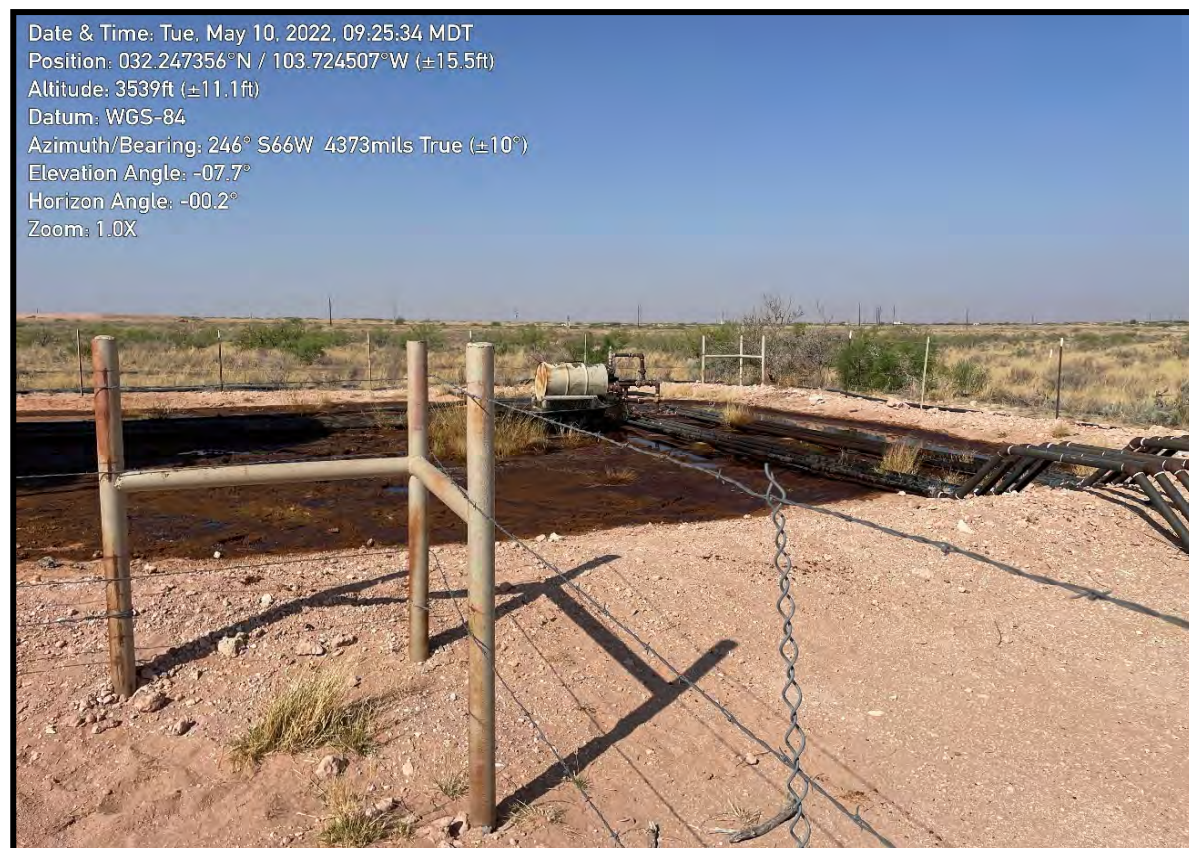
## APPENDIX C

### Photographic Documentation





View of release area during initial soil sampling activities, facing northwest.



View of release area during initial soil sampling activities, facing southwest.



Date & Time: Tue, May 10, 2022, 09:26:57 MDT  
Position: 032.247168°N / 103.724469°W ( $\pm 15.5$ ft)  
Altitude: 3533ft ( $\pm 11.1$ ft)  
Datum: WGS-84  
Azimuth/Bearing: 337° N23W 5991mils True ( $\pm 17^\circ$ )  
Elevation Angle:  $-04.5^\circ$   
Horizon Angle:  $+00.9^\circ$   
Zoom: 1.0X



View of release area during initial soil sampling activities, facing northwest.

Date & Time: Tue, May 10, 2022, 09:27:15 MDT  
Position: 032.247203°N / 103.724532°W ( $\pm 15.5$ ft)  
Altitude: 3537ft ( $\pm 11.1$ ft)  
Datum: WGS-84  
Azimuth/Bearing: 038° N38E 0676mils True ( $\pm 12^\circ$ )  
Elevation Angle:  $-12.0^\circ$   
Horizon Angle:  $+00.4^\circ$   
Zoom: 1.0X



View of release area during initial soil sampling activities, facing northeast.





View of release area during response action activities, facing northwest.



View of release area during remediation activities, facing southwest.



## APPENDIX D

### Tables





**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 Sundance 1-3 CTB  
 Oxy USA Inc.  
 Eddy County, New Mexico  
 Ensolum Project No. 03B1417045

