



**December 29, 2022**

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

**Re:** Remediation Work Plan  
**North Corridor WPF**  
**32.247° N, 103.787° W**  
**Eddy County, New Mexico**  
**Incident ID: nAPP2227954604**  
Ensolum Project No. 03B1417062

Dear Mr. Dittrich:

Ensolum, LLC. (Ensolum) has prepared this Remediation Work Plan to perform environmental consulting services in the vicinity of the North Corridor WPF, referred to hereinafter as the "Site." The Site is located off Louis Whitlock Rd and an unnamed caliche road, approximately 17 miles east of Malaga in Eddy County, New Mexico.

## **I. SITE DESCRIPTION & BACKGROUND**

<b>Operator:</b>	Oxy USA Inc. (Oxy)
<b>Site Name:</b>	North Corridor WPF
<b>Location:</b>	32.247° N, 103.787° W Eddy County, New Mexico
<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 Site is located in Unit E, Section 4, Township 24 South, Range 31 East, in Eddy County, New Mexico (32.247° N, 103.787° W) and is associated with oil and gas exploration and production operations on BLM Federal Land.

On October 4, 2022, a release of produced water was reported from internal corrosion on a transfer pump. Approximately 165 barrels (bbls) of produced water were released with 160 bbls recovered. Oxy reported the release to the NMOCD and BLM through email notification on October 5, 2022. The release was assigned Incident Number nAPP2227954604.

On October 26, 2022, Ensolum arrived on-Site and collected a total of 20 composite pothole soil samples from five locations (PH-1 and PH-5), four from each pothole location at one-foot intervals down to a depth of four feet below ground surface (bgs), within the release area. Additionally, four delineation composite soil samples (BG-1 through BG-4) were collected from a depth of 0 – 0.25 feet bgs to determine the horizontal and vertical extent of the release.

Based on the analytical results from the soil samples collected and the lack of a water well within 0.5 mile from the Site, the New Mexico Administrative Code (NMAC) 19.15.29 *Releases* Table I: Closure Criteria for Soils Impacted by a Release ( $\leq 50$  feet) values were utilized. The composite pothole soil samples and delineation composite soil sample results are included as **Table 1** in **Attachment D**.

The Site Map indicating the overall area of the release, the composite pothole soil sample's locations, and the delineation composite soil sample's locations are included as **Figure 3** in **Attachment A**.

## II. 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. Closure criteria supporting documentation is included in **Attachment B**.

- The Site is not located within 300 feet of a New Mexico ENMRD 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.
- 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 BLM, the Site is not located within an unstable area.
- The Site is not located within an area of 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
≤50 feet	Chloride	EPA 300.0 or SM4500 Cl B	600 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	100 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

### III. SCOPE OF SERVICES

#### A. Health and Safety Plan

Ensolum will develop a site-specific Health and Safety Plan (HSP) for the performance of the scope of services described in this Remediation Work Plan. For the purposes of this HSP, it is assumed that the constituents of concern (COCs) include petroleum hydrocarbons. For the purposes of this HSP, it is assumed that the scope of services can be conducted under modified Level D personal protective equipment (PPE), which will include fire-retardant (FR) clothing, hard hat, steel-toed boots, protective eyewear and gloves. Should the need arise to upgrade PPE (e.g. respiratory protection), the client will be notified, and the HSP will be modified accordingly. Although it is not anticipated at this time, it should be noted that a PPE upgrade will constitute a change in scope of work, requiring a change order.

#### B. Soil Boring Installation

Due to the absence of water wells being present within 0.5 mile of the Site, one soil boring will be installed to determine the depth to groundwater in the area. The soil boring will be advanced utilizing an air rotary drilling rig, under the supervision of a state-licensed water well driller. The soil boring will be left open for approximately 48 hours to allow groundwater, if encountered, to reach static level.

Prior to initiation of drilling activities, an *Application for Permit to Drill a Well with No Consumptive Use of Water (WR-07)* will be submitted to the New Mexico OSE prior to the installation of the soil boring. In preparation for the potential encounter of groundwater, a *Well Plugging Plan of Operations (WD-08)* will be submitted to the New Mexico OSE prior to the installation of the soil boring.

If groundwater is not encountered, soil cuttings will be placed back in the bore hole and capped with bentonite subsequent to installation and the 48 hour waiting period.

Drilling equipment will be decontaminated by high pressure cleaning prior to commencement of the project. A boring log will be created using drill cuttings from the air rotary rig to document lithology, color, relative moisture content and visual or olfactory evidence of impairment.

### **C. Excavation Activities**

Subsequent to soil boring installation activities, the Site will be excavated by a third-party contractor to remove impacted soils in the release area based on laboratory analytical data, olfactory and/or visual evidence of impairment. Based on current analytical data taken at the Site, sample point PH-2, PH-3 and PH-5 will be excavated down to one to four feet bgs.

At this time, an estimated 60 cubic yards (cy) will be excavated from the release area. The excavated impacted soils will be placed on plastic on-Site and will be taken off-Site for proper disposal upon receipt of laboratory analytical results. The remediation will be completed within 90 days of approval from the NMOCD.

### **D. Confirmation Composite Soil Sampling Program**

Once excavation activities are complete, Ensolum will collect additional confirmation composite soil samples every 600 square-feet from the bottomhole and sidewalls of the release area based on the following criteria:

- Highest photoionization detector (PID) reading;
- Highest electrical conductivity reading; or
- Change in lithology.

### **E. Laboratory Analytical Program**

The soil samples collected from the proposed confirmation composite samples will be analyzed for total petroleum hydrocarbons (TPH) gasoline range organics (GRO)/ diesel range organics (DRO)/ motor oil/lube oil range organics (MRO) utilizing Environmental Protection Agency (EPA) SW-846 Method 8015M, benzene, toluene, ethylbenzene and xylene (BTEX) utilizing EPA SW-846 Method 8021B, and chloride utilizing EPA Method SM4500 Cl B under the NMOCD Closure Criteria for Soils Impacted by a Release ( $\leq 50$  feet). Based on the results of the soil boring installation and depth to groundwater (if encountered), the Closure Criteria limits for TPH (GRO/DRO/MRO), BTEX, benzene and/or chloride is subject to change.

## **IV. REPORTING**

Subsequent to the completion of Site activities, a Closure Report will be prepared by Ensolum to document completed site investigation and remediation activities as well as any corrective action at the Site, if needed.

## **V. DELIVERABLES**

The results, findings, conclusions, and recommendations, which will be provided in the Closure Report, will be based solely on the conditions which are observed during the site investigation and the information reviewed by Ensolum. No warranties or representations, expressed or implied, will be made as to the condition of the site beyond that observed by Ensolum during its site investigation.

Mr. Wade Dittrich  
Remediation Work Plan  
North Corridor WPF

December 29, 2022  
Page 5

We appreciate the opportunity to provide this Remediation Work Plan and look forward to working with you on this project. If you should have any questions or comments regarding this Remediation Work Plan, please contact either of the undersigned.

