



May 15, 2025

New Mexico Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

**Re: Remediation Work Plan  
New Wave Lobo Frac Booster  
Incident Number nAPP2505953548  
Lea County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of New Wave Energy (New Wave) and Mewbourne Oil Company (Mewbourne), has prepared the following *Remediation Work Plan (Work Plan)* to document delineation activities completed to date and to propose excavation of impacted soil to address a produced water release that occurred at the New Wave Lobo Frac Booster (Site) facility. The purpose of the delineation activities was to define the lateral and vertical extent of impacted soil resulting from the release. The following *Work Plan* proposes to excavate impacted soil and conduct confirmation soil sampling activities.

## **SITE DESCRIPTION AND RELEASE SUMMARY**

The Site is located in Unit M, Section 28, Township 21 South, Range 32 East, in Lea County, New Mexico (32.44444°, -103.68827°) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On February 15, 2025, corrosion of a produced water flowline resulted in the release of 78.4 barrels (bbls) of produced water to the surface of a right-of-way and pasture areas. No fluids were recovered. Mewbourne reported the release to the New Mexico Oil Conservation Division (NMOCD) via Notification of Release (NOR) and Initial C-141 Application (C-141) on February 28, 2025. The release was assigned Incident Number nAPP2505953548.

## **SITE CHARACTERIZATION AND CLOSURE CRITERIA**

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented below and potential Site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be between 51 and 100 feet below ground surface (bgs) based on the nearest groundwater well data. On June 14, 2024, New Mexico Office of State Engineer (OSE) permitted well (C-04839) was advanced to a depth of 55 feet below ground surface (bgs) approximately 520 feet northeast of the Site to determine the regional depth to groundwater. No groundwater was observed, verifying that depth to water is greater than 55 feet bgs. The Well Record & Log is included in Appendix A

Mewbourne Oil Company  
Remediation Work Plan  
New Wave Lobo Frac Booster

The closest continuously flowing or significant watercourse to the Site is a riverine, located approximately 5,993 feet south of the Site. The Site is greater than 200 feet from any lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area).

Based on the results of the Site Characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply:

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

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

## SITE ASSESSMENT AND DELINEATION ACTIVITIES

Between March 24 and May 12, 2025, Ensolum personnel conducted Site assessment and delineation activities to evaluate the release extent based on information provided on the C-141 and visual observations. Six delineation soil samples (SS01 through SS06) were collected around the release extent from a depth of 0.5 feet bgs to assess the lateral extent of the release. Eight boreholes (BH01 through BH08) were advanced via hand auger to depths ranging from 1-foot to 4 feet bgs. Discrete delineation soil samples were collected from each borehole at depths ranging from 0.5-feet bgs to 4 feet bgs. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Photographic documentation was completed during the Site activities and a photographic log is included in Appendix B. Field screening results and observations for all boreholes advanced were logged on lithologic/soil sampling logs, which are included in Appendix C. The release extent and delineation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

The delineation soil samples were transported under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico or Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following contaminants of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following Standard Method SM4500 or EPA 300.0.

## LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for the delineation soil samples SS01 through SS06, collected outside of the release extent, indicated all COC concentrations were in compliance with the Closure Criteria and reclamation requirements, successfully defining the lateral extent of the release. Laboratory analytical results for soil samples BH01, BH02, BH03, BH03A, BH03B, BH05, BH06, BH06A, BH06B, BH07A, and BH08 collected at 1-foot bgs indicated chloride concentrations exceeded reclamation requirement

Mewbourne Oil Company  
Remediation Work Plan  
New Wave Lobo Frac Booster

standards. Soil samples collected from the terminal depths of all boreholes advanced indicated analytical results in compliance with Closure Criteria and/or reclamation requirement, thus, defining the vertical extent of the release. All other delineation soil samples collected indicated all COC concentrations were below reclamation requirements. Laboratory analytical results are summarized in Table 1 and the Laboratory Analytical Reports & Chain-of-Custody Documentation are presented in Appendix D.

## PROPOSED REMEDIATION WORK PLAN

The delineation soil sampling results indicate that chloride impacted soil exists across an estimated 6,125 square-foot area and extends to depths ranging from 1-foot to 4 feet bgs. New Wave and Mewbourne proposes to complete the following remediation activities:

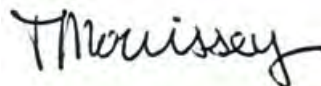
- Excavation of impacted soil to depths ranging from 1-foot to 4 feet bgs, based on delineation soil sample laboratory analytical data. An estimated 530 cubic yards impacted soil will be excavated. The excavated soil will be transferred a New Mexico approved landfill disposal facility for disposal.
- Following the soil removal, 5-point composite confirmation soil samples will be collected at a frequency of every 200 square feet from the floor and sidewalls of the final excavation extent. The 5-point composite samples will be collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. The confirmation soil samples will be handled as described above and submitted to either Cardinal or Eurofins for the same COCs described above. The excavation sidewalls will proceed laterally until all confirmation sidewall soil samples confirm all COC concentrations are compliant with the reclamation requirement.
- Following excavation and a review of confirmation soil sampling results indicating impacted soil has been removed, the excavation will be backfilled with locally procured like-material and recontoured to match pre-existing Site conditions and reseeded with a BLM approved seed mixture.

If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or [tmorrissey@ensolum.com](mailto:tmorrissey@ensolum.com).

Sincerely,  
**Ensolum, LLC**



Jeremy Reich  
Project Geologist



Tacoma Morrissey, MS  
Associate Principal

cc: Brock Molander, New Wave  
Connor Walker, Mewbourne Operating Company  
Jeff Broom, Mewbourne Operating Company  
BLM

Mewbourne Oil Company  
Remediation Work Plan  
New Wave Lobo Frac Booster

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Proposed Excavation Extent
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Photographic Log
Appendix C	Lithologic / Soil Sampling Logs
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation



FIGURES

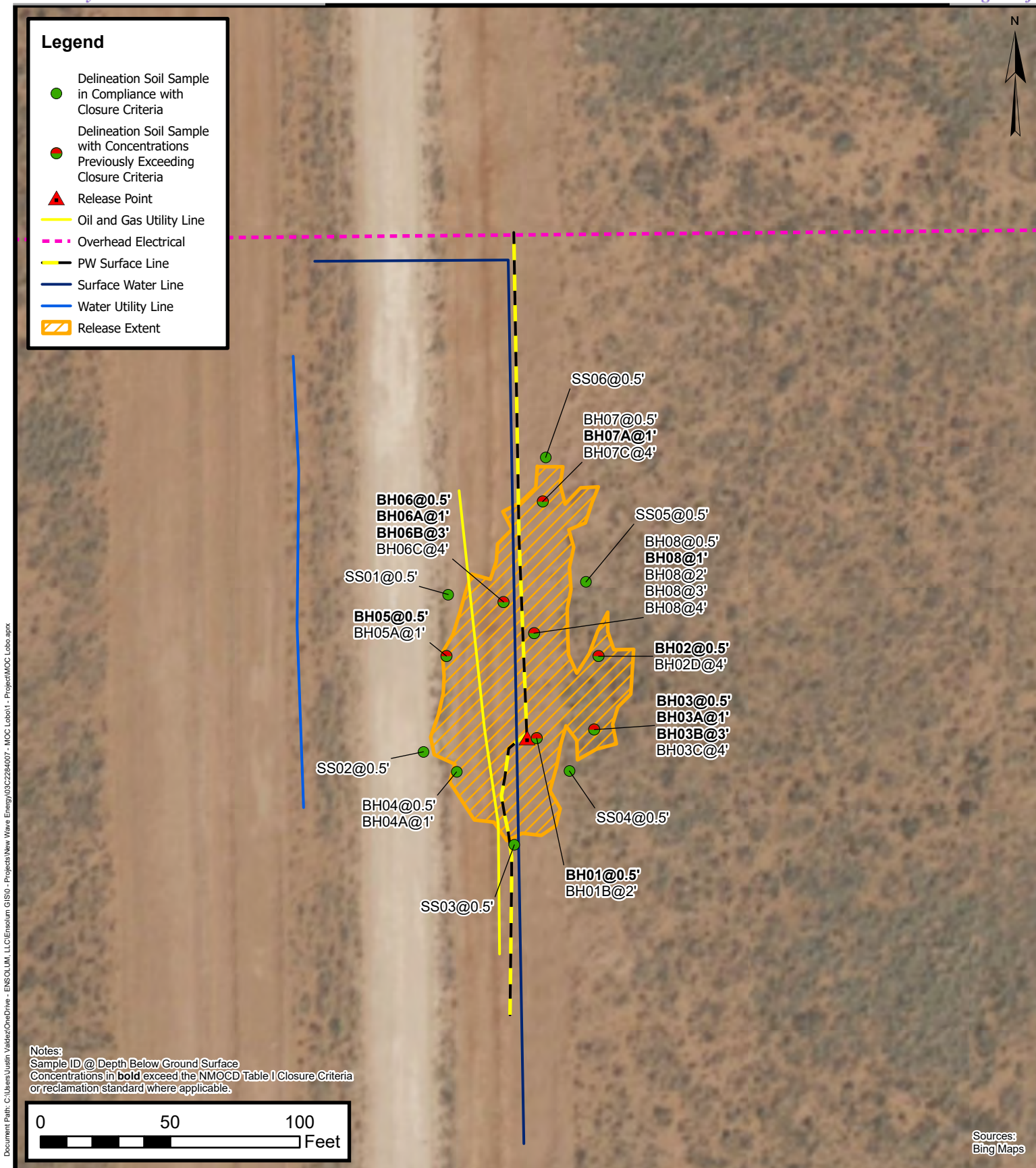




New Wave Energy  
New Wave Lobo Frac Booster  
Incident Number: nAPP2505953548  
Unit M, Sec 28, T21S, R32E  
Lea County, New Mexico

**FIGURE**  
**1**





## Delineation Soil Sample Locations


New Wave Energy  
 New Wave Lobo Frac Booster  
 Incident Number: nAPP2505953548  
 Unit M, Sec 28, T21S, R32E  
 Lea County, New Mexico

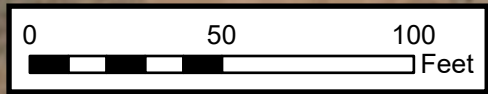
FIGURE  
 2



Document Path: C:\Users\Peter.Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\PAR\_GIS\File Path Structure3 - Carlsbad\New Wave\03C228407 - MOC Lobo 1 - Project\MOC Lobo.aprx

**Legend**

 Proposed Excavation Extent



Sources:  
Bing Maps



## Proposed Excavation Extent

New Wave Energy  
New Wave Lobo Frac Booster  
Incident Number: nAPP2505953548  
Unit M, Sec 28, T21S, R32E  
Lea County, New Mexico

**FIGURE**  
**3**





TABLES



**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 New Wave Lobo Frac Booster  
 New Wave Energy  
 Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
Delineation Soil Samples										
SS01	05/12/2025	0.5	<0.00139	<0.00228	<14.5	<15.1	<15.1	<15.1	<15.1	98.4
SS02	05/12/2025	0.5	<0.00138	<0.00226	<14.5	19.1	<15.1	19.1	19.1	481
SS03	05/12/2025	0.5	<0.00139	<0.00228	<14.5	<15.1	<15.1	<15.1	<15.1	110
SS04	05/12/2025	0.5	<0.00138	<0.00226	<14.5	<15.1	<15.1	<15.1	<15.1	245
SS05	05/12/2025	0.5	<0.00140	<0.00229	<14.6	<15.2	<15.2	<15.2	<15.2	311
SS06	05/12/2025	0.5	<0.00138	<0.00226	<14.5	<15.1	<15.1	<15.1	<15.1	152
BH01	03/24/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	928
BH01B	03/24/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
BH02	03/24/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,920
BH02D	03/24/2025	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	560
BH03	03/24/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	864
BH03A	03/24/2025	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,200
BH03B	05/02/2025	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,570
BH03C	05/02/2025	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	272
BH04	03/24/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
BH04A	03/24/2025	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
BH05	03/24/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,490
BH05A	03/24/2025	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
BH06	03/24/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,260
BH06A	03/24/2025	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,760
BH06B	05/02/2025	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	10,000
BH06C	05/02/2025	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	4,000
BH07	03/24/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
BH07A	03/24/2025	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,560
BH07B	05/02/2025	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
BH07C	05/02/2025	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0



**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 New Wave Lobo Frac Booster  
 New Wave Energy  
 Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
BH08	03/24/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	400
BH08	03/24/2025	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<b>1,700</b>
BH08	03/24/2025	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256
BH08	03/24/2025	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
BH08	03/24/2025	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256

## Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

Grey text indicates soil sample removed during excavation activities





## APPENDIX A

### Referenced Well Records

---

**WELL RECORD & LOG**

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD 1		WELL TAG ID NO.		OSE FILE NO(S). C 04839			
	WELL OWNER NAME(S) Goodnight Midstream Permian, LLC				PHONE (OPTIONAL) 432-530-9517			
	WELL OWNER MAILING ADDRESS 11612 Tower Road				CITY STATE ZIP Midland TX 79707			
	WELL LOCATION (FROM GPS)	DEGREES 32	MINUTES 26	SECONDS 44.89 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND			
		LONGITUDE 103	41	15.78 W	* DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE Unit Letter M, Section 28, T21S, R32E								
2. DRILLING & CASING INFORMATION	LICENSE NO. 1755		NAME OF LICENSED DRILLER John Norris			NAME OF WELL DRILLING COMPANY Hungry Horse, LLC		
	DRILLING STARTED 6/14/24		DRILLING ENDED 6/14/24		DEPTH OF COMPLETED WELL (FT) 55	BORE HOLE DEPTH (FT) NA		
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN *add Centralizer info below <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) NA		DATE STATIC MEASURED NA	
	DRILLING FLUID: <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY:						CHECK HERE IF PITLESS ADAPTER IS INSTALLED <input type="checkbox"/>	
	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
				No Casing				
3. ANNULAR MATERIAL	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE- RANGE BY INTERVAL *(if using Centralizers for Artesian wells- indicate the spacing below)	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	0 10		6	bentonite chips	1.96	tremie		
	10 55		6	native soil	8.84	shovel		

OSE DII ROSWELL NM  
AUG 15 2024 PM 2:15

FOR OSE INTERNAL USE

WR-20 WELL RECORD &amp; LOG (Version 09/22/2022)

FILE NO. C-4839	POD NO. 1	TRN NO. 760735
LOCATION 215.32E-28 133	WELL TAG ID NO. NA	PAGE 1 OF 2

OSE DII ROSWELL NM  
AUG 15 2024 PM2:16

FOR USE INTERNAL USE		WR-20 WELL RECORD & LOG (Version 09/22/2022)	
FILE NO. C-4839	POD NO. 1	TRN NO. 760735	
LOCATION 215.32E-28 133	WELL TAG ID NO. NA	PAGE 2 OF 2	





## APPENDIX B

### Photographic Log

---



**Photographic Log**  
 New Wave Energy  
 New Wave Lobo Frac Booster  
 Lea County, New Mexico



Photograph: 1 Date: 2/18/2025  
 Description: Point of release  
 View: Southeast



Photograph: 2 Date: 5/12/2025  
 Description: Soil staining within release extent  
 View: West



Photograph: 3 Date: 5/2/2025  
 Description: Delineation activities  
 View: Northeast



Photograph: 4 Date: 5/2/2025  
 Description: Delineation activities  
 View: Southeast


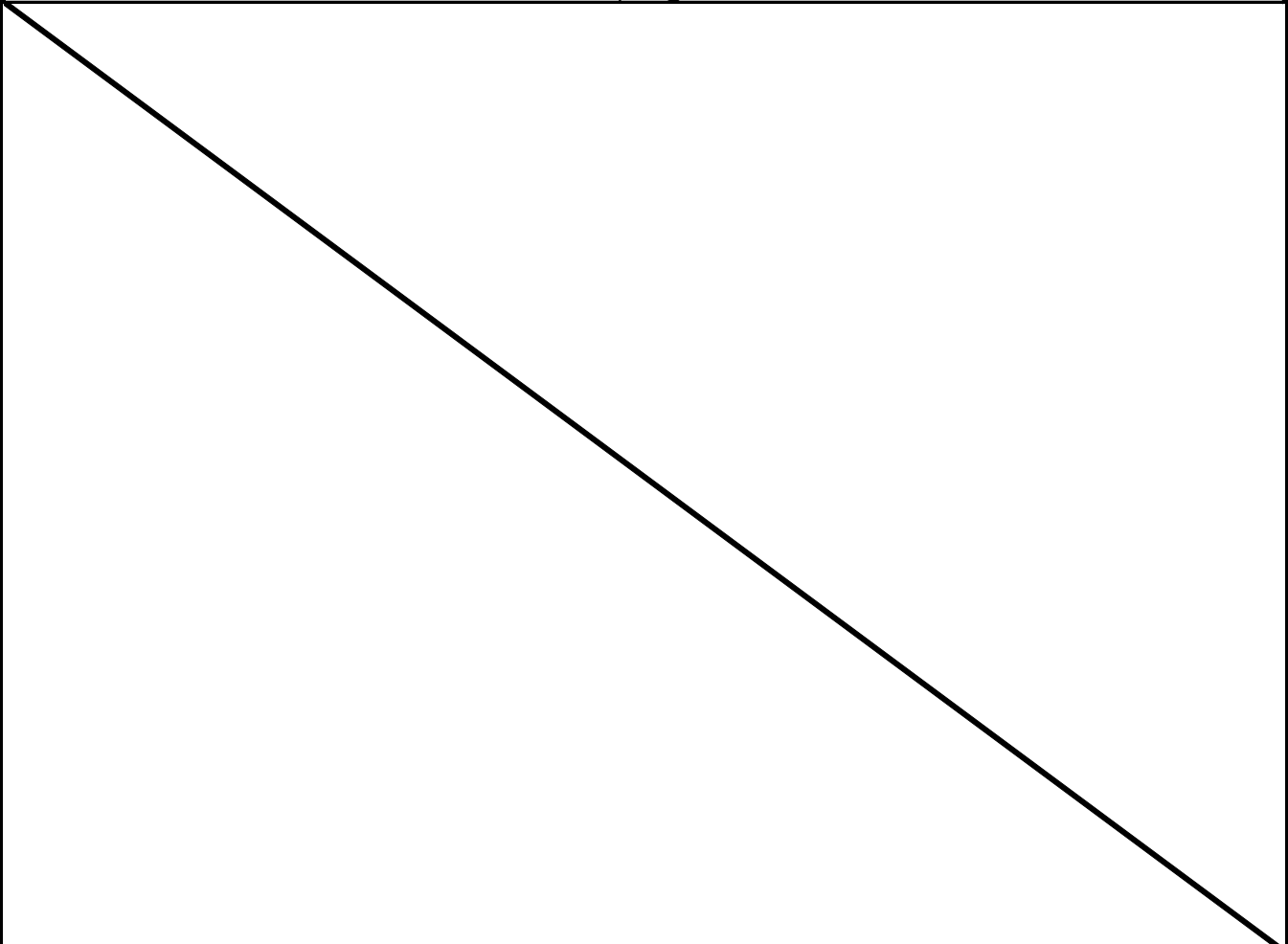



## APPENDIX C


### Lithologic Soil Sampling Logs


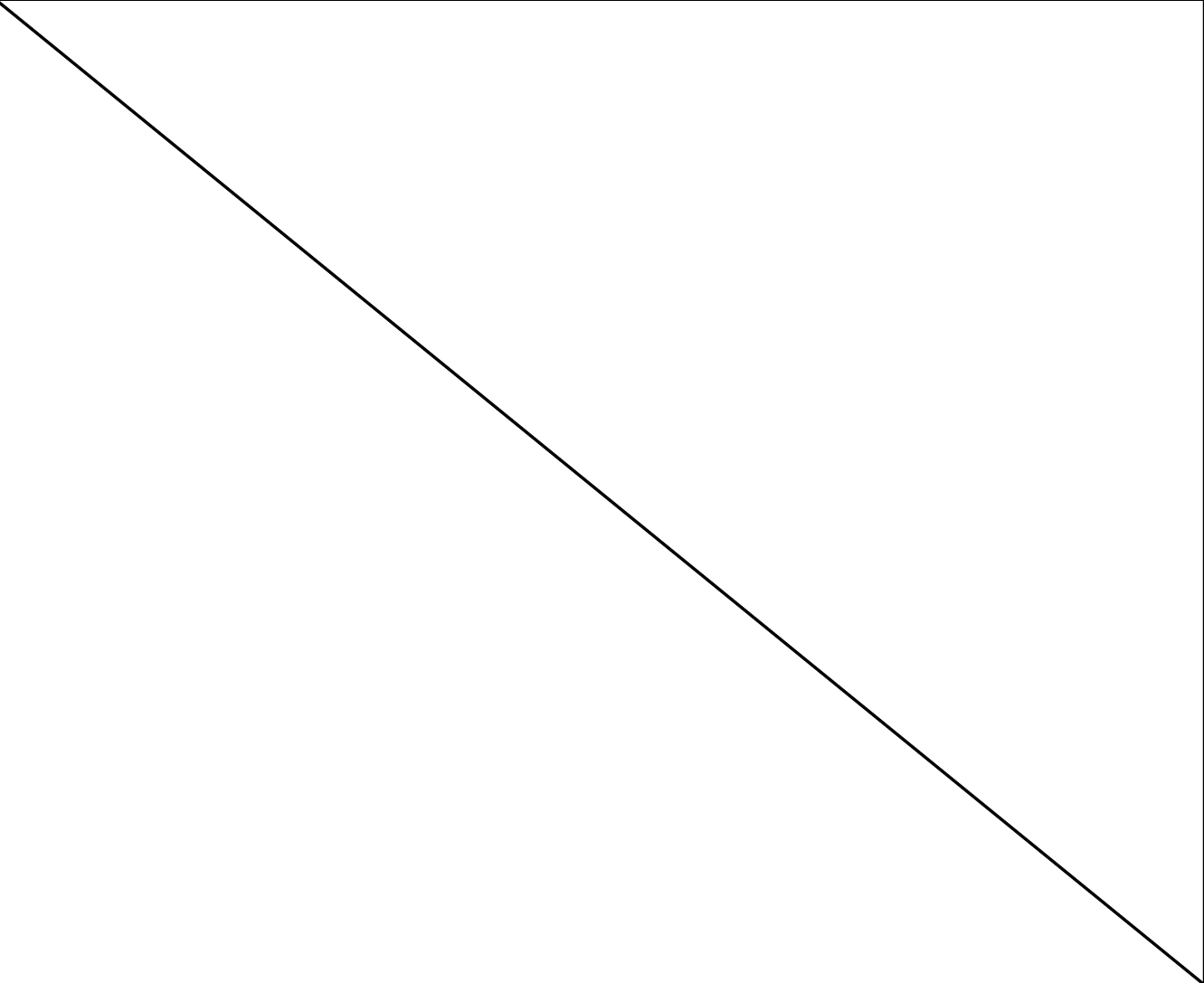
---




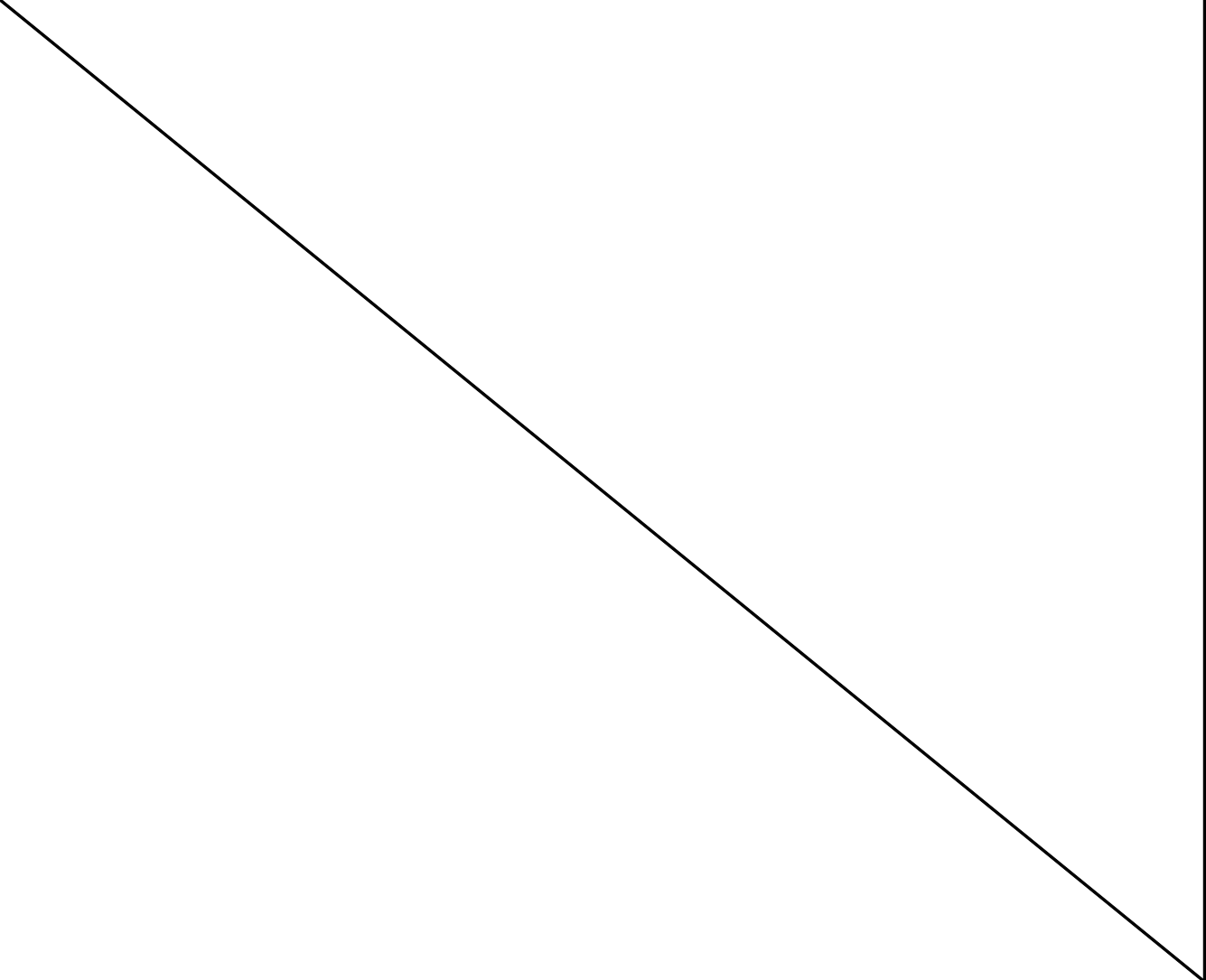
 <b>ENSOLUM</b>		Sample Name: BH01		Date: 3-24-25				
		Site Name: New Wave Lobo Frac Booster						
		Incident Number: nAPP2505953548						
		Job Number: 03C2284007						
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								
Coordinates: 32.444441, -103.688199			Logged By: Evan Roe		Method: Hand Auger			
			Hole Diameter: 3.5 inch		Total Depth: 2'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A correction factor of 40% is included for chloride.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Drv	5852	0.1	N	BH01	0.5	0	SC-SC	(0-2') CLAYEY SAND. Brown. Fine. Uniform. No staining, no odor.
Drv	3292	0	N		1	1		
Drv	<162	1.6	N	BH01B	2	2		
Final Depth @ 2 Feet								
								