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+DRO (mg/kg)	TPH MRO (mg/kg)	Total TPH (GRO+DRO+MRO) (mg/kg)	Chloride (mg/kg)
New Mexico Oil Conservation Division Closure Criteria for Soils Impacted by a Release (> 100 feet)			10	NE	NE	NE	50	1,000	NE	2,500	20,000
Floor Sample Analytical Results											
FS-1	12/22/2022	1	<0.050	<0.050	<0.050	<0.150	<0.300	2,110	513	2,623	3,120
	1/6/2023	1	NS					2,210	732	2,942	NS
	1/17/2023	1	NS					279	67.1	346	NS
FS-2	12/22/2022	1	0.141	0.555	0.060	0.231	0.987	6,860	1,970	8,830	512
	1/6/2023	1	NS					254	104	358	NS
FS-3	12/22/2022	2.5	<0.050	<0.050	<0.050	<0.150	<0.300	26.7	<10.0	26.7	480
FS-4	12/22/2022	2.5	<0.050	<0.050	<0.050	<0.150	<0.300	389	60.6	450	1,730
FS-5	12/22/2022	2.5	<0.050	<0.050	<0.050	<0.150	<0.300	1,010	179	1,189	512
	1/6/2023	3	NS					398	91.0	489	NS
FS-6	12/22/2022	2.5	<0.050	<0.050	<0.050	<0.150	<0.300	560	75.4	635	1,070
FS-7	12/22/2022	1	<0.050	<0.050	<0.050	<0.150	<0.300	600	95.9	696	2,560
FS-8	12/22/2022	2	<0.050	<0.050	<0.050	<0.150	<0.300	2,828	457	3,285	1,200
	1/6/2023	3	NS					742	228	970	NS
Sidewall Sample Analytical Results											
SW-1	12/22/2022	1	<0.050	<0.050	<0.050	<0.150	<0.300	1,140	132	1,272	1,330
	1/6/2023	0 - 3	NS					12.7	<10.0	12.7	NS
SW-2	12/22/2022	1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	3,160
Pothole Sample Analytical Results											
CS-1	5/31/2022	0 - 1	0.057	0.946	1.17	6.41	8.58	10,447	1,980	12,427	14,200
		1 - 2	<0.050	<0.050	<0.050	<0.150	<0.300	505	148	653	10,600
		2 - 3	<0.050	<0.050	<0.050	<0.150	<0.300	751	193	944	11,600
		3 - 4	<0.050	<0.050	<0.050	<0.150	<0.300	155	60.5	216	11,300
CS-2	5/31/2022	0 - 1	0.385	4.22	3.56	17.6	25.7	18,930	4,020	22,950	1,920
		1 - 2	<0.050	<0.050	<0.050	<0.150	<0.300	680	240	920	256
		2 - 3	<0.050	<0.050	<0.050	<0.150	<0.300	456	124	580	480
		3 - 4	<0.050	<0.050	<0.050	<0.150	<0.300	209	64.2	273	1,150
Background Sample Analytical Results											
BG-N	8/8/2023	0 - 0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.0
BG-E	8/8/2023	0 - 0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.0
BG-S	8/8/2023	0 - 0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	16.0
BG-W	8/8/2023	0 - 0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<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 (> 100 feet)

Over Excavated and/or Re-Sampled

bgs: below ground surface

mg/kg: milligrams per kilogram

NE: Not Established

NS: Not Sampled

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

MRO: Motor Oil/Lube Oil Range Organics

TPH: Total Petroleum Hydrocarbon



## APPENDIX E

### Laboratory Data Sheets and Chain-of-Custody Documentation



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

---

June 03, 2022

BEAUX JENNINGS

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: SUNDANCE 1-3 CTB

Enclosed are the results of analyses for samples received by the laboratory on 05/31/22 16:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 05/31/2022  
 Reported: 06/03/2022  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: EDDY COUNTY, NM

Sampling Date: 05/31/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS - 1 0-1 (H222305-01)**

BTX 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>0.057</b>	0.050	06/02/2022	ND	2.04	102	2.00	0.0351	GC-NC1
<b>Toluene*</b>	<b>0.946</b>	0.050	06/02/2022	ND	2.05	103	2.00	0.572	
<b>Ethylbenzene*</b>	<b>1.17</b>	0.050	06/02/2022	ND	1.91	95.6	2.00	0.138	
<b>Total Xylenes*</b>	<b>6.41</b>	0.150	06/02/2022	ND	5.94	98.9	6.00	0.457	
<b>Total BTX</b>	<b>8.58</b>	0.300	06/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 209 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>14200</b>	16.0	06/02/2022	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>517</b>	50.0	06/01/2022	ND	206	103	200	0.938	
<b>DRO &gt;C10-C28*</b>	<b>9930</b>	50.0	06/01/2022	ND	204	102	200	7.62	
<b>EXT DRO &gt;C28-C36</b>	<b>1980</b>	50.0	06/01/2022	ND					

Surrogate: 1-Chlorooctane 284 % 66.9-136

Surrogate: 1-Chlorooctadecane 750 % 59.5-142

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

Received: 05/31/2022  
 Reported: 06/03/2022  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: EDDY COUNTY, NM

Sampling Date: 05/31/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS - 1 1-2 (H222305-02)**

BTEx 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/01/2022	ND	2.04	102	2.00	0.0351	
Toluene*	<0.050	0.050	06/01/2022	ND	2.05	103	2.00	0.572	
Ethylbenzene*	<0.050	0.050	06/01/2022	ND	1.91	95.6	2.00	0.138	
Total Xylenes*	<0.150	0.150	06/01/2022	ND	5.94	98.9	6.00	0.457	
Total BTEX	<0.300	0.300	06/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	10600	16.0	06/02/2022	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	06/01/2022	ND	206	103	200	0.938	
DRO >C10-C28*	505	10.0	06/01/2022	ND	204	102	200	7.62	
EXT DRO >C28-C36	148	10.0	06/01/2022	ND					

Surrogate: 1-Chlorooctane 102 % 66.9-136

Surrogate: 1-Chlorooctadecane 128 % 59.5-142

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

Received: 05/31/2022  
 Reported: 06/03/2022  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: EDDY COUNTY, NM