Sincerely,  
**Ensolum, LLC**

  
**Heather Holthaus**  
Senior Project Manager  
[hholthaus@ensolum.com](mailto:hholthaus@ensolum.com)

  
**Beaux Jennings**  
Senior Project Manager  
[bjennings@ensolum.com](mailto:bjennings@ensolum.com)

**Attachments:**

**Attachment A – Figures**

**Attachment B – Supporting Documentation**

**Attachment C – Photographic Documentation**

**Attachment D – Table 1 – Soil Sample Analytical Results**

**Attachment E – Laboratory Report & Chain-of-Custody Documentation**

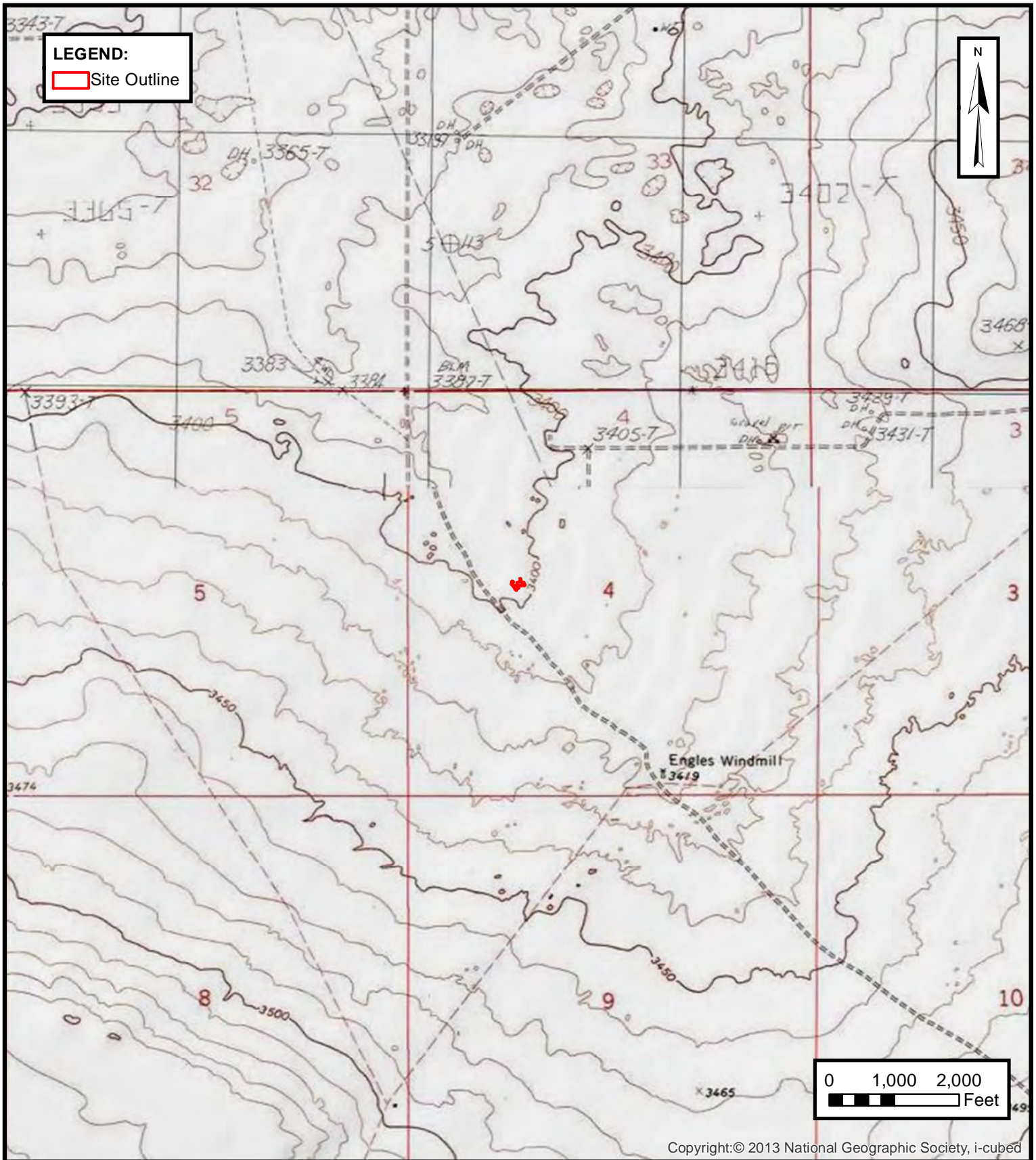
**Attachment F – C-141**



ATTACHMENT A

Figures





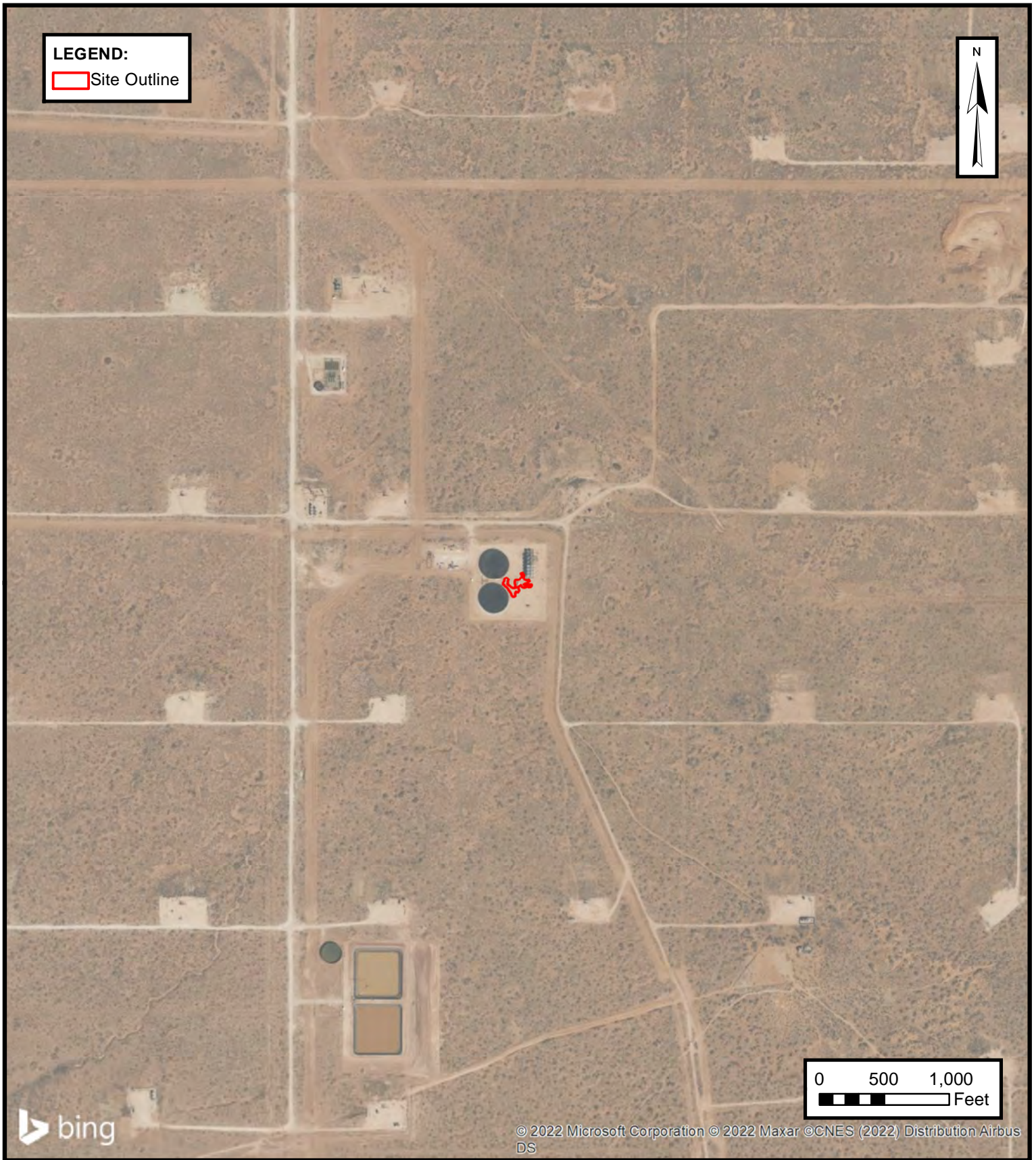
**ENSOLUM**  
Environmental, Engineering and  
Hydrogeologic Consultants