 <b>ENSOLUM</b>		Sample Name: BH02		Date: 3-24-25				
		Site Name: New Wave Lobo Frac Booster						
		Incident Number: nAPP2505953548						
		Job Number: 03C2284007						
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								
Coordinates: 32.4445461, -103.6881191			Logged By: Evan Roe		Method: Hand Auger			
			Hole Diameter: 3.5 inch		Total Depth: 4'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A correction factor of 40% is included for chloride.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
Dry	4177	0	N	BH02	0.5			
Dry	5112	0	N		1	1		
Dry	1696	0.9	N		2	2	SC-SC	(0-4') CLAYEY SAND. Brown. Fine. Uniform. No staining, no odor.
Dry	1164	1	N		3	3		
Dry	515	2.1	N	BH02D	4	4		
Final Depth @ 4 Feet								


 <b>ENSOLUM</b>		Sample Name: BH03		Date: 3-24-25				
		Site Name: New Wave Lobo Frac Booster						
		Incident Number: nAPP2505953548						
		Job Number: 03C2284007						
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								
Coordinates: 32.444449, -103.688126			Logged By: Evan Roe		Method: Hand Auger			
			Hole Diameter: 3.5 inch		Total Depth: 4'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A correction factor of 40% is included for chloride.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	5852	0	N	BH03	0.5	0	SC-SC	(0-4') CLAYEY SAND. Brown. Fine. Uniform. No staining, no odor.
Dry	3242	0.1	N	BH03A	1	1		
Dry	9111	0.7	N		2	2		
Dry	2470	0.3	N	BH03B	3	3		
Dry	<174	0.4	N	BH03C	4	4		
Final Depth @ 4 Foot								


 <b>ENSOLUM</b>		Sample Name: BH04		Date: 3-24-25				
		Site Name: New Wave Lobo Frac Booster						
		Incident Number: nAPP2505953548						
		Job Number: 03C2284007						
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								
Coordinates: 32.444406, -103.688299			Logged By: Evan Roe		Method: Hand Auger			
			Hole Diameter: 3.5 inch		Total Depth: 1'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A correction factor of 40% is included for chloride.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Drv	<162	0	N	BH04	0.5	0	SC-SC	(0-1') CLAYEY SAND. Brown. Fine. Uniform. No staining, no odor.
Drv	<162	0	N	BH04A	1	1		
Final Depth @ 1 Foot								
								



 <b>ENSOLUM</b>		Sample Name: BH05		Date: 3-24-25				
		Site Name: New Wave Lobo Frac Booster						
		Incident Number: nAPP2505953548						
		Job Number: 03C2284007						
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								
Coordinates: 32.444529, -103.688310			Logged By: Evan Roe		Method: Hand Auger			
			Hole Diameter: 3.5 inch		Total Depth: 1'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A correction factor of 40% is included for chloride.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Drv	2273	0	N	BH05	0.5	0	SC-SC	(0-1') CLAYEY SAND. Brown. Fine. Uniform. No staining, no odor.
Drv	274	0.1	N	BH05A	1	1		
Final Depth @ 1 Foot								
								

 <b>ENSOLUM</b>		Sample Name: BH06		Date: 3-24-25				
		Site Name: New Wave Lobo Frac Booster						
		Incident Number: nAPP2505953548						
		Job Number: 03C2284007						
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								
Coordinates: 32.444586, -103.688238			Logged By: Evan Roe		Method: Hand Auger			
			Hole Diameter: 3.5 inch		Total Depth: 4'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A correction factor of 40% is included for chloride.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Drv	4552	0	N	BH06	0.5	0	SC-SC	(0-4') CLAYEY SAND. Brown. Fine. Uniform. No staining, no odor.
Drv	5073	0.1	N	BH06A	1	1		
Dry	3158	0.7	N		2	2		
Drv	12672	1.6	N	BH06B	3	3		
Drv	8406	0.9	N	BH06C	4	4		
Final Depth @ 4 Foot								

 <b>ENSOLUM</b>		Sample Name: BH07		Date: 3-24-25				
		Site Name: New Wave Lobo Frac Booster						
		Incident Number: nAPP2505953548						
		Job Number: 03C2284007						
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								
Coordinates: 32.4446906, -103.6881859			Logged By: Evan Roe		Method: Hand Auger			
			Hole Diameter: 3.5 inch		Total Depth: 4'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A correction factor of 40% is included for chloride.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Drv	4670	0.1	N	BH07	0.5	0	SC-SC	(0-4') CLAYEY SAND. Brown. Fine. Uniform. No staining, no odor.
Drv	5073	0.1	N	BH07A	1	1		
Dry	1020	0.0	N		2	2		
Drv	1025	0.0	N		3	3		
Drv	1030	0.4	N	BH07C	4	4		
Final Depth @ 4 Foot								

 <b>ENSOLUM</b>		Sample Name: BH08		Date: 3-24-25				
		Site Name: New Wave Lobo Frac Booster						
		Incident Number: nAPP2505953548						
		Job Number: 03C2284007						
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								
Coordinates: 32.444552, -103.688200			Logged By: Evan Roe		Method: Hand Auger			
			Hole Diameter: 3.5 inch		Total Depth: 4'			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A correction factor of 40% is included for chloride.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
Dry	4177	0.1	N	BH08	0.5			(0-2') CLAYEY SAND. Brown. Fine. Uniform. No staining, no odor.  (3-4') CLAYEY SAND. Brown. Fine. Uniform. No staining, no odor.
Dry	3556	0.1	N	BH08	1	1		
Dry	5073	0.1	N	BH08	2	2	SC-SC	
Dry	767	0.1	N	BH08	3	3		
Dry	1254	0.1	N	BH08	4	4		
Final Depth @ 4 Feet								



## APPENDIX D

### Laboratory Analytical Reports & Chain of Custody Documentation

---





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

April 02, 2025

JEREMY REICH

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: OLD LOBO

Enclosed are the results of analyses for samples received by the laboratory on 03/27/25 13:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM, LLC  
 JEREMY REICH  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 03/27/2025  
 Reported: 04/02/2025  
 Project Name: OLD LOBO  
 Project Number: 03C2284007  
 Project Location: NEW WAVE 32.444437-103.688210

Sampling Date: 03/24/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: BH 01 .5' (H251811-01)**

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	03/30/2025	ND	2.20	110	2.00	4.09	
Toluene*	<0.050	0.050	03/30/2025	ND	2.29	114	2.00	6.99	
Ethylbenzene*	<0.050	0.050	03/30/2025	ND	2.48	124	2.00	7.89	QM-07
Total Xylenes*	<0.150	0.150	03/30/2025	ND	7.44	124	6.00	7.36	
Total BTEX	<0.300	0.300	03/30/2025	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	928	16.0	03/28/2025	ND	416	104	400	0.00	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	03/28/2025	ND	220	110	200	2.45	
DRO >C10-C28*	<10.0	10.0	03/28/2025	ND	204	102	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	03/28/2025	ND					

Surrogate: 1-Chlorooctane 98.3 % 44.4-145

Surrogate: 1-Chlorooctadecane 93.3 % 40.6-153

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  
 JEREMY REICH  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	03/27/2025	Sampling Date:	03/24/2025
Reported:	04/02/2025	Sampling Type:	Soil
Project Name:	OLD LOBO	Sampling Condition:	Cool & Intact
Project Number:	03C2284007	Sample Received By:	Tamara Oldaker
Project Location:	NEW WAVE 32.444437-103.688210		

**Sample ID: BH 01B 2' (H251811-02)**

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	03/30/2025	ND	2.20	110	2.00	4.09		
Toluene*	<0.050	0.050	03/30/2025	ND	2.29	114	2.00	6.99		
Ethylbenzene*	<0.050	0.050	03/30/2025	ND	2.48	124	2.00	7.89		
Total Xylenes*	<0.150	0.150	03/30/2025	ND	7.44	124	6.00	7.36		
Total BTEX	<0.300	0.300	03/30/2025	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	03/28/2025	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	03/28/2025	ND	220	110	200	2.45	
DRO >C10-C28*	<10.0	10.0	03/28/2025	ND	204	102	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	03/28/2025	ND					

Surrogate: 1-Chlorooctane 94.6 % 44.4-145

Surrogate: 1-Chlorooctadecane 88.2 % 40.6-153

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  
 JEREMY REICH  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	03/27/2025	Sampling Date:	03/24/2025
Reported:	04/02/2025	Sampling Type:	Soil
Project Name:	OLD LOBO	Sampling Condition:	Cool & Intact
Project Number:	03C2284007	Sample Received By:	Tamara Oldaker
Project Location:	NEW WAVE 32.444437-103.688210		

**Sample ID: BH 02 .5' (H251811-03)**

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	03/30/2025	ND	2.20	110	2.00	4.09		
Toluene*	<0.050	0.050	03/30/2025	ND	2.29	114	2.00	6.99		
Ethylbenzene*	<0.050	0.050	03/30/2025	ND	2.48	124	2.00	7.89		
Total Xylenes*	<0.150	0.150	03/30/2025	ND	7.44	124	6.00	7.36		
Total BTEX	<0.300	0.300	03/30/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2920	16.0	03/28/2025	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	03/28/2025	ND	220	110	200	2.45	
DRO >C10-C28*	<10.0	10.0	03/28/2025	ND	204	102	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	03/28/2025	ND					

Surrogate: 1-Chlorooctane 95.7 % 44.4-145

Surrogate: 1-Chlorooctadecane 92.0 % 40.6-153

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  
 JEREMY REICH  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	03/27/2025	Sampling Date:	03/24/2025
Reported:	04/02/2025	Sampling Type:	Soil
Project Name:	OLD LOBO	Sampling Condition:	Cool & Intact
Project Number:	03C2284007	Sample Received By:	Tamara Oldaker
Project Location:	NEW WAVE 32.444437-103.688210		

**Sample ID: BH 02D 4' (H251811-04)**

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	03/30/2025	ND	2.20	110	2.00	4.09	
Toluene*	<0.050	0.050	03/30/2025	ND	2.29	114	2.00	6.99	
Ethylbenzene*	<0.050	0.050	03/30/2025	ND	2.48	124	2.00	7.89	
Total Xylenes*	<0.150	0.150	03/30/2025	ND	7.44	124	6.00	7.36	
Total BTEX	<0.300	0.300	03/30/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 116 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	560	16.0	03/28/2025	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	03/28/2025	ND	220	110	200	2.45	
DRO >C10-C28*	<10.0	10.0	03/28/2025	ND	204	102	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	03/28/2025	ND					