Sampling Date: 05/31/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS - 1 2-3 (H222305-03)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/01/2022	ND	2.04	102	2.00	0.0351		
Toluene*	<0.050	0.050	06/01/2022	ND	2.05	103	2.00	0.572		
Ethylbenzene*	<0.050	0.050	06/01/2022	ND	1.91	95.6	2.00	0.138		
Total Xylenes*	<0.150	0.150	06/01/2022	ND	5.94	98.9	6.00	0.457		
Total BTEx	<0.300	0.300	06/01/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	11600	16.0	06/02/2022	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	06/01/2022	ND	206	103	200	0.938	
DRO >C10-C28*	751	10.0	06/01/2022	ND	204	102	200	7.62	
EXT DRO >C28-C36	193	10.0	06/01/2022	ND					

Surrogate: 1-Chlorooctane 101 % 66.9-136

Surrogate: 1-Chlorooctadecane 127 % 59.5-142

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 05/31/2022  
 Reported: 06/03/2022  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: EDDY COUNTY, NM

Sampling Date: 05/31/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS - 1 3-4 (H222305-04)**

BTEx 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/01/2022	ND	2.04	102	2.00	0.0351	
Toluene*	<0.050	0.050	06/01/2022	ND	2.05	103	2.00	0.572	
Ethylbenzene*	<0.050	0.050	06/01/2022	ND	1.91	95.6	2.00	0.138	
Total Xylenes*	<0.150	0.150	06/01/2022	ND	5.94	98.9	6.00	0.457	
Total BTEX	<0.300	0.300	06/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	11300	16.0	06/02/2022	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	06/01/2022	ND	206	103	200	0.938	
DRO >C10-C28*	155	10.0	06/01/2022	ND	204	102	200	7.62	
EXT DRO >C28-C36	60.5	10.0	06/01/2022	ND					

Surrogate: 1-Chlorooctane 97.0 % 66.9-136

Surrogate: 1-Chlorooctadecane 107 % 59.5-142

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

Received: 05/31/2022  
 Reported: 06/03/2022  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: EDDY COUNTY, NM

Sampling Date: 05/31/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS - 2 0-1 (H222305-05)**

BTEx 8021B		mg/kg	Analyzed By: JH					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>0.385</b>	0.050	06/02/2022	ND	2.04	102	2.00	0.0351	GC-NC1
<b>Toluene*</b>	<b>4.22</b>	0.050	06/02/2022	ND	2.05	103	2.00	0.572	
<b>Ethylbenzene*</b>	<b>3.56</b>	0.050	06/02/2022	ND	1.91	95.6	2.00	0.138	
<b>Total Xylenes*</b>	<b>17.6</b>	0.150	06/02/2022	ND	5.94	98.9	6.00	0.457	
<b>Total BTEX</b>	<b>25.7</b>	0.300	06/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 290 % 69.9-140

Chloride, SM4500CI-B		mg/kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>1920</b>	16.0	06/02/2022	ND	416	104	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>1130</b>	100	06/01/2022	ND	206	103	200	0.938	
<b>DRO &gt;C10-C28*</b>	<b>17800</b>	100	06/01/2022	ND	204	102	200	7.62	
<b>EXT DRO &gt;C28-C36</b>	<b>4020</b>	100	06/01/2022	ND					

Surrogate: 1-Chlorooctane 525 % 66.9-136

Surrogate: 1-Chlorooctadecane 509 % 59.5-142

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

Received: 05/31/2022  
 Reported: 06/03/2022  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: EDDY COUNTY, NM

Sampling Date: 05/31/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS - 2 1-2 (H222305-06)**

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	06/02/2022	ND	2.15	107	2.00	7.50		
Toluene*	<0.050	0.050	06/02/2022	ND	2.13	107	2.00	7.78		
Ethylbenzene*	<0.050	0.050	06/02/2022	ND	2.04	102	2.00	7.10		
Total Xylenes*	<0.150	0.150	06/02/2022	ND	6.34	106	6.00	7.53		
Total BTEx	<0.300	0.300	06/02/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	06/02/2022	ND	416	104	400	0.00		

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	06/02/2022	ND	206	103	200	0.938	
DRO >C10-C28*	680	10.0	06/02/2022	ND	204	102	200	7.62	
EXT DRO >C28-C36	240	10.0	06/02/2022	ND					

Surrogate: 1-Chlorooctane 105 % 66.9-136

Surrogate: 1-Chlorooctadecane 167 % 59.5-142

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

Received: 05/31/2022  
 Reported: 06/03/2022  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: EDDY COUNTY, NM

Sampling Date: 05/31/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS - 2 2-3 (H222305-07)**

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	06/02/2022	ND	2.05	102	2.00	6.51	
Toluene*	<0.050	0.050	06/02/2022	ND	2.03	102	2.00	6.27	
Ethylbenzene*	<0.050	0.050	06/02/2022	ND	1.89	94.4	2.00	6.61	
Total Xylenes*	<0.150	0.150	06/02/2022	ND	5.89	98.1	6.00	6.62	
Total BTEx	<0.300	0.300	06/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	06/02/2022	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	06/01/2022	ND	206	103	200	0.938	
DRO >C10-C28*	456	10.0	06/01/2022	ND	204	102	200	7.62	
EXT DRO >C28-C36	124	10.0	06/01/2022	ND					

Surrogate: 1-Chlorooctane 107 % 66.9-136

Surrogate: 1-Chlorooctadecane 139 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 05/31/2022  
 Reported: 06/03/2022  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: EDDY COUNTY, NM

Sampling Date: 05/31/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: CS - 2 3-4 (H222305-08)**

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	06/03/2022	ND	2.05	102	2.00	6.51		
Toluene*	<0.050	0.050	06/03/2022	ND	2.03	102	2.00	6.27		
Ethylbenzene*	<0.050	0.050	06/03/2022	ND	1.89	94.4	2.00	6.61		
Total Xylenes*	<0.150	0.150	06/03/2022	ND	5.89	98.1	6.00	6.62		
Total BTEX	<0.300	0.300	06/03/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1150	16.0	06/02/2022	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	06/01/2022	ND	206	103	200	0.938	
DRO >C10-C28*	209	10.0	06/01/2022	ND	204	102	200	7.62	
EXT DRO >C28-C36	64.2	10.0	06/01/2022	ND					