**TOPOGRAPHIC MAP**  
OXY USA INC.  
NORTH CORRIDOR WPF  
Eddy County, New Mexico  
32.247° N, 103.787° W

PROJECT NUMBER: 03B1417062

**FIGURE**  
**1**



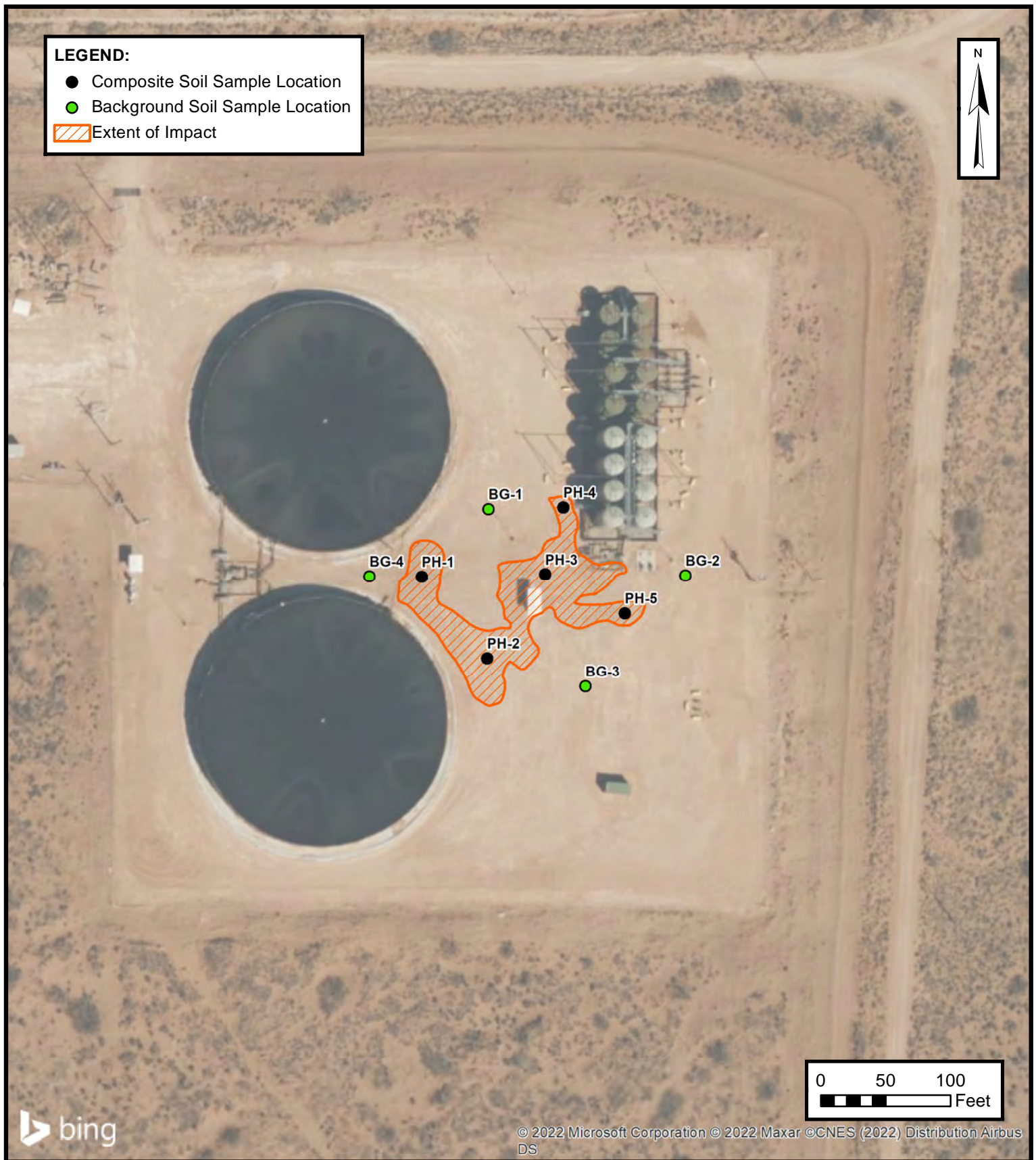


**SITE VICINITY MAP**  
OXY USA INC.  
NORTH CORRIDOR WPF  
Eddy County, New Mexico  
32.247° N, 103.787° W

PROJECT NUMBER: 03B1417062

**FIGURE**  
**2**



**SITE MAP**

OXY USA INC.  
NORTH CORRIDOR WPF  
Eddy County, New Mexico  
32.247° N, 103.787° W