Surrogate: 1-Chlorooctane 98.1 % 44.4-145

Surrogate: 1-Chlorooctadecane 94.1 % 40.6-153

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  
 JEREMY REICH  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	03/27/2025	Sampling Date:	03/24/2025
Reported:	04/02/2025	Sampling Type:	Soil
Project Name:	OLD LOBO	Sampling Condition:	Cool & Intact
Project Number:	03C2284007	Sample Received By:	Tamara Oldaker
Project Location:	NEW WAVE 32.444437-103.688210		

**Sample ID: BH 03 .5' (H251811-05)**

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	03/30/2025	ND	2.20	110	2.00	4.09		
Toluene*	<0.050	0.050	03/30/2025	ND	2.29	114	2.00	6.99		
Ethylbenzene*	<0.050	0.050	03/30/2025	ND	2.48	124	2.00	7.89		
Total Xylenes*	<0.150	0.150	03/30/2025	ND	7.44	124	6.00	7.36		
Total BTEX	<0.300	0.300	03/30/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 116 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	864	16.0	03/28/2025	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	03/28/2025	ND	220	110	200	2.45	
DRO >C10-C28*	<10.0	10.0	03/28/2025	ND	204	102	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	03/28/2025	ND					

Surrogate: 1-Chlorooctane 96.3 % 44.4-145

Surrogate: 1-Chlorooctadecane 91.5 % 40.6-153

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  
 JEREMY REICH  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	03/27/2025	Sampling Date:	03/24/2025
Reported:	04/02/2025	Sampling Type:	Soil
Project Name:	OLD LOBO	Sampling Condition:	Cool & Intact
Project Number:	03C2284007	Sample Received By:	Tamara Oldaker
Project Location:	NEW WAVE 32.444437-103.688210		

**Sample ID: BH 03A 1' (H251811-06)**

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	03/30/2025	ND	2.20	110	2.00	4.09	
Toluene*	<0.050	0.050	03/30/2025	ND	2.29	114	2.00	6.99	
Ethylbenzene*	<0.050	0.050	03/30/2025	ND	2.48	124	2.00	7.89	
Total Xylenes*	<0.150	0.150	03/30/2025	ND	7.44	124	6.00	7.36	
Total BTEX	<0.300	0.300	03/30/2025	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3200	16.0	03/28/2025	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	03/28/2025	ND	220	110	200	2.45	
DRO >C10-C28*	<10.0	10.0	03/28/2025	ND	204	102	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	03/28/2025	ND					

Surrogate: 1-Chlorooctane 99.0 % 44.4-145

Surrogate: 1-Chlorooctadecane 94.5 % 40.6-153

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  
 JEREMY REICH  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	03/27/2025	Sampling Date:	03/24/2025
Reported:	04/02/2025	Sampling Type:	Soil
Project Name:	OLD LOBO	Sampling Condition:	Cool & Intact
Project Number:	03C2284007	Sample Received By:	Tamara Oldaker
Project Location:	NEW WAVE 32.444437-103.688210		

**Sample ID: BH 04 .5' (H251811-07)**

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	03/30/2025	ND	2.20	110	2.00	4.09		
Toluene*	<0.050	0.050	03/30/2025	ND	2.29	114	2.00	6.99		
Ethylbenzene*	<0.050	0.050	03/30/2025	ND	2.48	124	2.00	7.89		
Total Xylenes*	<0.150	0.150	03/30/2025	ND	7.44	124	6.00	7.36		
Total BTEX	<0.300	0.300	03/30/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 116 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	03/28/2025	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	03/28/2025	ND	220	110	200	2.45	
DRO >C10-C28*	<10.0	10.0	03/28/2025	ND	204	102	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	03/28/2025	ND					

Surrogate: 1-Chlorooctane 91.4 % 44.4-145

Surrogate: 1-Chlorooctadecane 86.0 % 40.6-153

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  
 JEREMY REICH  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	03/27/2025	Sampling Date:	03/24/2025
Reported:	04/02/2025	Sampling Type:	Soil
Project Name:	OLD LOBO	Sampling Condition:	Cool & Intact
Project Number:	03C2284007	Sample Received By:	Tamara Oldaker
Project Location:	NEW WAVE 32.444437-103.688210		

**Sample ID: BH 04A 1' (H251811-08)**

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	03/30/2025	ND	2.20	110	2.00	4.09	
Toluene*	<0.050	0.050	03/30/2025	ND	2.29	114	2.00	6.99	
Ethylbenzene*	<0.050	0.050	03/30/2025	ND	2.48	124	2.00	7.89	
Total Xylenes*	<0.150	0.150	03/30/2025	ND	7.44	124	6.00	7.36	
Total BTEX	<0.300	0.300	03/30/2025	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/28/2025	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	03/28/2025	ND	220	110	200	2.45	
DRO >C10-C28*	<10.0	10.0	03/28/2025	ND	204	102	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	03/28/2025	ND					

Surrogate: 1-Chlorooctane 102 % 44.4-145

Surrogate: 1-Chlorooctadecane 96.0 % 40.6-153

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  
 JEREMY REICH  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 03/27/2025  
 Reported: 04/02/2025  
 Project Name: OLD LOBO  
 Project Number: 03C2284007  
 Project Location: NEW WAVE 32.444437-103.688210

Sampling Date: 03/24/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: BH 05 .5' (H251811-09)**

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	03/30/2025	ND	2.20	110	2.00	4.09	
Toluene*	<0.050	0.050	03/30/2025	ND	2.29	114	2.00	6.99	
Ethylbenzene*	<0.050	0.050	03/30/2025	ND	2.48	124	2.00	7.89	
Total Xylenes*	<0.150	0.150	03/30/2025	ND	7.44	124	6.00	7.36	
Total BTEX	<0.300	0.300	03/30/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1490	16.0	03/28/2025	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	03/28/2025	ND	220	110	200	2.45	
DRO >C10-C28*	<10.0	10.0	03/28/2025	ND	204	102	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	03/28/2025	ND					

Surrogate: 1-Chlorooctane 99.0 % 44.4-145

Surrogate: 1-Chlorooctadecane 93.5 % 40.6-153

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  
 JEREMY REICH  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	03/27/2025	Sampling Date:	03/24/2025
Reported:	04/02/2025	Sampling Type:	Soil
Project Name:	OLD LOBO	Sampling Condition:	Cool & Intact
Project Number:	03C2284007	Sample Received By:	Tamara Oldaker
Project Location:	NEW WAVE 32.444437-103.688210		

**Sample ID: BH 05A 1' (H251811-10)**

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	03/30/2025	ND	2.20	110	2.00	4.09		
Toluene*	<0.050	0.050	03/30/2025	ND	2.29	114	2.00	6.99		
Ethylbenzene*	<0.050	0.050	03/30/2025	ND	2.48	124	2.00	7.89		
Total Xylenes*	<0.150	0.150	03/30/2025	ND	7.44	124	6.00	7.36		
Total BTEX	<0.300	0.300	03/30/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	03/28/2025	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	03/28/2025	ND	220	110	200	2.45	
DRO >C10-C28*	<10.0	10.0	03/28/2025	ND	204	102	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	03/28/2025	ND					

Surrogate: 1-Chlorooctane 91.1 % 44.4-145

Surrogate: 1-Chlorooctadecane 86.0 % 40.6-153

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  
 JEREMY REICH  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	03/27/2025	Sampling Date:	03/24/2025
Reported:	04/02/2025	Sampling Type:	Soil
Project Name:	OLD LOBO	Sampling Condition:	Cool & Intact
Project Number:	03C2284007	Sample Received By:	Tamara Oldaker
Project Location:	NEW WAVE 32.444437-103.688210		

**Sample ID: BH 06 .5' (H251811-11)**

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	03/30/2025	ND	2.20	110	2.00	4.09		
Toluene*	<0.050	0.050	03/30/2025	ND	2.29	114	2.00	6.99		
Ethylbenzene*	<0.050	0.050	03/30/2025	ND	2.48	124	2.00	7.89		
Total Xylenes*	<0.150	0.150	03/30/2025	ND	7.44	124	6.00	7.36		
Total BTEx	<0.300	0.300	03/30/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 117 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1260	16.0	03/28/2025	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	03/28/2025	ND	220	110	200	2.45	
DRO >C10-C28*	<10.0	10.0	03/28/2025	ND	204	102	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	03/28/2025	ND					

Surrogate: 1-Chlorooctane 89.4 % 44.4-145

Surrogate: 1-Chlorooctadecane 84.8 % 40.6-153

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  
 JEREMY REICH  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	03/27/2025	Sampling Date:	03/24/2025
Reported:	04/02/2025	Sampling Type:	Soil
Project Name:	OLD LOBO	Sampling Condition:	Cool & Intact
Project Number:	03C2284007	Sample Received By:	Tamara Oldaker
Project Location:	NEW WAVE 32.444437-103.688210		

**Sample ID: BH 06A 1' (H251811-12)**

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	03/30/2025	ND	2.20	110	2.00	4.09	
Toluene*	<0.050	0.050	03/30/2025	ND	2.29	114	2.00	6.99	
Ethylbenzene*	<0.050	0.050	03/30/2025	ND	2.48	124	2.00	7.89	
Total Xylenes*	<0.150	0.150	03/30/2025	ND	7.44	124	6.00	7.36	
Total BTEX	<0.300	0.300	03/30/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2760	16.0	03/28/2025	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	03/28/2025	ND	220	110	200	2.45		
DRO >C10-C28*	<10.0	10.0	03/28/2025	ND	204	102	200	1.42		
EXT DRO >C28-C36	<10.0	10.0	03/28/2025	ND						

Surrogate: 1-Chlorooctane 93.7 % 44.4-145

Surrogate: 1-Chlorooctadecane 89.0 % 40.6-153

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  
 JEREMY REICH  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	03/27/2025	Sampling Date:	03/24/2025
Reported:	04/02/2025	Sampling Type:	Soil
Project Name:	OLD LOBO	Sampling Condition:	Cool & Intact
Project Number:	03C2284007	Sample Received By:	Tamara Oldaker
Project Location:	NEW WAVE 32.444437-103.688210		

**Sample ID: BH 07 .5' (H251811-13)**

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	03/30/2025	ND	2.20	110	2.00	4.09		
Toluene*	<0.050	0.050	03/30/2025	ND	2.29	114	2.00	6.99		
Ethylbenzene*	<0.050	0.050	03/30/2025	ND	2.48	124	2.00	7.89		
Total Xylenes*	<0.150	0.150	03/30/2025	ND	7.44	124	6.00	7.36		
Total BTEX	<0.300	0.300	03/30/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	03/28/2025	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	03/28/2025	ND	220	110	200	2.45	
DRO >C10-C28*	<10.0	10.0	03/28/2025	ND	204	102	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	03/28/2025	ND					

Surrogate: 1-Chlorooctane 94.8 % 44.4-145

Surrogate: 1-Chlorooctadecane 91.4 % 40.6-153

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  
 JEREMY REICH  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	03/27/2025	Sampling Date:	03/24/2025
Reported:	04/02/2025	Sampling Type:	Soil
Project Name:	OLD LOBO	Sampling Condition:	Cool & Intact
Project Number:	03C2284007	Sample Received By:	Tamara Oldaker
Project Location:	NEW WAVE 32.444437-103.688210		

**Sample ID: BH 07A 1' (H251811-14)**

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	03/30/2025	ND	2.20	110	2.00	4.09		
Toluene*	<0.050	0.050	03/30/2025	ND	2.29	114	2.00	6.99		
Ethylbenzene*	<0.050	0.050	03/30/2025	ND	2.48	124	2.00	7.89		
Total Xylenes*	<0.150	0.150	03/30/2025	ND	7.44	124	6.00	7.36		
Total BTEX	<0.300	0.300	03/30/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3560	16.0	03/28/2025	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	03/28/2025	ND	220	110	200	2.45	
DRO >C10-C28*	<10.0	10.0	03/28/2025	ND	204	102	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	03/28/2025	ND					

Surrogate: 1-Chlorooctane 93.6 % 44.4-145

Surrogate: 1-Chlorooctadecane 89.2 % 40.6-153

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  
 JEREMY REICH  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	03/27/2025	Sampling Date:	03/24/2025
Reported:	04/02/2025	Sampling Type:	Soil
Project Name:	OLD LOBO	Sampling Condition:	Cool & Intact
Project Number:	03C2284007	Sample Received By:	Tamara Oldaker
Project Location:	NEW WAVE 32.444437-103.688210		

**Sample ID: BH 08 .5' (H251811-15)**

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	03/30/2025	ND	2.20	110	2.00	4.09		
Toluene*	<0.050	0.050	03/30/2025	ND	2.29	114	2.00	6.99		
Ethylbenzene*	<0.050	0.050	03/30/2025	ND	2.48	124	2.00	7.89		
Total Xylenes*	<0.150	0.150	03/30/2025	ND	7.44	124	6.00	7.36		
Total BTEX	<0.300	0.300	03/30/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 116 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	400	16.0	03/28/2025	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	03/28/2025	ND	220	110	200	2.45	
DRO >C10-C28*	<10.0	10.0	03/28/2025	ND	204	102	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	03/28/2025	ND					