Surrogate: 1-Chlorooctane 94.9 % 66.9-136

Surrogate: 1-Chlorooctadecane 109 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
GC-NC1	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
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

<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 Marientfeld Street, Suite 400				<b>Company:</b> Oxy USA Inc.							
<b>City:</b> Midland				<b>Attn:</b> Wade Dittrich							
<b>State:</b> TX <b>Zip:</b> 79701				<b>Address:</b> -							
<b>Phone #:</b> 210-219-8858 <b>Fax #:</b> -				<b>City:</b> -							
<b>Project #:</b> 03B4117015 <b>Project Owner:</b> NHA				<b>State:</b> - <b>Zip:</b> -							
<b>Project Location:</b> Sundance 1-3 CTB				<b>Phone #:</b> 575-390-2828							
<b>Sampler Name:</b> Kelly Lowery				<b>Fax #:</b> -							

Lab I.D.		Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.		SAMPLING	DATE	TIME	TPH	BTEX	Chlorides							
						GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :												
H200305		CS-1	0-1	G	1	X									5/31/22	1425	X	X	X							
		CS-1	1-2	G	1	X									5/31/22	1447	X	X	X							
		CS-1	2-3	G	1	X									5/31/22	1449	X	X	X							
		CS-1	3-4	G	1	X									5/31/22	1451	X	X	X							
		CS-2	0-1	G	1	X									5/31/22	1453	X	X	X							
		CS-2	1-2	G	1	X									5/31/22	1455	X	X	X							
		CS-2	2-3	G	1	X									5/31/22	1457	X	X	X							
		CS-2	3-4	G	1	X									5/31/22	1459	X	X	X							
		CS-2													N/A	05/31/2022	1459									

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<b>Relinquished By:</b>	<b>Date:</b> 05/31/22	<b>Received By:</b>	<b>Date:</b> 05/31/22
<b>Relinquished By:</b>	<b>Date:</b> 10/55	<b>Received By:</b>	<b>Date:</b> 05/31/2022

**REMARKS:** B Jennings@ensolum.com

<b>Delivered By:</b> (Circle One) Sampler - UPS   Bus   Other:	<b>Observed Temp. °C:</b> 4.80 <b>Corrected Temp. °C:</b> 4.30	<b>Sample Condition:</b> Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>CHECKED BY:</b>	<b>Turnaround Time:</b>	<b>Standard:</b> <input checked="" type="checkbox"/> <b>Rush:</b> <input type="checkbox"/>	<b>Bacteria (only):</b> Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>Sample Condition:</b> Observed Temp. °C Corrected Temp. °C
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### ***Custody Seal***

DATE \_\_\_\_\_

**SIGNATURE**



Environment Test  
TestAmerica

1002261

Page 11 of 11



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December 29, 2022

BEAUX JENNINGS

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: SUNDANCE 1-3 CTB

Enclosed are the results of analyses for samples received by the laboratory on 12/22/22 12:10.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received: 12/22/2022  
 Reported: 12/29/2022  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 12/22/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 1 1' (H226050-01)**

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	12/27/2022	ND	2.09	104	2.00	6.14	
Toluene*	<0.050	0.050	12/27/2022	ND	2.21	111	2.00	5.44	
Ethylbenzene*	<0.050	0.050	12/27/2022	ND	2.20	110	2.00	5.46	
Total Xylenes*	<0.150	0.150	12/27/2022	ND	6.75	113	6.00	5.67	
Total BTEX	<0.300	0.300	12/27/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 120 % 69.9-140

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3120	16.0	12/22/2022	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*	<50.0	50.0	12/22/2022	ND	211	106	200	3.50	
DRO >C10-C28*	2110	50.0	12/22/2022	ND	227	113	200	5.39	QM-07
EXT DRO >C28-C36	513	50.0	12/22/2022	ND					

Surrogate: 1-Chlorooctane 94.8 % 45.3-161

Surrogate: 1-Chlorooctadecane 126 % 46.3-178

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

Received: 12/22/2022  
 Reported: 12/29/2022  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 12/22/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 2 1' (H226050-02)**

BTEx 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>0.141</b>	0.050	12/29/2022	ND	2.09	104	2.00	6.14	
<b>Toluene*</b>	<b>0.555</b>	0.050	12/29/2022	ND	2.21	111	2.00	5.44	
<b>Ethylbenzene*</b>	<b>0.060</b>	0.050	12/29/2022	ND	2.20	110	2.00	5.46	
<b>Total Xylenes*</b>	<b>0.231</b>	0.150	12/29/2022	ND	6.75	113	6.00	5.67	
<b>Total BTEX</b>	<b>0.987</b>	0.300	12/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 152 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>512</b>	16.0	12/22/2022	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<50.0	50.0	12/22/2022	ND	211	106	200	3.50	
<b>DRO &gt;C10-C28*</b>	<b>6860</b>	50.0	12/22/2022	ND	227	113	200	5.39	
<b>EXT DRO &gt;C28-C36</b>	<b>1970</b>	50.0	12/22/2022	ND					

Surrogate: 1-Chlorooctane 98.3 % 45.3-161

Surrogate: 1-Chlorooctadecane 191 % 46.3-178

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

Received: 12/22/2022  
 Reported: 12/29/2022  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 12/22/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 3 2.5' (H226050-03)**