PROJECT NUMBER: 03B1417062

**FIGURE****3**

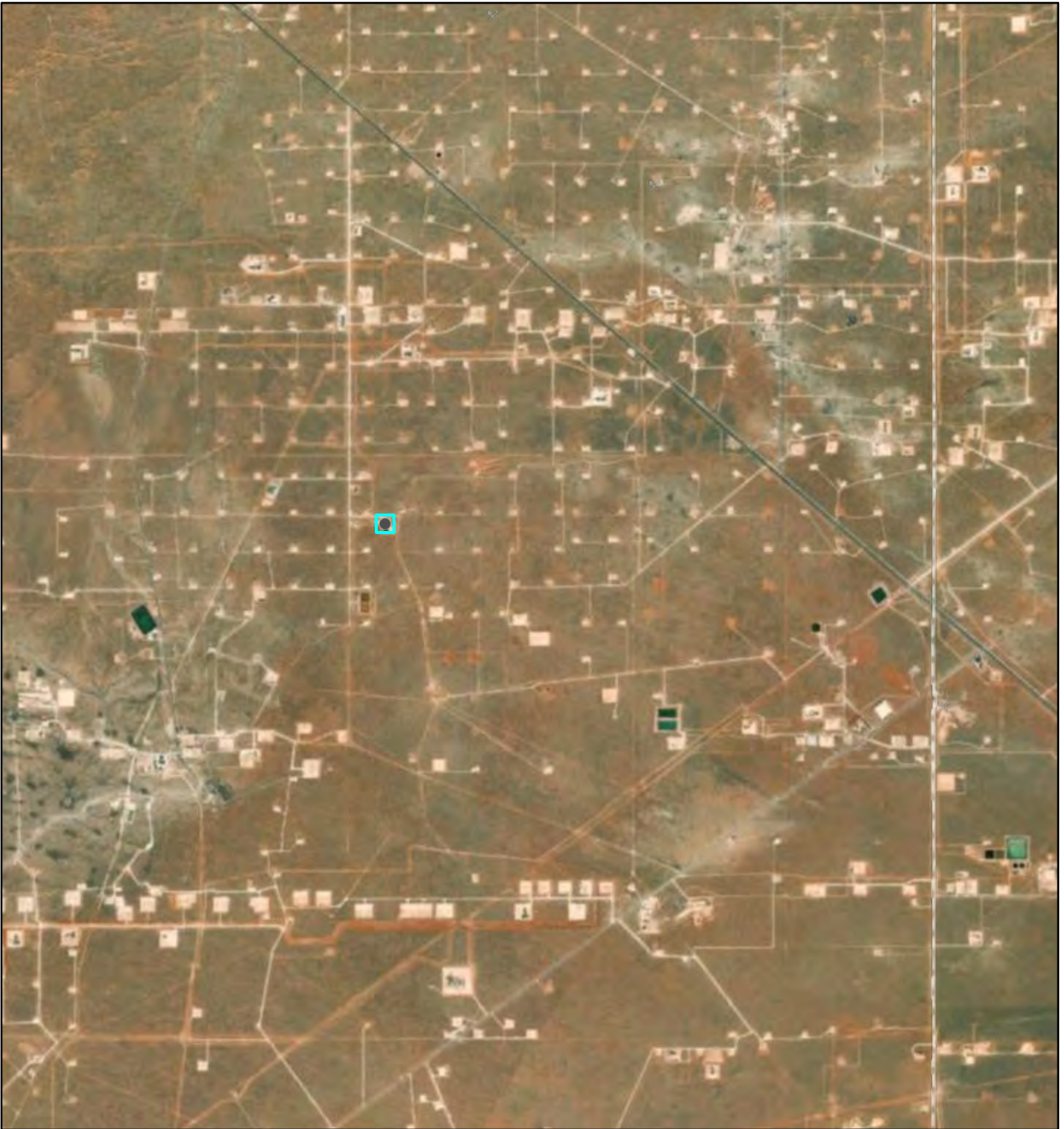


ATTACHMENT B

Supporting Documentation



## Active Mines in New Mexico

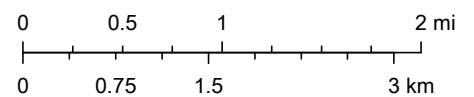


12/23/2022, 9:28:04 AM

Registered Mines

- ✕ Aggregate, Stone etc.
- ✕ Aggregate, Stone etc.

1:72,224



Esri, HERE, Garmin, Earthstar Geographics



# National Flood Hazard Layer FIRMette



103°47'30"W 32°15'2"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
OTHER FEATURES		Levee, Dike, or Floodwall
		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
		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 **12/23/2022 at 10:30 AM** 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.



# North Corridor WPF

Write a description for your map.

## Legend

- Feature 1
- Feature 2
- Feature 3
- High
- Low
- Medium
- North Corridor WPF 10.12.22
- North Corridor WPF 10.12.22



600 ft



# OSE POD Locations Map



12/23/2022, 9:08:16 AM

default

default

GIS WATERS PODs

Active

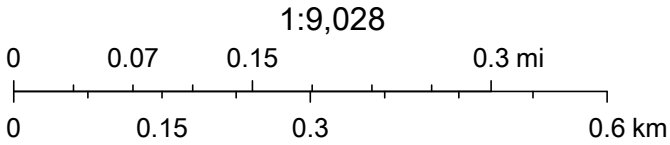
Plugged

OSE District Boundary

New Mexico State Trust Lands

Both Estates

SiteBoundaries



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










## Wetlands Mapper




December 23, 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.



## ATTACHMENT C

### Photographic Documentation



Date & Time: Wed, Oct 12, 2022, 11:35:45 MDT  
Position: +032.246701° / -103.786231° (±15.6ft)  
Altitude: 3399ft (±11.0ft)  
Datum: WGS-84  
Azimuth/Bearing: 288° N72W 5120mils True (±15°)  
Elevation Angle: -09.3°  
Horizon Angle: -00.1°  
Zoom: 0.5X



View of release point and impact area during initial investigation activities, facing northwest.

Date & Time: Wed, Oct 12, 2022, 11:36:09 MDT  
Position: +032.246758° / -103.786454° (±15.6ft)  
Altitude: 3399ft (±11.1ft)  
Datum: WGS-84  
Azimuth/Bearing: 114° S66E 2027mils True (±15°)  
Elevation Angle: -08.5°  
Horizon Angle: +01.4°  
Zoom: 0.5X



View of impact area during initial investigation activities, facing southeast.





View of impact area during initial investigation activities, facing northwest.



View of impact area during initial investigation activities, facing northeast.



## ATTACHMENT D

### Table 1 - Soil Sample Analytical Results



**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**

North Corridor WPF  
Oxy USA Inc.  
Eddy County, New Mexico  
Ensolum Project No. 03B1417062

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total TPH (GRO+DRO+MRO) (mg/kg)	Chloride (mg/kg)
New Mexico Oil Conservation Division Closure Criteria for Soils Impacted by a Release (≤ 50 feet)			10	NE	NE	NE	50	NE	NE	NE	100	600
Pothole Soil Sample Analytical Results												
PH-1	10/26/2022	0 - 1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	80.0
		1 - 2	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	16.0
		2 - 3	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	16.0
		3 - 4	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	32.0
PH-2	10/26/2022	0 - 1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	3,920
		1 - 2	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	920
		2 - 3	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	480
		3 - 4	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	848
PH-3	10/26/2022	0 - 1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	3,360
		1 - 2	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	384
		2 - 3	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	96.0
		3 - 4	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	128
PH-4	10/26/2022	0 - 1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	128
		1 - 2	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	16.0
		2 - 3	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	16.0
		3 - 4	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	32.0
PH-5	10/26/2022	0 - 1	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	2,080
		1 - 2	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	128
		2 - 3	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	80.0
		3 - 4	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	112
Background Sample Analytical Results												
BG-1	10/26/2022	0 - 0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
BG-2	10/26/2022	0 - 0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
BG-3	10/26/2022	0 - 0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	32.0
BG-4	10/26/2022	0 - 0.25	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0