Surrogate: 1-Chlorooctane 98.2 % 44.4-145

Surrogate: 1-Chlorooctadecane 94.8 % 40.6-153

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  
 JEREMY REICH  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	03/27/2025	Sampling Date:	03/24/2025
Reported:	04/02/2025	Sampling Type:	Soil
Project Name:	OLD LOBO	Sampling Condition:	Cool & Intact
Project Number:	03C2284007	Sample Received By:	Tamara Oldaker
Project Location:	NEW WAVE 32.444437-103.688210		

**Sample ID: BH 08 1' (H251811-16)**

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	03/30/2025	ND	2.20	110	2.00	4.09		
Toluene*	<0.050	0.050	03/30/2025	ND	2.29	114	2.00	6.99		
Ethylbenzene*	<0.050	0.050	03/30/2025	ND	2.48	124	2.00	7.89		
Total Xylenes*	<0.150	0.150	03/30/2025	ND	7.44	124	6.00	7.36		
Total BTEX	<0.300	0.300	03/30/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 116 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1700	16.0	03/28/2025	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	03/28/2025	ND	220	110	200	2.45	
DRO >C10-C28*	<10.0	10.0	03/28/2025	ND	204	102	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	03/28/2025	ND					

Surrogate: 1-Chlorooctane 97.5 % 44.4-145

Surrogate: 1-Chlorooctadecane 91.9 % 40.6-153

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  
 JEREMY REICH  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	03/27/2025	Sampling Date:	03/24/2025
Reported:	04/02/2025	Sampling Type:	Soil
Project Name:	OLD LOBO	Sampling Condition:	Cool & Intact
Project Number:	03C2284007	Sample Received By:	Tamara Oldaker
Project Location:	NEW WAVE 32.444437-103.688210		

**Sample ID: BH 08 2' (H251811-17)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/30/2025	ND	2.20	110	2.00	4.09		
Toluene*	<0.050	0.050	03/30/2025	ND	2.29	114	2.00	6.99		
Ethylbenzene*	<0.050	0.050	03/30/2025	ND	2.48	124	2.00	7.89		
Total Xylenes*	<0.150	0.150	03/30/2025	ND	7.44	124	6.00	7.36		
Total BTEX	<0.300	0.300	03/30/2025	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	03/28/2025	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	03/28/2025	ND	220	110	200	2.45	
DRO >C10-C28*	<10.0	10.0	03/28/2025	ND	204	102	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	03/28/2025	ND					

Surrogate: 1-Chlorooctane 87.9 % 44.4-145

Surrogate: 1-Chlorooctadecane 84.6 % 40.6-153

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  
 JEREMY REICH  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received: 03/27/2025  
 Reported: 04/02/2025  
 Project Name: OLD LOBO  
 Project Number: 03C2284007  
 Project Location: NEW WAVE 32.444437-103.688210

Sampling Date: 03/24/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: BH 08 3' (H251811-18)**

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	03/31/2025	ND	1.80	89.9	2.00	0.147		
Toluene*	<0.050	0.050	03/31/2025	ND	1.87	93.3	2.00	0.802		
Ethylbenzene*	<0.050	0.050	03/31/2025	ND	1.88	93.8	2.00	1.12		
Total Xylenes*	<0.150	0.150	03/31/2025	ND	5.81	96.9	6.00	0.864		
Total BTEx	<0.300	0.300	03/31/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	03/28/2025	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	03/28/2025	ND	220	110	200	2.45	
DRO >C10-C28*	<10.0	10.0	03/28/2025	ND	204	102	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	03/28/2025	ND					

Surrogate: 1-Chlorooctane 91.1 % 44.4-145

Surrogate: 1-Chlorooctadecane 86.5 % 40.6-153

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  
 JEREMY REICH  
 705 W WADLEY AVE.  
 MIDLAND TX, 79705  
 Fax To:

Received:	03/27/2025	Sampling Date:	03/24/2025
Reported:	04/02/2025	Sampling Type:	Soil
Project Name:	OLD LOBO	Sampling Condition:	Cool & Intact
Project Number:	03C2284007	Sample Received By:	Tamara Oldaker
Project Location:	NEW WAVE 32.444437-103.688210		

**Sample ID: BH 08 4' (H251811-19)**

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	03/31/2025	ND	1.80	89.9	2.00	0.147		
Toluene*	<0.050	0.050	03/31/2025	ND	1.87	93.3	2.00	0.802		
Ethylbenzene*	<0.050	0.050	03/31/2025	ND	1.88	93.8	2.00	1.12		
Total Xylenes*	<0.150	0.150	03/31/2025	ND	5.81	96.9	6.00	0.864		
Total BTEX	<0.300	0.300	03/31/2025	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	03/28/2025	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	03/28/2025	ND	220	110	200	2.45	
DRO >C10-C28*	<10.0	10.0	03/28/2025	ND	204	102	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	03/28/2025	ND					

Surrogate: 1-Chlorooctane 89.1 % 44.4-145

Surrogate: 1-Chlorooctadecane 83.7 % 40.6-153

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

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 "C. D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC		P.O. #:		ANALYSIS REQUEST															
Project Manager: Jeremy Reich		Company: Ensolum LLC																	
Address: 601 N Marientfield Street, Suite 400		Attn: Jeremy Reich																	
City: Midland		Address: 601 N Marientfield Street, Suite 400																	
Phone #: 432-296-0627		City: Midland																	
Fax #: 432-296-0627		State: NM Zip: 79701																	
Project #: 03C2284007		Phone #: 432-296-0627																	
Project Owner: New Wave		Fax #:																	
Project Name: Old Lobo																			
Project Location: 32.444437, -103.688210																			
Sampler Name: Evan Roe																			
FOR LAB USE ONLY																			
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV.	SAMPLING	DATE	TIME	TPH 8015	BTEX 8021	Chloride 4500							
HS7811	BH01	.5	G	1	✓			3-24-25	1039	✓	✓	✓							
	BH01B	4.2	G	1	✓			3-24-25	1430	✓	✓	✓							
	BH02	.5	G	1	✓			3-24-25	1055	✓	✓	✓							
	BH02D	4	G	1	✓			3-24-25	1516	✓	✓	✓							
	BH03	.5	G	1	✓			3-24-25	1111	✓	✓	✓							
	BH03A	1	G	1	✓			3-24-25	1120	✓	✓	✓							
	BH04	.5	G	1	✓			3-24-25	1120	✓	✓	✓							
	BH04A	1	G	1	✓			3-24-25	1244	✓	✓	✓							
	BH05	.5	G	1	✓			3-24-25	1247	✓	✓	✓							
	BH05A	1	G	1	✓			3-24-25	1222	✓	✓	✓							
PLEASE NOTE: Liability and claims for damages, Cardinal's liability and claims for damages shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.																			
Relinquished By: <i>DMN</i>		Date: 8/8/05		Received By: <i>Michael Clarke</i>		Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:		All Results are emailed. Please provide Email address: jreich@ensolum.com BBeill@ensolum.com, TMorrissey@ensolum.com, THillard@ensolum.com									
Relinquished By: <i>DMN</i>		Date: 1/30/0		Received By: <i>Michael Clarke</i>		Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:		REMARKS:									
Delivered By: (Circle One)		Observed Temp. °C		Sample Condition		CHECKED BY: (Initials)		Turnaround Time:		Standard		Bacteria (only)		Sample Condition		Observed Temp. °C		Corrected Temp. °C	
Sampler - UPS - Bus - Other:		Corrected Temp. °C		Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Thermometer ID: A13		Rush <input checked="" type="checkbox"/> Standard <input type="checkbox"/>		Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		Sample Condition		Observed Temp. °C		Corrected Temp. °C	
TURNAROUND: R 3-2 10/07/21		† Cardinal cannot accept verbal changes. Please email changes to caley.keene@cardinalhsntr.com																	





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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2

Company Name: Ensolum, LLC

Project Manager: Jeremy Reich

Address: 601 N Marlenfield Street, Suite 400

City: Midland State: TX Zip: 79701

Phone #: 432-296-0627 Fax #:

Project #: 03C2284007 Project Owner: New Wave

Project Name: Old Lobo

Project Location: 32.444437, -103.688210

Sampler Name: Evan Roe

BILL TO

P.O. #:

Company: Ensolum LLC

Attn: Jeremy Reich

Address: 601 N Marlenfield Street, Suite 400

City: Midland

State: NM Zip: 79701

Phone #: 432-296-0627

Fax #:

ANALYSIS REQUEST

Project Manager: Jeremy Reich										P.O. #:													
Address: 601 N Marientfeld Street, Suite 400										Company: Ensolum LLC													
City: Midland										Attn: Jeremy Reich													
Phone #: 432-296-0627										Address: 601 N Marientfeld Street, Suite 400													
Fax #:										City: Midland													
Project #: 03C2284007										State: NM Zip: 79701													
Project Name: Old Lobo										Phone #: 432-296-0627													
Project Location: 32.444437, -103.688210										Fax #:													
Sample Name: Evan Roe																							
FOR LAB USE ONLY										PRESERV.		SAMPLING											

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

Relinquished By:

Date: 8/7/25

Received By:

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

All Results are emailed. Please provide Email address: jreich@ensolum.com  
BBeill@ensolum.com, TMorrissey@ensolum.com, THillard@ensolum.com

Relinquished By:

Date:

Received By:

REMARKS:

Delivered By: (Circle One)

Observed Temp.: 18.5

Sample Condition

CHECKED BY: (Initials)

Turnaround Time:

Standard

☒

Bacteria (only)

Sample Condition

Sampler - UPS - Bus - Other:

Corrected Temp.: 21.2

Cool Intact

Thermometer ID #13

Correction Factor: 0.35

Rush

☐

Cool Intact

Observed Temp.: 20.35

Corrected Temp.: 20.35

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



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

May 06, 2025

JEREMY REICH

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MOC LOBO

Enclosed are the results of analyses for samples received by the laboratory on 05/05/25 12:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
JEREMY REICH  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received:	05/05/2025	Sampling Date:	05/02/2025
Reported:	05/06/2025	Sampling Type:	Soil
Project Name:	MOC LOBO	Sampling Condition:	Cool & Intact
Project Number:	03C2284007	Sample Received By:	Tamara Oldaker
Project Location:	NEW WAVE 32.444437-103.688210		

**Sample ID: BH 03 B 3' (H252660-01)**

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	05/05/2025	ND	1.96	97.9	2.00	10.3	QM-07
Toluene*	<0.050	0.050	05/05/2025	ND	1.98	98.9	2.00	8.53	
Ethylbenzene*	<0.050	0.050	05/05/2025	ND	1.95	97.6	2.00	12.6	
Total Xylenes*	<0.150	0.150	05/05/2025	ND	6.03	101	6.00	15.7	
Total BTX	<0.300	0.300	05/05/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.2 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1570	16.0	05/05/2025	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/05/2025	ND	190	95.1	200	1.18	
DRO >C10-C28*	<10.0	10.0	05/05/2025	ND	200	99.8	200	0.947	
EXT DRO >C28-C36	<10.0	10.0	05/05/2025	ND					

Surrogate: 1-Chlorooctane 87.0 % 44.4-145

Surrogate: 1-Chlorooctadecane 88.0 % 40.6-153

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  
JEREMY REICH  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received: 05/05/2025  
Reported: 05/06/2025  
Project Name: MOC LOBO  
Project Number: 03C2284007  
Project Location: NEW WAVE 32.444437-103.688210

Sampling Date: 05/02/2025  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: BH 03 C 4' (H252660-02)**

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	05/05/2025	ND	1.96	97.9	2.00	10.3		
Toluene*	<0.050	0.050	05/05/2025	ND	1.98	98.9	2.00	8.53		
Ethylbenzene*	<0.050	0.050	05/05/2025	ND	1.95	97.6	2.00	12.6		
Total Xylenes*	<0.150	0.150	05/05/2025	ND	6.03	101	6.00	15.7		
Total BTEX	<0.300	0.300	05/05/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 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	272	16.0	05/05/2025	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/05/2025	ND	190	95.1	200	1.18	
DRO >C10-C28*	<10.0	10.0	05/05/2025	ND	200	99.8	200	0.947	
EXT DRO >C28-C36	<10.0	10.0	05/05/2025	ND					

Surrogate: 1-Chlorooctane 82.2 % 44.4-145

Surrogate: 1-Chlorooctadecane 78.5 % 40.6-153

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  
JEREMY REICH  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received:	05/05/2025	Sampling Date:	05/02/2025
Reported:	05/06/2025	Sampling Type:	Soil
Project Name:	MOC LOBO	Sampling Condition:	Cool & Intact
Project Number:	03C2284007	Sample Received By:	Tamara Oldaker
Project Location:	NEW WAVE 32.444437-103.688210		