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	12/28/2022	ND	2.09	104	2.00	6.14		
Toluene*	<0.050	0.050	12/28/2022	ND	2.21	111	2.00	5.44		
Ethylbenzene*	<0.050	0.050	12/28/2022	ND	2.20	110	2.00	5.46		
Total Xylenes*	<0.150	0.150	12/28/2022	ND	6.75	113	6.00	5.67		
Total BTEx	<0.300	0.300	12/28/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	480	16.0	12/22/2022	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	12/22/2022	ND	211	106	200	3.50	
DRO >C10-C28*	26.7	10.0	12/22/2022	ND	227	113	200	5.39	
EXT DRO >C28-C36	<10.0	10.0	12/22/2022	ND					

Surrogate: 1-Chlorooctane 86.1 % 45.3-161

Surrogate: 1-Chlorooctadecane 89.1 % 46.3-178

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 12/22/2022  
 Reported: 12/29/2022  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 12/22/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 4 2.5' (H226050-04)**

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	12/27/2022	ND	2.09	104	2.00	6.14	
Toluene*	<0.050	0.050	12/27/2022	ND	2.21	111	2.00	5.44	
Ethylbenzene*	<0.050	0.050	12/27/2022	ND	2.20	110	2.00	5.46	
Total Xylenes*	<0.150	0.150	12/27/2022	ND	6.75	113	6.00	5.67	
Total BTEx	<0.300	0.300	12/27/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1730	16.0	12/22/2022	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	12/22/2022	ND	205	103	200	2.00	
DRO >C10-C28*	389	10.0	12/22/2022	ND	200	100	200	4.11	
EXT DRO >C28-C36	60.6	10.0	12/22/2022	ND					

Surrogate: 1-Chlorooctane 97.1 % 45.3-161

Surrogate: 1-Chlorooctadecane 122 % 46.3-178

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**Analytical Results For:**

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

Received: 12/22/2022  
 Reported: 12/29/2022  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 12/22/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 5 2.5' (H226050-05)**

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	12/29/2022	ND	2.09	104	2.00	6.14		
Toluene*	<0.050	0.050	12/29/2022	ND	2.21	111	2.00	5.44		
Ethylbenzene*	<0.050	0.050	12/29/2022	ND	2.20	110	2.00	5.46		
Total Xylenes*	<0.150	0.150	12/29/2022	ND	6.75	113	6.00	5.67		
Total BTX	<0.300	0.300	12/29/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

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	12/22/2022	ND	400	100	400	3.92	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	12/22/2022	ND	205	103	200	2.00	
DRO >C10-C28*	1010	10.0	12/22/2022	ND	200	100	200	4.11	
EXT DRO >C28-C36	179	10.0	12/22/2022	ND					

Surrogate: 1-Chlorooctane 96.0 % 45.3-161

Surrogate: 1-Chlorooctadecane 132 % 46.3-178

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**Analytical Results For:**

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

Received: 12/22/2022  
 Reported: 12/29/2022  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 12/22/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 6 2.5' (H226050-06)**

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	12/27/2022	ND	2.09	104	2.00	6.14	
Toluene*	<0.050	0.050	12/27/2022	ND	2.21	111	2.00	5.44	
Ethylbenzene*	<0.050	0.050	12/27/2022	ND	2.20	110	2.00	5.46	
Total Xylenes*	<0.150	0.150	12/27/2022	ND	6.75	113	6.00	5.67	
Total BTEX	<0.300	0.300	12/27/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 116 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1070	16.0	12/22/2022	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/22/2022	ND	205	103	200	2.00	
DRO >C10-C28*	560	10.0	12/22/2022	ND	200	100	200	4.11	
EXT DRO >C28-C36	75.4	10.0	12/22/2022	ND					

Surrogate: 1-Chlorooctane 89.8 % 45.3-161

Surrogate: 1-Chlorooctadecane 118 % 46.3-178

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**Analytical Results For:**

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

Received: 12/22/2022  
 Reported: 12/29/2022  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 12/22/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 7 1' (H226050-07)**

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	12/29/2022	ND	2.09	104	2.00	6.14	
Toluene*	<0.050	0.050	12/29/2022	ND	2.21	111	2.00	5.44	
Ethylbenzene*	<0.050	0.050	12/29/2022	ND	2.20	110	2.00	5.46	
Total Xylenes*	<0.150	0.150	12/29/2022	ND	6.75	113	6.00	5.67	
Total BTEX	<0.300	0.300	12/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2560	16.0	12/22/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/22/2022	ND	205	103	200	2.00	
DRO >C10-C28*	600	10.0	12/22/2022	ND	200	100	200	4.11	
EXT DRO >C28-C36	95.9	10.0	12/22/2022	ND					

Surrogate: 1-Chlorooctane 107 % 45.3-161

Surrogate: 1-Chlorooctadecane 147 % 46.3-178

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**Analytical Results For:**

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

Received: 12/22/2022  
Reported: 12/29/2022  
Project Name: SUNDANCE 1-3 CTB  
Project Number: 03B1417045  
Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 12/22/2022  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: FS - 8 2' (H226050-08)**

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	12/29/2022	ND	2.09	104	2.00	6.14	
Toluene*	<0.050	0.050	12/29/2022	ND	2.21	111	2.00	5.44	
Ethylbenzene*	<0.050	0.050	12/29/2022	ND	2.20	110	2.00	5.46	
Total Xylenes*	<0.150	0.150	12/29/2022	ND	6.75	113	6.00	5.67	
Total BTX	<0.300	0.300	12/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 137 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1200	16.0	12/22/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	27.5	10.0	12/22/2022	ND	205	103	200	2.00	
DRO >C10-C28*	2800	10.0	12/22/2022	ND	200	100	200	4.11	
EXT DRO >C28-C36	457	10.0	12/22/2022	ND					