Concentrations in **bold** and yellow exceed the New Mexico Oil Conservation Division Closure Criteria for Soils Impacted by a Release ( $\leq 50$  feet)

bgs: below ground surface

mg/kg: milligrams per kilogram

NE: Not Established

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

MRO: Motor Oil/Lube Oil Range Organics

TPH: Total Petroleum Hydrocarbon





## ATTACHMENT E

### Laboratory Report & Chain-of-Custody Documentation



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

November 01, 2022

BEAUX JENNINGS

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: NORTH CORRIDOR WPF

Enclosed are the results of analyses for samples received by the laboratory on 10/26/22 14:03.

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:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: PH 1 0-1' (H225048-01)**

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/31/2022	ND	1.96	98.0	2.00	5.86	
Toluene*	<0.050	0.050	10/31/2022	ND	2.11	106	2.00	3.93	
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.06	103	2.00	2.48	
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.25	104	6.00	2.68	
Total BTX	<0.300	0.300	10/31/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.7 % 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	80.0	16.0	10/28/2022	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/30/2022	ND	189	94.6	200	1.69	
DRO >C10-C28*	<10.0	10.0	10/30/2022	ND	194	97.0	200	1.73	
EXT DRO >C28-C36	<10.0	10.0	10/30/2022	ND					

Surrogate: 1-Chlorooctane 106 % 45.3-161

Surrogate: 1-Chlorooctadecane 124 % 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

**Analytical Results For:**

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

Received:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: PH 1 1-2' (H225048-02)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/31/2022	ND	1.96	98.0	2.00	5.86	
Toluene*	<0.050	0.050	10/31/2022	ND	2.11	106	2.00	3.93	
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.06	103	2.00	2.48	
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.25	104	6.00	2.68	
Total BTEx	<0.300	0.300	10/31/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 90.3 % 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	16.0	16.0	10/28/2022	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/30/2022	ND	189	94.6	200	1.69	
DRO >C10-C28*	<10.0	10.0	10/30/2022	ND	194	97.0	200	1.73	
EXT DRO >C28-C36	<10.0	10.0	10/30/2022	ND					

Surrogate: 1-Chlorooctane 101 % 45.3-161

Surrogate: 1-Chlorooctadecane 116 % 46.3-178

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**Analytical Results For:**

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

Received:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: PH 1 2-3' (H225048-03)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/31/2022	ND	1.96	98.0	2.00	5.86		
Toluene*	<0.050	0.050	10/31/2022	ND	2.11	106	2.00	3.93		
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.06	103	2.00	2.48		
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.25	104	6.00	2.68		
Total BTEX	<0.300	0.300	10/31/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.1 % 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	16.0	16.0	10/28/2022	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/30/2022	ND	189	94.6	200	1.69	
DRO >C10-C28*	<10.0	10.0	10/30/2022	ND	194	97.0	200	1.73	
EXT DRO >C28-C36	<10.0	10.0	10/30/2022	ND					

Surrogate: 1-Chlorooctane 99.7 % 45.3-161

Surrogate: 1-Chlorooctadecane 113 % 46.3-178

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**Analytical Results For:**

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

Received:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: PH 1 3-4' (H225048-04)**

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/31/2022	ND	1.96	98.0	2.00	5.86	
Toluene*	<0.050	0.050	10/31/2022	ND	2.11	106	2.00	3.93	
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.06	103	2.00	2.48	
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.25	104	6.00	2.68	
Total BTX	<0.300	0.300	10/31/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 90.4 % 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	32.0	16.0	10/28/2022	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/30/2022	ND	189	94.6	200	1.69	
DRO >C10-C28*	<10.0	10.0	10/30/2022	ND	194	97.0	200	1.73	
EXT DRO >C28-C36	<10.0	10.0	10/30/2022	ND					

Surrogate: 1-Chlorooctane 109 % 45.3-161

Surrogate: 1-Chlorooctadecane 124 % 46.3-178

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**Analytical Results For:**

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

Received:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: PH 2 0-1' (H225048-05)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/31/2022	ND	1.96	98.0	2.00	5.86		
Toluene*	<0.050	0.050	10/31/2022	ND	2.11	106	2.00	3.93		
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.06	103	2.00	2.48		
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.25	104	6.00	2.68		
Total BTEx	<0.300	0.300	10/31/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 90.7 % 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	3920	16.0	10/28/2022	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/30/2022	ND	189	94.6	200	1.69	
DRO >C10-C28*	<10.0	10.0	10/30/2022	ND	194	97.0	200	1.73	
EXT DRO >C28-C36	<10.0	10.0	10/30/2022	ND					

Surrogate: 1-Chlorooctane 105 % 45.3-161

Surrogate: 1-Chlorooctadecane 121 % 46.3-178

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**Analytical Results For:**

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 MIDLAND TX, 79705  
 Fax To:

Received:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: PH 2 1-2' (H225048-06)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/31/2022	ND	1.96	98.0	2.00	5.86	
Toluene*	<0.050	0.050	10/31/2022	ND	2.11	106	2.00	3.93	
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.06	103	2.00	2.48	
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.25	104	6.00	2.68	
Total BTEx	<0.300	0.300	10/31/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.6 % 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	920	16.0	10/28/2022	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/30/2022	ND	189	94.6	200	1.69	
DRO >C10-C28*	<10.0	10.0	10/30/2022	ND	194	97.0	200	1.73	
EXT DRO >C28-C36	<10.0	10.0	10/30/2022	ND					

Surrogate: 1-Chlorooctane 106 % 45.3-161

Surrogate: 1-Chlorooctadecane 126 % 46.3-178

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**Analytical Results For:**

ENSOLUM, LLC  
 BEAUX JENNINGS  
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 MIDLAND TX, 79705  
 Fax To:

Received:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: PH 2 2-3' (H225048-07)**

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	10/31/2022	ND	1.96	98.0	2.00	5.86		
Toluene*	<0.050	0.050	10/31/2022	ND	2.11	106	2.00	3.93		
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.06	103	2.00	2.48		
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.25	104	6.00	2.68		
Total BTEx	<0.300	0.300	10/31/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 89.1 % 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	10/28/2022	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/31/2022	ND	189	94.6	200	1.69	
DRO >C10-C28*	<10.0	10.0	10/31/2022	ND	194	97.0	200	1.73	
EXT DRO >C28-C36	<10.0	10.0	10/31/2022	ND					

Surrogate: 1-Chlorooctane 102 % 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:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: PH 2 3-4' (H225048-08)**