**Sample ID: BH 06 B 3' (H252660-03)**

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	05/05/2025	ND	1.96	97.9	2.00	10.3		
Toluene*	<0.050	0.050	05/05/2025	ND	1.98	98.9	2.00	8.53		
Ethylbenzene*	<0.050	0.050	05/05/2025	ND	1.95	97.6	2.00	12.6		
Total Xylenes*	<0.150	0.150	05/05/2025	ND	6.03	101	6.00	15.7		
Total BTEX	<0.300	0.300	05/05/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	10000	16.0	05/05/2025	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/05/2025	ND	190	95.1	200	1.18	
DRO >C10-C28*	<10.0	10.0	05/05/2025	ND	200	99.8	200	0.947	
EXT DRO >C28-C36	<10.0	10.0	05/05/2025	ND					

Surrogate: 1-Chlorooctane 84.5 % 44.4-145

Surrogate: 1-Chlorooctadecane 81.8 % 40.6-153

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  
JEREMY REICH  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received:	05/05/2025	Sampling Date:	05/02/2025
Reported:	05/06/2025	Sampling Type:	Soil
Project Name:	MOC LOBO	Sampling Condition:	Cool & Intact
Project Number:	03C2284007	Sample Received By:	Tamara Oldaker
Project Location:	NEW WAVE 32.444437-103.688210		

**Sample ID: BH 06 C 4' (H252660-04)**

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	05/05/2025	ND	1.96	97.9	2.00	10.3		
Toluene*	<0.050	0.050	05/05/2025	ND	1.98	98.9	2.00	8.53		
Ethylbenzene*	<0.050	0.050	05/05/2025	ND	1.95	97.6	2.00	12.6		
Total Xylenes*	<0.150	0.150	05/05/2025	ND	6.03	101	6.00	15.7		
Total BTX	<0.300	0.300	05/05/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	4000	16.0	05/05/2025	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/05/2025	ND	190	95.1	200	1.18	
DRO >C10-C28*	<10.0	10.0	05/05/2025	ND	200	99.8	200	0.947	
EXT DRO >C28-C36	<10.0	10.0	05/05/2025	ND					

Surrogate: 1-Chlorooctane 88.7 % 44.4-145

Surrogate: 1-Chlorooctadecane 85.3 % 40.6-153

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  
JEREMY REICH  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received:	05/05/2025	Sampling Date:	05/02/2025
Reported:	05/06/2025	Sampling Type:	Soil
Project Name:	MOC LOBO	Sampling Condition:	Cool & Intact
Project Number:	03C2284007	Sample Received By:	Tamara Oldaker
Project Location:	NEW WAVE 32.444437-103.688210		

**Sample ID: BH 07 B 3' (H252660-05)**

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	05/05/2025	ND	1.96	97.9	2.00	10.3		
Toluene*	<0.050	0.050	05/05/2025	ND	1.98	98.9	2.00	8.53		
Ethylbenzene*	<0.050	0.050	05/05/2025	ND	1.95	97.6	2.00	12.6		
Total Xylenes*	<0.150	0.150	05/05/2025	ND	6.03	101	6.00	15.7		
Total BTX	<0.300	0.300	05/05/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	05/05/2025	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/05/2025	ND	190	95.1	200	1.18	
DRO >C10-C28*	<10.0	10.0	05/05/2025	ND	200	99.8	200	0.947	
EXT DRO >C28-C36	<10.0	10.0	05/05/2025	ND					

Surrogate: 1-Chlorooctane 87.6 % 44.4-145

Surrogate: 1-Chlorooctadecane 84.0 % 40.6-153

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  
JEREMY REICH  
3122 NATIONAL PARKS HWY  
CARLSBAD NM, 88220  
Fax To:

Received:	05/05/2025	Sampling Date:	05/02/2025
Reported:	05/06/2025	Sampling Type:	Soil
Project Name:	MOC LOBO	Sampling Condition:	Cool & Intact
Project Number:	03C2284007	Sample Received By:	Tamara Oldaker
Project Location:	NEW WAVE 32.444437-103.688210		

**Sample ID: BH 07 C 4' (H252660-06)**

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	05/05/2025	ND	1.96	97.9	2.00	10.3		
Toluene*	<0.050	0.050	05/05/2025	ND	1.98	98.9	2.00	8.53		
Ethylbenzene*	<0.050	0.050	05/05/2025	ND	1.95	97.6	2.00	12.6		
Total Xylenes*	<0.150	0.150	05/05/2025	ND	6.03	101	6.00	15.7		
Total BTX	<0.300	0.300	05/05/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	05/05/2025	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/05/2025	ND	190	95.1	200	1.18	
DRO >C10-C28*	<10.0	10.0	05/05/2025	ND	200	99.8	200	0.947	
EXT DRO >C28-C36	<10.0	10.0	05/05/2025	ND					

Surrogate: 1-Chlorooctane 86.4 % 44.4-145

Surrogate: 1-Chlorooctadecane 81.3 % 40.6-153

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

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
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 "C. 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

1 of 1

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC

Project Manager: Jeremy Reich

Address: 3122 National Parks Hwy

City: Carlsbad

State: NM Zip: 88220

Phone #: 432 296 0627

Fax #:

Project #: 03C12241 007

Project Owner: New York

Project Name: MOC Lobe

Project Location: 32.444437 -103.688210

Sampler Name: Joshua Boyley

P.O. #:

Company: Ensolum

Attn:

Address:

City:

State:

Zip:

Phone #:

Fax #:

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

Depth (feet)

(G)RAB OR (C)OMP.

# CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

Chlorides

TPH

BTEX

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

Relinquished By:

Date: 5-5-25

Received By:

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

All Results are emailed. Please provide Email address:

Relinquished By:

Date: 5-5-25

Received By:

REMARKS: Incident: nAPP 2505953548

Cost Center:

Delivered By: (Circle One)

Observed Temp.: °C 35

Sample Condition

Cool ☒ Intact ☐

CHECKED BY: (Initials)

Turnaround Time: 148 hr

Standard Rush

Bacteria (only)

Cool Intact ☐ Yes ☐ No

Sample Condition

Observed Temp.: °C

Corrected Temp.: °C

Sampler - UPS - Bus - Other:

Corrected Temp.: °C 38

Cool ☐ Intact ☐

Yes ☐ No ☐

CHECKED BY: (Initials)

Thermometer ID: #148

Correction Factor: 0.3°C

Bacteria (only)

Cool Intact ☐ Yes ☐ No

Sample Condition

Observed Temp.: °C

Corrected Temp.: °C

FORM-006 R 3.2 10/07/21

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





Environment Testing

1

2

3

4

5

6

7

8

9

10

11

12

13

14

# ANALYTICAL REPORT

## PREPARED FOR

Attn: Jeremy Reich

Ensolum

601 N. Marienfeld St.

Suite 400

Midland, Texas 79701

Generated 5/14/2025 3:38:46 PM

## JOB DESCRIPTION

MOC LOBO

03C2284007

## JOB NUMBER

890-8153-1

Eurofins Carlsbad  
1089 N Canal St.  
Carlsbad NM 88220

# Eurofins Carlsbad

## Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

## Authorization



Generated  
5/14/2025 3:38:46 PM

Authorized for release by  
Jessica Kramer, Project Manager  
[Jessica.Kramer@et.eurofinsus.com](mailto:Jessica.Kramer@et.eurofinsus.com)  
(432)704-5440



Client: Ensolum  
Project/Site: MOC LOBO

Laboratory Job ID: 890-8153-1  
SDG: 03C2284007

# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	3
Definitions/Glossary . . . . .	4
Case Narrative . . . . .	5
Client Sample Results . . . . .	6
Surrogate Summary . . . . .	10
QC Sample Results . . . . .	11
QC Association Summary . . . . .	17
Lab Chronicle . . . . .	19
Certification Summary . . . . .	21
Method Summary . . . . .	22
Sample Summary . . . . .	23
Chain of Custody . . . . .	24
Receipt Checklists . . . . .	25

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14

Definitions/Glossary

Client: Ensolum  
Project/Site: MOC LOBO

Job ID: 890-8153-1  
SDG: 03C2284007

Qualifiers

GC VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
F1	MS and/or MSD recovery exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

## Case Narrative

Client: Ensolum  
Project: MOC LOBO

Job ID: 890-8153-1

**Job ID: 890-8153-1**

**Eurofins Carlsbad**

### Job Narrative 890-8153-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 5/13/2025 4:14 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.4°C.

#### Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: SS 01 (890-8153-1), SS 02 (890-8153-2), SS 03 (890-8153-3), SS 04 (890-8153-4), SS 05 (890-8153-5) and SS 06 (890-8153-6).

#### GC VOA

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-110098 and analytical batch 880-110091 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-110098 and analytical batch 880-110091 was outside the control limits.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-110097 and analytical batch 880-110089 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### Diesel Range Organics

Method 8015MOD\_NM: The method blank for preparation batch 880-110070 and analytical batch 880-110100 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### HPLC/IC

Method 300\_ORGFM\_28D - Soluble: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-110082 and analytical batch 880-110088 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Carlsbad

## Client Sample Results

Client: Ensolum  
Project/Site: MOC LOBO

Job ID: 890-8153-1  
SDG: 03C2284007

Client Sample ID: SS 01

Lab Sample ID: 890-8153-1

Date Collected: 05/12/25 14:35

Matrix: Solid

Date Received: 05/13/25 16:14

Sample Depth: 0.5

## Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00139	U	0.00199	0.00139	mg/Kg		05/14/25 08:48	05/14/25 13:42	1
Toluene	<0.00199	U	0.00199	0.00199	mg/Kg		05/14/25 08:48	05/14/25 13:42	1
Ethylbenzene	<0.00108	U	0.00199	0.00108	mg/Kg		05/14/25 08:48	05/14/25 13:42	1
m-Xylene & p-Xylene	<0.00228	U *	0.00398	0.00228	mg/Kg		05/14/25 08:48	05/14/25 13:42	1
o-Xylene	<0.00158	U	0.00199	0.00158	mg/Kg		05/14/25 08:48	05/14/25 13:42	1
Xylenes, Total	<0.00228	U *	0.00398	0.00228	mg/Kg		05/14/25 08:48	05/14/25 13:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130	05/14/25 08:48	05/14/25 13:42	1
1,4-Difluorobenzene (Surr)	81		70 - 130	05/14/25 08:48	05/14/25 13:42	1

## Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<14.5	U	49.8	14.5	mg/Kg		05/13/25 14:57	05/14/25 11:33	1
Diesel Range Organics (Over C10-C28)	<15.1	U	49.8	15.1	mg/Kg		05/13/25 14:57	05/14/25 11:33	1
Oil Range Organics (Over C28-C36)	<15.1	U	49.8	15.1	mg/Kg		05/13/25 14:57	05/14/25 11:33	1
Total TPH	<15.1	U	49.8	15.1	mg/Kg		05/13/25 14:57	05/14/25 11:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130	05/13/25 14:57	05/14/25 11:33	1
o-Terphenyl	86		70 - 130	05/13/25 14:57	05/14/25 11:33	1

## Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	98.4		10.0	0.396	mg/Kg			05/14/25 11:34	1

Client Sample ID: SS 02

Lab Sample ID: 890-8153-2

Date Collected: 05/12/25 14:46

Matrix: Solid

Date Received: 05/13/25 16:14

Sample Depth: 0.5

## Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00138	U	0.00198	0.00138	mg/Kg		05/14/25 08:48	05/14/25 14:02	1
Toluene	<0.00198	U	0.00198	0.00198	mg/Kg		05/14/25 08:48	05/14/25 14:02	1
Ethylbenzene	<0.00108	U	0.00198	0.00108	mg/Kg		05/14/25 08:48	05/14/25 14:02	1
m-Xylene & p-Xylene	<0.00226	U *	0.00396	0.00226	mg/Kg		05/14/25 08:48	05/14/25 14:02	1
o-Xylene	<0.00157	U	0.00198	0.00157	mg/Kg		05/14/25 08:48	05/14/25 14:02	1
Xylenes, Total	<0.00226	U *	0.00396	0.00226	mg/Kg		05/14/25 08:48	05/14/25 14:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130	05/14/25 08:48	05/14/25 14:02	1
1,4-Difluorobenzene (Surr)	80		70 - 130	05/14/25 08:48	05/14/25 14:02	1

## Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<14.5	U	50.0	14.5	mg/Kg		05/13/25 14:57	05/14/25 11:49	1