Surrogate: 1-Chlorooctane 104 % 45.3-161

Surrogate: 1-Chlorooctadecane 122 % 46.3-178

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**Analytical Results For:**

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

Received: 12/22/2022  
 Reported: 12/29/2022  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 12/22/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 1 1' (H226050-09)**

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	12/28/2022	ND	2.03	101	2.00	2.78		
Toluene*	<0.050	0.050	12/28/2022	ND	2.17	109	2.00	1.56		
Ethylbenzene*	<0.050	0.050	12/28/2022	ND	2.11	106	2.00	0.661		
Total Xylenes*	<0.150	0.150	12/28/2022	ND	6.47	108	6.00	0.482		
Total BTEX	<0.300	0.300	12/28/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1330	16.0	12/22/2022	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<50.0	50.0	12/22/2022	ND	205	103	200	2.00	
DRO >C10-C28*	1140	50.0	12/22/2022	ND	200	100	200	4.11	
EXT DRO >C28-C36	132	50.0	12/22/2022	ND					

Surrogate: 1-Chlorooctane 106 % 45.3-161

Surrogate: 1-Chlorooctadecane 162 % 46.3-178

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**Analytical Results For:**

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

Received: 12/22/2022  
 Reported: 12/29/2022  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 12/22/2022  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 2 1' (H226050-10)**

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	12/28/2022	ND	2.03	101	2.00	2.78		
Toluene*	<0.050	0.050	12/28/2022	ND	2.17	109	2.00	1.56		
Ethylbenzene*	<0.050	0.050	12/28/2022	ND	2.11	106	2.00	0.661		
Total Xylenes*	<0.150	0.150	12/28/2022	ND	6.47	108	6.00	0.482		
Total BTEx	<0.300	0.300	12/28/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3160	16.0	12/22/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/22/2022	ND	205	103	200	2.00	
DRO >C10-C28*	<10.0	10.0	12/22/2022	ND	200	100	200	4.11	
EXT DRO >C28-C36	<10.0	10.0	12/22/2022	ND					

Surrogate: 1-Chlorooctane 98.0 % 45.3-161

Surrogate: 1-Chlorooctadecane 120 % 46.3-178

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

### Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

\*=Accredited Analyte

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

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

Celey D. Keene, Lab Director/Quality Manager





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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC										<b>BILL TO</b>										<b>ANALYSIS REQUEST</b>									
Project Manager: Beaux Jennings										P.O. #:																			
Address: 601 N Marlenfeld Street, Suite 400										Company: Oxy USA Inc.																			
City: Midland										Attn: Wade Dittich																			
Phone #: 210-219-8858										Address:																			
Fax #: 210-219-8858										City:																			
Project #: 0381417045										State: Zip:																			
Project Name: Sundance 1-3 CTB										Phone #: 575-390-2828																			
Project Location: Eddy Co NM										Fax #:																			
Sampler Name: Shane Diller										PRESERV										SAMPLING									
FOR LAB USE ONLY										DATE										TIME									
Lab I.D.										Depth (feet)										(G)RAB OR (C)OMP.									
H226050										1										1									
1 FS-1										1										1									
2 FS-2										1										1									
3 FS-3										2.5										1									
4 FS-4										2.5										1									
5 FS-5										2.5										1									
6 FS-6										2.5										1									
7 FS-7										1										1									
8 FS-8										2										1									
9 SW-1										1										1									
10 SW-2										1										1									
Relinquished By:										Date: 12-22-22										Time: 1410									
Relinquished By:										Received By:										Date: 12-22-22									
Relinquished By:										Received By:										Date: 12-22-22									
Delivered By: (Circle One)										Observed Temp.: °C 3.3										Sample Condition									
Sampler - UPS - Bus - Other:										Corrected Temp.: °C 1.6										Cool Intact Yes No									
CHECKED BY: (Initials)										Tumaround Time:										Standard Rush									
Thermometer ID #113										70 - 12/22/22										Bacteria (only) Sample Condition									
Corrosion Factor: 0.5°C										70 - 12/22/22										Cool Intact Yes No									
Corrected Temp.: °C										Corrected Temp.: °C										Corrected Temp.: °C									



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

---

January 09, 2023

BEAUX JENNINGS

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: SUNDANCE 1-3 CTB

Enclosed are the results of analyses for samples received by the laboratory on 01/06/23 14:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [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 fluid and cursive, with the first name "Celey" and last name "Keene" clearly distinguishable.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 01/06/2023  
 Reported: 01/09/2023  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 01/06/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 1 1' (H230073-01)**

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	01/09/2023	ND	189	94.6	200	1.61	
<b>DRO &gt;C10-C28*</b>	<b>2210</b>	10.0	01/09/2023	ND	178	89.0	200	1.02	
<b>EXT DRO &gt;C28-C36</b>	<b>732</b>	10.0	01/09/2023	ND					

Surrogate: 1-Chlorooctane 62.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 170 % 49.1-148

**Sample ID: FS - 2 1' (H230073-02)**

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	01/07/2023	ND	203	102	200	2.75	
<b>DRO &gt;C10-C28*</b>	<b>254</b>	10.0	01/07/2023	ND	210	105	200	0.217	
<b>EXT DRO &gt;C28-C36</b>	<b>104</b>	10.0	01/07/2023	ND					

Surrogate: 1-Chlorooctane 82.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 01/06/2023  
 Reported: 01/09/2023  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 01/06/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 5 3' (H230073-03)**