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	10/31/2022	ND	1.96	98.0	2.00	5.86	
Toluene*	<0.050	0.050	10/31/2022	ND	2.11	106	2.00	3.93	
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.06	103	2.00	2.48	
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.25	104	6.00	2.68	
Total BTX	<0.300	0.300	10/31/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 90.5 % 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	848	16.0	10/28/2022	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/31/2022	ND	189	94.6	200	1.69	
DRO >C10-C28*	<10.0	10.0	10/31/2022	ND	194	97.0	200	1.73	
EXT DRO >C28-C36	<10.0	10.0	10/31/2022	ND					

Surrogate: 1-Chlorooctane 104 % 45.3-161

Surrogate: 1-Chlorooctadecane 125 % 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:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: PH 3 0-1' (H225048-09)**

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/31/2022	ND	1.96	98.0	2.00	5.86	
Toluene*	<0.050	0.050	10/31/2022	ND	2.11	106	2.00	3.93	
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.06	103	2.00	2.48	
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.25	104	6.00	2.68	
Total BTX	<0.300	0.300	10/31/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 89.4 % 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	3360	16.0	10/28/2022	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/31/2022	ND	189	94.3	200	0.867	
DRO >C10-C28*	<10.0	10.0	10/31/2022	ND	189	94.5	200	4.05	
EXT DRO >C28-C36	<10.0	10.0	10/31/2022	ND					

Surrogate: 1-Chlorooctane 100 % 45.3-161

Surrogate: 1-Chlorooctadecane 117 % 46.3-178

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**Analytical Results For:**

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

Received:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: PH 3 1-2' (H225048-10)**

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/31/2022	ND	1.96	98.0	2.00	5.86	
Toluene*	<0.050	0.050	10/31/2022	ND	2.11	106	2.00	3.93	
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.06	103	2.00	2.48	
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.25	104	6.00	2.68	
Total BTX	<0.300	0.300	10/31/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 89.6 % 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	384	16.0	10/28/2022	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/31/2022	ND	189	94.3	200	0.867	
DRO >C10-C28*	<10.0	10.0	10/31/2022	ND	189	94.5	200	4.05	
EXT DRO >C28-C36	<10.0	10.0	10/31/2022	ND					

Surrogate: 1-Chlorooctane 105 % 45.3-161

Surrogate: 1-Chlorooctadecane 124 % 46.3-178

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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:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: PH 3 2-3' (H225048-11)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/31/2022	ND	1.96	98.0	2.00	5.86		
Toluene*	<0.050	0.050	10/31/2022	ND	2.11	106	2.00	3.93		
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.06	103	2.00	2.48		
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.25	104	6.00	2.68		
Total BTEx	<0.300	0.300	10/31/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 90.6 % 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	96.0	16.0	10/28/2022	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/31/2022	ND	189	94.3	200	0.867	
DRO >C10-C28*	<10.0	10.0	10/31/2022	ND	189	94.5	200	4.05	
EXT DRO >C28-C36	<10.0	10.0	10/31/2022	ND					

Surrogate: 1-Chlorooctane 99.0 % 45.3-161

Surrogate: 1-Chlorooctadecane 115 % 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:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: PH 3 3-4' (H225048-12)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/31/2022	ND	1.96	98.0	2.00	5.86		
Toluene*	<0.050	0.050	10/31/2022	ND	2.11	106	2.00	3.93		
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.06	103	2.00	2.48		
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.25	104	6.00	2.68		
Total BTEx	<0.300	0.300	10/31/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 89.3 % 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	128	16.0	10/28/2022	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/31/2022	ND	189	94.3	200	0.867	
DRO >C10-C28*	<10.0	10.0	10/31/2022	ND	189	94.5	200	4.05	
EXT DRO >C28-C36	<10.0	10.0	10/31/2022	ND					

Surrogate: 1-Chlorooctane 94.1 % 45.3-161

Surrogate: 1-Chlorooctadecane 111 % 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:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: PH 4 0-1' (H225048-13)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/31/2022	ND	1.96	98.0	2.00	5.86		
Toluene*	<0.050	0.050	10/31/2022	ND	2.11	106	2.00	3.93		
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.06	103	2.00	2.48		
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.25	104	6.00	2.68		
Total BTEx	<0.300	0.300	10/31/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 92.1 % 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	128	16.0	10/28/2022	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/31/2022	ND	189	94.3	200	0.867	
DRO >C10-C28*	<10.0	10.0	10/31/2022	ND	189	94.5	200	4.05	
EXT DRO >C28-C36	<10.0	10.0	10/31/2022	ND					

Surrogate: 1-Chlorooctane 101 % 45.3-161

Surrogate: 1-Chlorooctadecane 117 % 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:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: PH 4 1-2' (H225048-14)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/31/2022	ND	1.96	98.0	2.00	5.86		
Toluene*	<0.050	0.050	10/31/2022	ND	2.11	106	2.00	3.93		
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.06	103	2.00	2.48		
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.25	104	6.00	2.68		
Total BTEx	<0.300	0.300	10/31/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 89.1 % 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	16.0	16.0	10/28/2022	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/31/2022	ND	189	94.3	200	0.867	
DRO >C10-C28*	<10.0	10.0	10/31/2022	ND	189	94.5	200	4.05	
EXT DRO >C28-C36	<10.0	10.0	10/31/2022	ND					

Surrogate: 1-Chlorooctane 97.6 % 45.3-161

Surrogate: 1-Chlorooctadecane 115 % 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:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: PH 4 2-3' (H225048-15)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/31/2022	ND	1.96	98.0	2.00	5.86		
Toluene*	<0.050	0.050	10/31/2022	ND	2.11	106	2.00	3.93		
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.06	103	2.00	2.48		
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.25	104	6.00	2.68		
Total BTEx	<0.300	0.300	10/31/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 87.8 % 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	16.0	16.0	10/28/2022	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/31/2022	ND	189	94.3	200	0.867	
DRO >C10-C28*	<10.0	10.0	10/31/2022	ND	189	94.5	200	4.05	
EXT DRO >C28-C36	<10.0	10.0	10/31/2022	ND					

Surrogate: 1-Chlorooctane 99.6 % 45.3-161

Surrogate: 1-Chlorooctadecane 117 % 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:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: PH 4 3-4' (H225048-16)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/31/2022	ND	1.96	98.0	2.00	5.86	
Toluene*	<0.050	0.050	10/31/2022	ND	2.11	106	2.00	3.93	
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.06	103	2.00	2.48	
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.25	104	6.00	2.68	
Total BTEx	<0.300	0.300	10/31/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 89.4 % 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	32.0	16.0	10/28/2022	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/31/2022	ND	189	94.3	200	0.867	
DRO >C10-C28*	<10.0	10.0	10/31/2022	ND	189	94.5	200	4.05	
EXT DRO >C28-C36	<10.0	10.0	10/31/2022	ND					