Eurofins Carlsbad

## Client Sample Results

Client: Ensolum  
Project/Site: MOC LOBO

Job ID: 890-8153-1  
SDG: 03C2284007

Client Sample ID: SS 02

Lab Sample ID: 890-8153-2

Date Collected: 05/12/25 14:46

Matrix: Solid

Date Received: 05/13/25 16:14

Sample Depth: 0.5

## Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	19.1	J	50.0	15.1	mg/Kg		05/13/25 14:57	05/14/25 11:49	1
Oil Range Organics (Over C28-C36)	<15.1	U	50.0	15.1	mg/Kg		05/13/25 14:57	05/14/25 11:49	1
Total TPH	19.1	J B	50.0	15.1	mg/Kg		05/13/25 14:57	05/14/25 11:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	82		70 - 130	05/13/25 14:57	05/14/25 11:49	1
o-Terphenyl	80		70 - 130	05/13/25 14:57	05/14/25 11:49	1

## Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	481		9.98	0.394	mg/Kg			05/14/25 11:41	1

Client Sample ID: SS 03

Lab Sample ID: 890-8153-3

Date Collected: 05/12/25 14:43

Matrix: Solid

Date Received: 05/13/25 16:14

Sample Depth: 0.5

## Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00139	U	0.00199	0.00139	mg/Kg		05/14/25 08:48	05/14/25 14:23	1
Toluene	<0.00199	U	0.00199	0.00199	mg/Kg		05/14/25 08:48	05/14/25 14:23	1
Ethylbenzene	<0.00108	U	0.00199	0.00108	mg/Kg		05/14/25 08:48	05/14/25 14:23	1
m-Xylene & p-Xylene	<0.00228	U *	0.00398	0.00228	mg/Kg		05/14/25 08:48	05/14/25 14:23	1
o-Xylene	<0.00158	U	0.00199	0.00158	mg/Kg		05/14/25 08:48	05/14/25 14:23	1
Xylenes, Total	<0.00228	U *	0.00398	0.00228	mg/Kg		05/14/25 08:48	05/14/25 14:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		70 - 130	05/14/25 08:48	05/14/25 14:23	1
1,4-Difluorobenzene (Surr)	76		70 - 130	05/14/25 08:48	05/14/25 14:23	1

## Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<14.5	U	49.9	14.5	mg/Kg		05/13/25 14:57	05/14/25 12:06	1
Diesel Range Organics (Over C10-C28)	<15.1	U	49.9	15.1	mg/Kg		05/13/25 14:57	05/14/25 12:06	1
Oil Range Organics (Over C28-C36)	<15.1	U	49.9	15.1	mg/Kg		05/13/25 14:57	05/14/25 12:06	1
Total TPH	<15.1	U	49.9	15.1	mg/Kg		05/13/25 14:57	05/14/25 12:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	85		70 - 130	05/13/25 14:57	05/14/25 12:06	1
o-Terphenyl	81		70 - 130	05/13/25 14:57	05/14/25 12:06	1

## Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	110		9.96	0.393	mg/Kg			05/14/25 11:48	1

Eurofins Carlsbad

## Client Sample Results

Client: Ensolum  
Project/Site: MOC LOBO

Job ID: 890-8153-1  
SDG: 03C2284007

Client Sample ID: SS 04

Lab Sample ID: 890-8153-4

Date Collected: 05/12/25 14:41

Matrix: Solid

Date Received: 05/13/25 16:14

Sample Depth: 0.5

## Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00138	U	0.00198	0.00138	mg/Kg		05/14/25 08:48	05/14/25 14:43	1
Toluene	<0.00198	U	0.00198	0.00198	mg/Kg		05/14/25 08:48	05/14/25 14:43	1
Ethylbenzene	<0.00108	U	0.00198	0.00108	mg/Kg		05/14/25 08:48	05/14/25 14:43	1
m-Xylene & p-Xylene	<0.00226	U *	0.00396	0.00226	mg/Kg		05/14/25 08:48	05/14/25 14:43	1
o-Xylene	<0.00157	U	0.00198	0.00157	mg/Kg		05/14/25 08:48	05/14/25 14:43	1
Xylenes, Total	<0.00226	U *	0.00396	0.00226	mg/Kg		05/14/25 08:48	05/14/25 14:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130	05/14/25 08:48	05/14/25 14:43	1
1,4-Difluorobenzene (Surr)	83		70 - 130	05/14/25 08:48	05/14/25 14:43	1

## Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<14.5	U	50.1	14.5	mg/Kg		05/13/25 14:57	05/14/25 12:22	1
Diesel Range Organics (Over C10-C28)	<15.1	U	50.1	15.1	mg/Kg		05/13/25 14:57	05/14/25 12:22	1
Oil Range Organics (Over C28-C36)	<15.1	U	50.1	15.1	mg/Kg		05/13/25 14:57	05/14/25 12:22	1
Total TPH	<15.1	U	50.1	15.1	mg/Kg		05/13/25 14:57	05/14/25 12:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130	05/13/25 14:57	05/14/25 12:22	1
o-Terphenyl	80		70 - 130	05/13/25 14:57	05/14/25 12:22	1

## Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	245	F1	10.1	0.399	mg/Kg			05/14/25 11:55	1

Client Sample ID: SS 05

Lab Sample ID: 890-8153-5

Date Collected: 05/12/25 14:39

Matrix: Solid

Date Received: 05/13/25 16:14

Sample Depth: 0.5

## Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00140	U	0.00201	0.00140	mg/Kg		05/14/25 08:43	05/14/25 13:35	1
Toluene	<0.00201	U	0.00201	0.00201	mg/Kg		05/14/25 08:43	05/14/25 13:35	1
Ethylbenzene	<0.00109	U	0.00201	0.00109	mg/Kg		05/14/25 08:43	05/14/25 13:35	1
m-Xylene & p-Xylene	<0.00229	U	0.00402	0.00229	mg/Kg		05/14/25 08:43	05/14/25 13:35	1
o-Xylene	<0.00159	U	0.00201	0.00159	mg/Kg		05/14/25 08:43	05/14/25 13:35	1
Xylenes, Total	<0.00229	U	0.00402	0.00229	mg/Kg		05/14/25 08:43	05/14/25 13:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130	05/14/25 08:43	05/14/25 13:35	1
1,4-Difluorobenzene (Surr)	81		70 - 130	05/14/25 08:43	05/14/25 13:35	1

## Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<14.6	U	50.2	14.6	mg/Kg		05/13/25 14:57	05/14/25 12:39	1

Eurofins Carlsbad

## Client Sample Results

Client: Ensolum  
Project/Site: MOC LOBO

Job ID: 890-8153-1  
SDG: 03C2284007

Client Sample ID: SS 05

Lab Sample ID: 890-8153-5

Date Collected: 05/12/25 14:39

Matrix: Solid

Date Received: 05/13/25 16:14

Sample Depth: 0.5

## Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<15.2	U	50.2	15.2	mg/Kg		05/13/25 14:57	05/14/25 12:39	1
Oil Range Organics (Over C28-C36)	<15.2	U	50.2	15.2	mg/Kg		05/13/25 14:57	05/14/25 12:39	1
Total TPH	<15.2	U	50.2	15.2	mg/Kg		05/13/25 14:57	05/14/25 12:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	83		70 - 130	05/13/25 14:57	05/14/25 12:39	1
o-Terphenyl	81		70 - 130	05/13/25 14:57	05/14/25 12:39	1

## Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	311		9.96	0.393	mg/Kg			05/14/25 12:16	1

Client Sample ID: SS 06

Lab Sample ID: 890-8153-6

Date Collected: 05/12/25 14:37

Matrix: Solid

Date Received: 05/13/25 16:14

Sample Depth: 0.5

## Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00138	U	0.00198	0.00138	mg/Kg		05/14/25 08:43	05/14/25 13:55	1
Toluene	<0.00198	U	0.00198	0.00198	mg/Kg		05/14/25 08:43	05/14/25 13:55	1
Ethylbenzene	<0.00108	U	0.00198	0.00108	mg/Kg		05/14/25 08:43	05/14/25 13:55	1
m-Xylene & p-Xylene	<0.00226	U	0.00396	0.00226	mg/Kg		05/14/25 08:43	05/14/25 13:55	1
o-Xylene	<0.00157	U	0.00198	0.00157	mg/Kg		05/14/25 08:43	05/14/25 13:55	1
Xylenes, Total	<0.00226	U	0.00396	0.00226	mg/Kg		05/14/25 08:43	05/14/25 13:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130	05/14/25 08:43	05/14/25 13:55	1
1,4-Difluorobenzene (Surr)	82		70 - 130	05/14/25 08:43	05/14/25 13:55	1

## Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<14.5	U	49.8	14.5	mg/Kg		05/13/25 14:57	05/14/25 12:55	1
Diesel Range Organics (Over C10-C28)	<15.1	U	49.8	15.1	mg/Kg		05/13/25 14:57	05/14/25 12:55	1
Oil Range Organics (Over C28-C36)	<15.1	U	49.8	15.1	mg/Kg		05/13/25 14:57	05/14/25 12:55	1
Total TPH	<15.1	U	49.8	15.1	mg/Kg		05/13/25 14:57	05/14/25 12:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	82		70 - 130	05/13/25 14:57	05/14/25 12:55	1
o-Terphenyl	79		70 - 130	05/13/25 14:57	05/14/25 12:55	1

## Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	152		9.98	0.394	mg/Kg			05/14/25 12:23	1

Eurofins Carlsbad



## Surrogate Summary

Client: Ensolum  
Project/Site: MOC LOBO

Job ID: 890-8153-1  
SDG: 03C2284007

## Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-58044-A-39-D MS	Matrix Spike	103	86
880-58044-A-39-E MSD	Matrix Spike Duplicate	103	90
880-58044-A-45-D MS	Matrix Spike	78	88
880-58044-A-45-E MSD	Matrix Spike Duplicate	75	91
890-8153-1	SS 01	88	81
890-8153-2	SS 02	90	80
890-8153-3	SS 03	84	76
890-8153-4	SS 04	91	83
890-8153-5	SS 05	92	81
890-8153-6	SS 06	93	82
LCS 880-110097/1-A	Lab Control Sample	105	97
LCS 880-110098/1-A	Lab Control Sample	80	79
LCSD 880-110097/2-A	Lab Control Sample Dup	95	86
LCSD 880-110098/2-A	Lab Control Sample Dup	76	73
MB 880-110097/5-A	Method Blank	88	94
MB 880-110098/5-A	Method Blank	56 S1-	85
<b>Surrogate Legend</b>			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

## Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-58051-A-19-C MS	Matrix Spike	88	91
880-58051-A-19-D MSD	Matrix Spike Duplicate	87	93
890-8153-1	SS 01	87	86
890-8153-2	SS 02	82	80
890-8153-3	SS 03	85	81
890-8153-4	SS 04	84	80
890-8153-5	SS 05	83	81
890-8153-6	SS 06	82	79
LCS 880-110070/2-A	Lab Control Sample	120	106
LCSD 880-110070/3-A	Lab Control Sample Dup	103	108
MB 880-110070/1-A	Method Blank	81	84
<b>Surrogate Legend</b>			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

Eurofins Carlsbad

## QC Sample Results

Client: Ensolum  
Project/Site: MOC LOBO

Job ID: 890-8153-1  
SDG: 03C2284007

## Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-110097/5-A

Matrix: Solid

Analysis Batch: 110089

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 110097

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00139	U	0.00200	0.00139	mg/Kg		05/14/25 08:43	05/14/25 11:10	1
Toluene	<0.00200	U	0.00200	0.00200	mg/Kg		05/14/25 08:43	05/14/25 11:10	1
Ethylbenzene	<0.00109	U	0.00200	0.00109	mg/Kg		05/14/25 08:43	05/14/25 11:10	1
m-Xylene & p-Xylene	<0.00229	U	0.00400	0.00229	mg/Kg		05/14/25 08:43	05/14/25 11:10	1
o-Xylene	<0.00158	U	0.00200	0.00158	mg/Kg		05/14/25 08:43	05/14/25 11:10	1
Xylenes, Total	<0.00229	U	0.00400	0.00229	mg/Kg		05/14/25 08:43	05/14/25 11:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130	05/14/25 08:43	05/14/25 11:10	1
1,4-Difluorobenzene (Surr)	94		70 - 130	05/14/25 08:43	05/14/25 11:10	1

Lab Sample ID: LCS 880-110097/1-A

Matrix: Solid

Analysis Batch: 110089

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 110097

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.08382		mg/Kg		84	70 - 130
Toluene	0.100	0.08415		mg/Kg		84	70 - 130
Ethylbenzene	0.100	0.09934		mg/Kg		99	70 - 130
m-Xylene & p-Xylene	0.200	0.1874		mg/Kg		94	70 - 130
o-Xylene	0.100	0.09126		mg/Kg		91	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: LCSD 880-110097/2-A