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	01/07/2023	ND	203	102	200	2.75	
DRO >C10-C28*	398	10.0	01/07/2023	ND	210	105	200	0.217	
EXT DRO >C28-C36	91.0	10.0	01/07/2023	ND					
Surrogate: 1-Chlorooctane	81.3 %	48.2-134							
Surrogate: 1-Chlorooctadecane	103 %	49.1-148							

**Sample ID: FS - 8 3' (H230073-04)**

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	01/07/2023	ND	203	102	200	2.75	
<b>DRO &gt;C10-C28*</b>	<b>742</b>	10.0	01/07/2023	ND	210	105	200	0.217	
<b>EXT DRO &gt;C28-C36</b>	<b>228</b>	10.0	01/07/2023	ND					
Surrogate: 1-Chlorooctane	83.4 %	48.2-134							
Surrogate: 1-Chlorooctadecane	127 %	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  
 BEAUX JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 01/06/2023  
 Reported: 01/09/2023  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 01/06/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW - 1 0-3' (H230073-05)**

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	01/09/2023	ND	189	94.6	200	1.61	
<b>DRO &gt;C10-C28*</b>	<b>12.7</b>	10.0	01/09/2023	ND	178	89.0	200	1.02	
EXT DRO >C28-C36	<10.0	10.0	01/09/2023	ND					
Surrogate: 1-Chlorooctane	82.1 %	48.2-134							
Surrogate: 1-Chlorooctadecane	85.7 %	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

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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

---

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC		P.O. #:															
Project Manager: BEAUX JENNINGS		Company: Oxy USA, Inc.															
Address: 601 N. Marland St. STE 400		Attn: Wade Dietrich															
City: Midland		Address:															
Phone #: (210) 214-8858 Fax #:		City:															
Project #: 0381417045 Project Owner: OXY		State: Zip:															
Project Name: SUNDANCE 1-3 CTB		Phone #: 575-390-2828															
Project Location: EDDY COUNTY, NM		Fax #:															
Sampler Name: SHANE DILLER & KELLY BENNETT		PRESERV															
FOR LAB USE ONLY		SAMPLING															
Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	TPH	
H230073	FS-1	1'		1			X							4/6/23	1130	X	
1	FS-2	1'		1			X							4/6/23	1135	X	
2	FS-3	3'		1			X							4/6/23	1140	X	
3	FS-8	3'		1			X							4/6/23	1125	X	
4	SW-1	0-3'		1			X							4/6/23	1128	X	
5	NPE																
1/6/2023																	
KAB																	

PLEASE NOTE: Laboratory and client's liability and damage exclusions remain for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruption, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: *[Signature]* Date: 4-6-23 Time: 1435 Received By: *[Signature]* Date: 4-6-23 Time: 1435

Delivered By: (Circle One) Oxy USA, Inc. Sample Condition: ☒ Intact ☐ Damaged Checked By: (Initials) *VE*

Sampler - UPS - Bus - Other: Corrected Temp.: 7.5

Turnaround Time: Standard ☒ Rush ☐ Bacteria (only) ☐ Sample Condition: ☐ Intact ☐ Observed Temp.: °C

Thermometer ID #113 Corrosion Factor: -0.5°C e 34 m2

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

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

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



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

---

January 18, 2023

BEAUX JENNINGS

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: SUNDANCE 1-3 CTB

Enclosed are the results of analyses for samples received by the laboratory on 01/17/23 12:12.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received: 01/17/2023  
 Reported: 01/18/2023  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 01/17/2023  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Tamara Oldaker

**Sample ID: FS - 1 1' (H230227-01)**

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	01/17/2023	ND	207	104	200	8.35	
<b>DRO &gt;C10-C28*</b>	<b>279</b>	10.0	01/17/2023	ND	191	95.3	200	5.60	
<b>EXT DRO &gt;C28-C36</b>	<b>67.1</b>	10.0	01/17/2023	ND					

Surrogate: 1-Chlorooctane 83.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 121 % 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

---

### Notes and Definitions

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

---

Cardinal Laboratories

\*=Accredited Analyte

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

---

Celey D. Keene, Lab Director/Quality Manager





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

---

August 09, 2023

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

RE: SUNDANCE 1-3 CTB

Enclosed are the results of analyses for samples received by the laboratory on 08/08/23 12:27.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [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  
 BEAUX JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 08/08/2023  
 Reported: 08/09/2023  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 08/08/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: BG - N 0-0.25' (H234213-01)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/09/2023	ND	2.14	107	2.00	3.20	
Toluene*	<0.050	0.050	08/09/2023	ND	2.06	103	2.00	3.29	
Ethylbenzene*	<0.050	0.050	08/09/2023	ND	1.93	96.4	2.00	4.51	
Total Xylenes*	<0.150	0.150	08/09/2023	ND	5.76	96.0	6.00	4.22	
Total BTEX	<0.300	0.300	08/09/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 90.0 % 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	32.0	16.0	08/09/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/08/2023	ND	168	84.2	200	0.120	
DRO >C10-C28*	<10.0	10.0	08/08/2023	ND	177	88.4	200	1.48	
EXT DRO >C28-C36	<10.0	10.0	08/08/2023	ND					

Surrogate: 1-Chlorooctane 97.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 115 % 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  
 BEAUX JENNINGS  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 08/08/2023  
 Reported: 08/09/2023  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 08/08/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: BG - E 0-0.25' (H234213-02)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/09/2023	ND	2.14	107	2.00	3.20	
Toluene*	<0.050	0.050	08/09/2023	ND	2.06	103	2.00	3.29	
Ethylbenzene*	<0.050	0.050	08/09/2023	ND	1.93	96.4	2.00	4.51	
Total Xylenes*	<0.150	0.150	08/09/2023	ND	5.76	96.0	6.00	4.22	
Total BTEX	<0.300	0.300	08/09/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.5 % 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	32.0	16.0	08/09/2023	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/08/2023	ND	168	84.2	200	0.120	
DRO >C10-C28*	<10.0	10.0	08/08/2023	ND	177	88.4	200	1.48	
EXT DRO >C28-C36	<10.0	10.0	08/08/2023	ND					