Surrogate: 1-Chlorooctane 103 % 45.3-161

Surrogate: 1-Chlorooctadecane 124 % 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:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: PH 5 0-1' (H225048-17)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/31/2022	ND	1.96	98.0	2.00	5.86		
Toluene*	<0.050	0.050	10/31/2022	ND	2.11	106	2.00	3.93		
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.06	103	2.00	2.48		
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.25	104	6.00	2.68		
Total BTX	<0.300	0.300	10/31/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 86.6 % 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	2080	16.0	10/28/2022	ND	432	108	400	3.64	QM-07	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/31/2022	ND	189	94.3	200	0.867	
DRO >C10-C28*	<10.0	10.0	10/31/2022	ND	189	94.5	200	4.05	
EXT DRO >C28-C36	<10.0	10.0	10/31/2022	ND					

Surrogate: 1-Chlorooctane 100 % 45.3-161

Surrogate: 1-Chlorooctadecane 117 % 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:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: PH 5 1-2' (H225048-18)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/31/2022	ND	1.97	98.3	2.00	6.10		
Toluene*	<0.050	0.050	10/31/2022	ND	2.10	105	2.00	5.03		
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.04	102	2.00	5.19		
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.19	103	6.00	4.83		
Total BTEx	<0.300	0.300	10/31/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 86.9 % 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	128	16.0	10/28/2022	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/31/2022	ND	189	94.3	200	0.867	
DRO >C10-C28*	<10.0	10.0	10/31/2022	ND	189	94.5	200	4.05	
EXT DRO >C28-C36	<10.0	10.0	10/31/2022	ND					

Surrogate: 1-Chlorooctane 141 % 45.3-161

Surrogate: 1-Chlorooctadecane 173 % 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:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: PH 5 2-3' (H225048-19)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/31/2022	ND	1.97	98.3	2.00	6.10		
Toluene*	<0.050	0.050	10/31/2022	ND	2.10	105	2.00	5.03		
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.04	102	2.00	5.19		
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.19	103	6.00	4.83		
Total BTEx	<0.300	0.300	10/31/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 90.6 % 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	80.0	16.0	10/28/2022	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/01/2022	ND	189	94.3	200	0.867	
DRO >C10-C28*	<10.0	10.0	11/01/2022	ND	189	94.5	200	4.05	
EXT DRO >C28-C36	<10.0	10.0	11/01/2022	ND					

Surrogate: 1-Chlorooctane 90.6 % 45.3-161

Surrogate: 1-Chlorooctadecane 108 % 46.3-178

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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:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: PH 5 3-4' (H225048-20)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/31/2022	ND	1.97	98.3	2.00	6.10		
Toluene*	<0.050	0.050	10/31/2022	ND	2.10	105	2.00	5.03		
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.04	102	2.00	5.19		
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.19	103	6.00	4.83		
Total BTEx	<0.300	0.300	10/31/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 89.2 % 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	112	16.0	10/28/2022	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/01/2022	ND	189	94.3	200	0.867	
DRO >C10-C28*	<10.0	10.0	11/01/2022	ND	189	94.5	200	4.05	
EXT DRO >C28-C36	<10.0	10.0	11/01/2022	ND					

Surrogate: 1-Chlorooctane 98.9 % 45.3-161

Surrogate: 1-Chlorooctadecane 113 % 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:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: BG - 1 0-.25' (H225048-21)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/31/2022	ND	1.97	98.3	2.00	6.10		
Toluene*	<0.050	0.050	10/31/2022	ND	2.10	105	2.00	5.03		
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.04	102	2.00	5.19		
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.19	103	6.00	4.83		
Total BTEx	<0.300	0.300	10/31/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 88.8 % 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	<16.0	16.0	10/28/2022	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/31/2022	ND	189	94.3	200	0.867	
DRO >C10-C28*	<10.0	10.0	10/31/2022	ND	189	94.5	200	4.05	
EXT DRO >C28-C36	<10.0	10.0	10/31/2022	ND					

Surrogate: 1-Chlorooctane 128 % 45.3-161

Surrogate: 1-Chlorooctadecane 152 % 46.3-178

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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:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: BG - 2 0-.25' (H225048-22)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/31/2022	ND	1.97	98.3	2.00	6.10		
Toluene*	<0.050	0.050	10/31/2022	ND	2.10	105	2.00	5.03		
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.04	102	2.00	5.19		
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.19	103	6.00	4.83		
Total BTEx	<0.300	0.300	10/31/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 86.7 % 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	<16.0	16.0	10/28/2022	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/31/2022	ND	189	94.3	200	0.867	
DRO >C10-C28*	<10.0	10.0	10/31/2022	ND	189	94.5	200	4.05	
EXT DRO >C28-C36	<10.0	10.0	10/31/2022	ND					

Surrogate: 1-Chlorooctane 139 % 45.3-161

Surrogate: 1-Chlorooctadecane 170 % 46.3-178

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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:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: BG - 3 0-.25' (H225048-23)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/31/2022	ND	1.97	98.3	2.00	6.10		
Toluene*	<0.050	0.050	10/31/2022	ND	2.10	105	2.00	5.03		
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.04	102	2.00	5.19		
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.19	103	6.00	4.83		
Total BTEX	<0.300	0.300	10/31/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 89.9 % 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	32.0	16.0	10/28/2022	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/01/2022	ND	189	94.3	200	0.867	
DRO >C10-C28*	<10.0	10.0	11/01/2022	ND	189	94.5	200	4.05	
EXT DRO >C28-C36	<10.0	10.0	11/01/2022	ND					

Surrogate: 1-Chlorooctane 99.8 % 45.3-161

Surrogate: 1-Chlorooctadecane 116 % 46.3-178

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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:	10/26/2022	Sampling Date:	10/26/2022
Reported:	11/01/2022	Sampling Type:	Soil
Project Name:	NORTH CORRIDOR WPF	Sampling Condition:	Cool & Intact
Project Number:	03B1417062	Sample Received By:	Tamara Oldaker
Project Location:	OXY - EDDY CO., NM		

**Sample ID: BG - 4 0-.25' (H225048-24)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/31/2022	ND	1.97	98.3	2.00	6.10		
Toluene*	<0.050	0.050	10/31/2022	ND	2.10	105	2.00	5.03		
Ethylbenzene*	<0.050	0.050	10/31/2022	ND	2.04	102	2.00	5.19		
Total Xylenes*	<0.150	0.150	10/31/2022	ND	6.19	103	6.00	4.83		
Total BTEx	<0.300	0.300	10/31/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 91.0 % 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	<16.0	16.0	10/28/2022	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/01/2022	ND	189	94.3	200	0.867	
DRO >C10-C28*	<10.0	10.0	11/01/2022	ND	189	94.5	200	4.05	
EXT DRO >C28-C36	<10.0	10.0	11/01/2022	ND					

Surrogate: 1-Chlorooctane 98.1 % 45.3-161

Surrogate: 1-Chlorooctadecane 114 % 46.3-178

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

---

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

---

Celey D. Keene, Lab Director/Quality Manager



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

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC						P.O. #:						BILL TO						ANALYSIS REQUEST																																																											
Project Manager: Bruce Jennings						Company: Oxy USA, Inc.																																																																							
Address: 601 N. Marientfield St. STE 400						Attn: Wade Dittich																																																																							
City: Midland						State: TX Zip: 79701																																																																							
Phone #: 432-230-3344 Fax #:						Address:																																																																							
Project #: 0331417062 Project Owner:						City:																																																																							
Project Name: Norrl Corridor WPS						State: Zip:																																																																							
Project Location: Eddy Co NM						Phone #: 575-390-2828																																																																							
Sample Name: Stone D.I.H.						Fax #:																																																																							
FOR LAB USE ONLY						MATRIX						PRESERV						SAMPLING																																																											
Lab I.D.						Sample Depth (feet)						(G)RAB OR (C)OMP.						# CONTAINERS																																																											
												GROUNDWATER						WASTEWATER																																																											
												SOIL						OIL																																																											
												SLUDGE						OTHER :																																																											
												ACID/BASE:						ICE / COOL																																																											
												OTHER :																																																																	
												DATE						TIME																																																											
H2SD48						PH1						0-1						C						X						10-26-22						1134						X						X						TPH 8015m						BTEX 80216						Chlorides 4500											
1						PH1						1-2						C						X						1136						X						X																																			
2						PH1						2-3						C						X						1138						X						X																																			
3						PH1						3-4						C						X						1140						X						X																																			
4						PH1						0-1						C						X						1144						X						X																																			
5						PH2						1-2						C						X						1146						X						X																																			
6						PH2						2-3						C						X						1148						X						X																																			
7						PH2						3-4						C						X						1150						X						X																																			
8						PH3						0-1						C						X						4/11/24						X						X																																			
9						PH3						1-2						C						X						10-26-22						1135						X						X																													
D						PH3												C						X																																																					
PLEASE NOTE: Liability and clients exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the service. 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 analysis. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.												Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #:																																																																	
Relinquished By: [Signature]												Date: 10-26-22 Received By: [Signature]												All Results are emailed. Please provide Email address: Blennings@ensolum.com																																																					
Time: 1403												Received By: [Signature]												REMARKS:																																																					
Date: 10-26-22												Time:												Turnaround Time: Standard Rush <input checked="" type="checkbox"/>																																																					
Delivered By: (Circle One)												Observed Temp.: °C 21.5 Corrected Temp.: °C 1.9												Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Bacteria (only) Sample Condition Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No																																																					
Sampler - UPS - Bus - Other:												Corrected Temp.: °C 1.9												Thermometer ID #113 Correction Factor -.0XC TS. 10/26/22																																																					



### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

Relinquished By:		Date:		Received By:		Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #:	
Sgt. [Signature]		10-26-22		[Signature]		All Results are emailed. Please provide Email address:	
Relinquished By:		Time:		Received By:		Bjennings@ensolum.com	
[Signature]		7:403		[Signature]		REMARKS:	

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C Corrected Temp. °C	Sample Condition Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	CHECKED BY: (Initials)	Turnaround Time:	Standard <b>Rush</b> <input type="checkbox"/>	Bacteria (only) Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	Sample Condition Observed Temp. °C Corrected Temp. °C
Time:	2.5 1.9		YD				
Thermometer ID #113	Correction Factor -0.4°C				TD 10/14/22		

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





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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



ATTACHMENT 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	nAPP2227954604
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 # nAPP2227954604
Contact mailing address: PO Box 4294, Houston, TX 77210	

### Location of Release Source

Latitude 32.246737 Longitude -103.786239  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: North Corridor WPF	Site Type: Water Transfer Pump
Date Release Discovered: 10/04/2022	API# (if applicable)

Unit Letter	Section	Township	Range	County
E	4	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 type="checkbox"/> Crude Oil	Volume Released (bbls):	Volume Recovered (bbls):
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls): 165	Volume Recovered (bbls): 160
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input checked="" 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: 1-inch nipple internal corrosion.




State of New Mexico  
Oil Conservation Division

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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@emnrd.nm.gov">OCD.enviro@emnrd.nm.gov</a> and <a href="mailto:BLM_NM_CFO_Spill@blm.gov">BLM_NM_CFO_Spill@blm.gov</a> on 10/05/2022 at 0842.	

**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> Signature: <u></u> email: <u>wade_dittrich@oxy.com</u>	Title: <u>Environmental Specialist</u> Date: <u>12-29-22</u> Telephone: <u>575-390-2828</u>
<b><u>OCD Only</u></b> Received by: <u>Jocelyn Harimon</u> Date: <u>12/30/2022</u>	

Incident ID	nAPP2227954604
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## 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>    N/A    </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 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.



Form C-141  
Page 4

State of New Mexico  
Oil Conservation Division

Incident ID	nAPP2227954604
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Printed Name: Wade Dittrich

Title: Environmental Specialist

Signature: 

Date: 12-29-22

email: wade\_dittrich@oxy.com

Telephone: 575-390-2828

**OCD Only**

Received by: Jocelyn Harimon

Date: 12/30/2022

Incident ID	nAPP2227954604
District RP	
Facility ID	
Application ID	

## Remediation Plan


**Remediation Plan Checklist:** *Each of the following items must be included in the plan.*

- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points
- ☒ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

**Deferral Requests Only:** *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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 DittrichTitle: Environmental SpecialistSignature: Date: 12-29-22email: wade\_dittrich@oxy.comTelephone: 575-390-2828**OCD Only**Received by: Jocelyn Harimon Date: 12/30/2022

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

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

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



Incident ID	nAPP2227954604
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Printed Name: Wade DittrichTitle: Environmental SpecialistSignature: Date: 12-29-22email: wade\_dittrich@oxy.comTelephone: 575-390-2828**OCD Only**Received by: Jocelyn HarimonDate: 12/30/2022☐ Approved☒ Approved with Attached Conditions of Approval☐ Denied☐ Deferral ApprovedSignature: Robert HamletDate: 4/5/2023

**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 171248

**CONDITIONS**

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 171248
	Action Type: [C-141] Release Corrective Action (C-141)

**CONDITIONS**

Created By	Condition	Condition Date
rhamlet	The Remediation Plan is Conditionally Approved. All samples must be analyzed for all constituents listed in Table I of 19.15.29.12 NMAC. Floor confirmation samples should be delineated/excavated to meet closure criteria standards for site assessment/characterization/proven depth to water determination. 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. The variance for 600 ft2 confirmation composite soil samples is denied. Confirmation samples should be collected every 200 ft2. With respect to the borehole, if water is not visible after reaching bottom-hole and waiting 72 hours, the OCD will accept this as evidence. We would just need a copy of the driller's log. The work will need to occur in 90 days after the work plan has been approved.	4/5/2023