Surrogate: 1-Chlorooctane 92.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 08/08/2023  
 Reported: 08/09/2023  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 08/08/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: BG - S 0-0.25' (H234213-03)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/09/2023	ND	2.14	107	2.00	3.20		
Toluene*	<0.050	0.050	08/09/2023	ND	2.06	103	2.00	3.29		
Ethylbenzene*	<0.050	0.050	08/09/2023	ND	1.93	96.4	2.00	4.51		
Total Xylenes*	<0.150	0.150	08/09/2023	ND	5.76	96.0	6.00	4.22		
Total BTEX	<0.300	0.300	08/09/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 91.5 % 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	08/09/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/09/2023	ND	163	81.4	200	4.01	
DRO >C10-C28*	<10.0	10.0	08/09/2023	ND	182	91.1	200	4.85	
EXT DRO >C28-C36	<10.0	10.0	08/09/2023	ND					

Surrogate: 1-Chlorooctane 112 % 48.2-134

Surrogate: 1-Chlorooctadecane 127 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 08/08/2023  
 Reported: 08/09/2023  
 Project Name: SUNDANCE 1-3 CTB  
 Project Number: 03B1417045  
 Project Location: OXY - EDDY COUNTY, NM

Sampling Date: 08/08/2023  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: BG - W 0-0.25' (H234213-04)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/09/2023	ND	2.14	107	2.00	3.20	
Toluene*	<0.050	0.050	08/09/2023	ND	2.06	103	2.00	3.29	
Ethylbenzene*	<0.050	0.050	08/09/2023	ND	1.93	96.4	2.00	4.51	
Total Xylenes*	<0.150	0.150	08/09/2023	ND	5.76	96.0	6.00	4.22	
Total BTEX	<0.300	0.300	08/09/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 92.9 % 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	<16.0	16.0	08/09/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/09/2023	ND	163	81.4	200	4.01	
DRO >C10-C28*	<10.0	10.0	08/09/2023	ND	182	91.1	200	4.85	
EXT DRO >C28-C36	<10.0	10.0	08/09/2023	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 122 % 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 black ink, appearing to read "C. D. Keene", written over a horizontal line.

---

Celey D. Keene, Lab Director/Quality Manager

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



APPENDIX F

C-141

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

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

Form C-141  
Revised August 24, 2018  
Submit to appropriate OCD District office

Incident ID	nAPP2215132849
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party: Oxy USA Inc.	OGRID: 16696
Contact Name: Wade Dittrich	Contact Telephone: 575-390-2828
Contact email: wade_dittrich@oxy.com	Incident # nAPP2215132849
Contact mailing address: PO Box 4294, Houston, TX 77210	

### Location of Release Source

Latitude 32.247216

Longitude -103.724486

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Sundance 1-3 CTB	Site Type: Central Tank Battery
Date Release Discovered: 5/9/2022	API# (if applicable)

Unit Letter	Section	Township	Range	County
H	1	24S	31E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (Name: \_\_\_\_\_)

### Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls): 10	Volume Recovered (bbls): 10
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls): 45	Volume Recovered (bbls): 35
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Produced water tank overflowed due to water transfer pump being tripped-no automation.




State of New Mexico  
Oil Conservation Division

Incident ID	nAPP2215132849
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? Release is greater than 25 barrels.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by Wade Dittrich of Oxy via email to <a href="mailto:OCD.enviro@state.nm.us">OCD.enviro@state.nm.us</a> and <a href="mailto:BLM_NM_CFO_Spill@blm.gov">BLM_NM_CFO_Spill@blm.gov</a> on 5/9/2022 at 1407.	

**Initial Response**

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

<input checked="" type="checkbox"/> The source of the release has been stopped.	
<input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.	
<input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
<input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Wade Dittrich</u>	Title: <u>Environmental Specialist</u>
Signature: <u></u>	Date: <u>2-15-22</u>
email: <u>wade_dittrich@oxy.com</u>	Telephone: <u>575-390-2828</u>
<b><u>OCD Only</u></b>	
Received by: _____	Date: _____

Incident ID	nAPP2215132849
District RP	
Facility ID	
Application ID	

## Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>&gt;100</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

### **Characterization Report Checklist:** *Each of the following items must be included in the report.*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 9.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.



State of New Mexico  
Oil Conservation Division

Incident ID	nAPP2215132849
District RP	
Facility ID	
Application ID	

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

Printed Name: Wade Dittrich

Title: Environmental Specialist

Signature: 

Date: 2-15-23

email: wade\_dittrich@oxy.com

Telephone: 575-390-2828

**OCD Only**

Received by: \_\_\_\_\_

Date: \_\_\_\_\_



State of New Mexico  
Oil Conservation Division

Incident ID	nAPP2215132849
District RP	
Facility ID	
Application ID	

## Closure

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

**Closure Report Attachment Checklist:** *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

I hereby certify that the information given above is true and complete to 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.

Printed Name: Wade Dittrich

Title: Environmental Specialist

Signature: \_\_\_\_\_

Date: 2-15-23

email: wade\_dittrich@oxy.com

Telephone: 575-390-2828

**OCD Only**

Received by: \_\_\_\_\_

Date: \_\_\_\_\_

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: \_\_\_\_\_

Date: 02/12/2024

Printed Name: Scott Rodgers

Title: Environmental Specialist Adv.



**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS  
  
Action 251904

CONDITIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 251904
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
scott.rodgers	None	2/12/2024