Matrix: Solid

Analysis Batch: 110089

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 110097

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.07108		mg/Kg		71	70 - 130	16	35
Toluene	0.100	0.07363		mg/Kg		74	70 - 130	13	35
Ethylbenzene	0.100	0.09242		mg/Kg		92	70 - 130	7	35
m-Xylene & p-Xylene	0.200	0.1685		mg/Kg		84	70 - 130	11	35
o-Xylene	0.100	0.08147		mg/Kg		81	70 - 130	11	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		70 - 130
1,4-Difluorobenzene (Surr)	86		70 - 130

Lab Sample ID: 880-58044-A-39-D MS

Matrix: Solid

Analysis Batch: 110089

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 110097

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00139	U F1	0.100	0.06939	F1	mg/Kg		69	70 - 130
Toluene	<0.00200	U F1	0.100	0.06815	F1	mg/Kg		68	70 - 130

Eurofins Carlsbad

## QC Sample Results

Client: Ensolum  
Project/Site: MOC LOBO

Job ID: 890-8153-1  
SDG: 03C2284007

## Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-58044-A-39-D MS

Matrix: Solid

Analysis Batch: 110089

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 110097

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00109	U	0.100	0.07474		mg/Kg		75	70 - 130
m-Xylene & p-Xylene	<0.00228	U F1	0.200	0.1371	F1	mg/Kg		69	70 - 130
o-Xylene	<0.00158	U F1	0.100	0.06842	F1	mg/Kg		68	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	86		70 - 130

Lab Sample ID: 880-58044-A-39-E MSD

Matrix: Solid

Analysis Batch: 110089

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 110097

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00139	U F1	0.100	0.07594		mg/Kg		76	70 - 130	9	35
Toluene	<0.00200	U F1	0.100	0.07347		mg/Kg		73	70 - 130	8	35
Ethylbenzene	<0.00109	U	0.100	0.07802		mg/Kg		78	70 - 130	4	35
m-Xylene & p-Xylene	<0.00228	U F1	0.200	0.1458		mg/Kg		73	70 - 130	6	35
o-Xylene	<0.00158	U F1	0.100	0.07370		mg/Kg		74	70 - 130	7	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	90		70 - 130

Lab Sample ID: MB 880-110098/5-A

Matrix: Solid

Analysis Batch: 110091

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 110098

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00139	U	0.00200	0.00139	mg/Kg		05/14/25 08:48	05/14/25 11:17	1
Toluene	<0.00200	U	0.00200	0.00200	mg/Kg		05/14/25 08:48	05/14/25 11:17	1
Ethylbenzene	<0.00109	U	0.00200	0.00109	mg/Kg		05/14/25 08:48	05/14/25 11:17	1
m-Xylene & p-Xylene	<0.00229	U	0.00400	0.00229	mg/Kg		05/14/25 08:48	05/14/25 11:17	1
o-Xylene	<0.00158	U	0.00200	0.00158	mg/Kg		05/14/25 08:48	05/14/25 11:17	1
Xylenes, Total	<0.00229	U	0.00400	0.00229	mg/Kg		05/14/25 08:48	05/14/25 11:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	56	S1-	70 - 130	05/14/25 08:48	05/14/25 11:17	1
1,4-Difluorobenzene (Surr)	85		70 - 130	05/14/25 08:48	05/14/25 11:17	1

Lab Sample ID: LCS 880-110098/1-A

Matrix: Solid

Analysis Batch: 110091

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 110098

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.07457		mg/Kg		75	70 - 130
Toluene	0.100	0.07088		mg/Kg		71	70 - 130
Ethylbenzene	0.100	0.07184		mg/Kg		72	70 - 130
m-Xylene & p-Xylene	0.200	0.1383	*	mg/Kg		69	70 - 130

Eurofins Carlsbad

## QC Sample Results

Client: Ensolum  
Project/Site: MOC LOBO

Job ID: 890-8153-1  
SDG: 03C2284007

## Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCS 880-110098/1-A

Matrix: Solid

Analysis Batch: 110091

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 110098

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
o-Xylene	0.100	0.07159		mg/Kg		72	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	80		70 - 130				
1,4-Difluorobenzene (Surr)	79		70 - 130				

Lab Sample ID: LCSD 880-110098/2-A

Matrix: Solid

Analysis Batch: 110091

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 110098

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.07418		mg/Kg		74	70 - 130	1	35
Toluene	0.100	0.07085		mg/Kg		71	70 - 130	0	35
Ethylbenzene	0.100	0.07077		mg/Kg		71	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.1370	*-	mg/Kg		69	70 - 130	1	35
o-Xylene	0.100	0.07139		mg/Kg		71	70 - 130	0	35
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	76		70 - 130						
1,4-Difluorobenzene (Surr)	73		70 - 130						

Lab Sample ID: 880-58044-A-45-D MS

Matrix: Solid

Analysis Batch: 110091

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 110098

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00139	U	0.100	0.08339		mg/Kg		83	70 - 130
Toluene	<0.00200	U	0.100	0.07640		mg/Kg		76	70 - 130
Ethylbenzene	<0.00109	U	0.100	0.07943		mg/Kg		79	70 - 130
m-Xylene & p-Xylene	<0.00228	U *-	0.200	0.1553		mg/Kg		78	70 - 130
o-Xylene	<0.00158	U	0.100	0.07990		mg/Kg		80	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	78		70 - 130						
1,4-Difluorobenzene (Surr)	88		70 - 130						

Lab Sample ID: 880-58044-A-45-E MSD

Matrix: Solid

Analysis Batch: 110091

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 110098

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00139	U	0.100	0.08435		mg/Kg		84	70 - 130	1	35
Toluene	<0.00200	U	0.100	0.07558		mg/Kg		76	70 - 130	1	35
Ethylbenzene	<0.00109	U	0.100	0.07823		mg/Kg		78	70 - 130	2	35
m-Xylene & p-Xylene	<0.00228	U *-	0.200	0.1533		mg/Kg		77	70 - 130	1	35
o-Xylene	<0.00158	U	0.100	0.07923		mg/Kg		79	70 - 130	1	35

Eurofins Carlsbad

## QC Sample Results

Client: Ensolum  
Project/Site: MOC LOBO

Job ID: 890-8153-1  
SDG: 03C2284007

## Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-58044-A-45-E MSD

Matrix: Solid

Analysis Batch: 110091

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 110098

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	75		70 - 130
1,4-Difluorobenzene (Surr)	91		70 - 130

## Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-110070/1-A

Matrix: Solid

Analysis Batch: 110100

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 110070

Analyte	MB	MB								
	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
Gasoline Range Organics (GRO)-C6-C10	19.50	J	50.0	14.5	mg/Kg		05/13/25 14:57	05/14/25 06:57	1	
Diesel Range Organics (Over C10-C28)	<15.1	U	50.0	15.1	mg/Kg		05/13/25 14:57	05/14/25 06:57	1	
Oil Range Organics (Over C28-C36)	<15.1	U	50.0	15.1	mg/Kg		05/13/25 14:57	05/14/25 06:57	1	
Total TPH	19.50	J	50.0	15.1	mg/Kg		05/13/25 14:57	05/14/25 06:57	1	

	MB	MB								
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil	Fac
1-Chlorooctane	81		70 - 130				05/13/25 14:57	05/14/25 06:57	1	
o-Terphenyl	84		70 - 130				05/13/25 14:57	05/14/25 06:57	1	

Lab Sample ID: LCS 880-110070/2-A

Matrix: Solid

Analysis Batch: 110100

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 110070

Analyte	Spike	LCS	LCS							
	Added	Result	Qualifier	Unit	D	%Rec	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	1000	862.4		mg/Kg		86		70 - 130		
Diesel Range Organics (Over C10-C28)	1000	841.1		mg/Kg		84		70 - 130		

	LCS	LCS								
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	120		70 - 130							
o-Terphenyl	106		70 - 130							

Lab Sample ID: LCSD 880-110070/3-A

Matrix: Solid

Analysis Batch: 110100

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 110070

Analyte	Spike	LCSD	LCSD							
	Added	Result	Qualifier	Unit	D	%Rec	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	842.1		mg/Kg		84		70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	907.2		mg/Kg		91		70 - 130	8	20

	LCSD	LCSD								
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	103		70 - 130							
o-Terphenyl	108		70 - 130							

Eurofins Carlsbad

## QC Sample Results

Client: Ensolum  
Project/Site: MOC LOBO

Job ID: 890-8153-1  
SDG: 03C2284007

## Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 880-58051-A-19-C MS

Matrix: Solid

Analysis Batch: 110100

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 110070

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<14.5	U	1000	747.8		mg/Kg		75	70 - 130		
Diesel Range Organics (Over C10-C28)	<15.1	U	1000	795.8		mg/Kg		79	70 - 130		
	MS %Recovery	MS Qualifier									
Surrogate			Limits								
1-Chlorooctane	88		70 - 130								
o-Terphenyl	91		70 - 130								

Lab Sample ID: 880-58051-A-19-D MSD

Matrix: Solid

Analysis Batch: 110100

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 110070

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<14.5	U	1000	732.1		mg/Kg		73	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<15.1	U	1000	805.0		mg/Kg		80	70 - 130	1	20
	MSD %Recovery	MSD Qualifier									
Surrogate			Limits								
1-Chlorooctane	87		70 - 130								
o-Terphenyl	93		70 - 130								

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-110082/1-A

Matrix: Solid

Analysis Batch: 110088

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.395	U	10.0	0.395	mg/Kg			05/14/25 09:55	1

Lab Sample ID: LCS 880-110082/2-A

Matrix: Solid

Analysis Batch: 110088

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	250	252.0		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-110082/3-A

Matrix: Solid

Analysis Batch: 110088

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	251.0		mg/Kg		100	90 - 110	0	20

Eurofins Carlsbad

QC Sample Results

Client: Ensolum  
Project/Site: MOC LOBO

Job ID: 890-8153-1  
SDG: 03C2284007

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-8153-4 MS											Client Sample ID: SS 04		
Matrix: Solid											Prep Type: Soluble		
Analysis Batch: 110088													
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits				
Chloride	245	F1	253	528.7	F1	mg/Kg		112	90 - 110				

Lab Sample ID: 890-8153-4 MSD											Client Sample ID: SS 04		
Matrix: Solid											Prep Type: Soluble		
Analysis Batch: 110088													
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits		RPD	RPD Limit	
Chloride	245	F1	253	527.7	F1	mg/Kg		112	90 - 110		0	20	



## QC Association Summary

Client: Ensolum  
Project/Site: MOC LOBO

Job ID: 890-8153-1  
SDG: 03C2284007

## GC VOA

## Analysis Batch: 110089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8153-5	SS 05	Total/NA	Solid	8021B	110097
890-8153-6	SS 06	Total/NA	Solid	8021B	110097
MB 880-110097/5-A	Method Blank	Total/NA	Solid	8021B	110097
LCS 880-110097/1-A	Lab Control Sample	Total/NA	Solid	8021B	110097
LCSD 880-110097/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	110097
880-58044-A-39-D MS	Matrix Spike	Total/NA	Solid	8021B	110097
880-58044-A-39-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	110097

## Analysis Batch: 110091

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8153-1	SS 01	Total/NA	Solid	8021B	110098
890-8153-2	SS 02	Total/NA	Solid	8021B	110098
890-8153-3	SS 03	Total/NA	Solid	8021B	110098
890-8153-4	SS 04	Total/NA	Solid	8021B	110098
MB 880-110098/5-A	Method Blank	Total/NA	Solid	8021B	110098
LCS 880-110098/1-A	Lab Control Sample	Total/NA	Solid	8021B	110098
LCSD 880-110098/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	110098
880-58044-A-45-D MS	Matrix Spike	Total/NA	Solid	8021B	110098
880-58044-A-45-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	110098

## Prep Batch: 110097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8153-5	SS 05	Total/NA	Solid	5035	
890-8153-6	SS 06	Total/NA	Solid	5035	
MB 880-110097/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-110097/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-110097/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-58044-A-39-D MS	Matrix Spike	Total/NA	Solid	5035	
880-58044-A-39-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

## Prep Batch: 110098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8153-1	SS 01	Total/NA	Solid	5035	
890-8153-2	SS 02	Total/NA	Solid	5035	
890-8153-3	SS 03	Total/NA	Solid	5035	
890-8153-4	SS 04	Total/NA	Solid	5035	
MB 880-110098/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-110098/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-110098/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-58044-A-45-D MS	Matrix Spike	Total/NA	Solid	5035	
880-58044-A-45-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

## GC Semi VOA

## Prep Batch: 110070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8153-1	SS 01	Total/NA	Solid	8015NM Prep	
890-8153-2	SS 02	Total/NA	Solid	8015NM Prep	
890-8153-3	SS 03	Total/NA	Solid	8015NM Prep	
890-8153-4	SS 04	Total/NA	Solid	8015NM Prep	
890-8153-5	SS 05	Total/NA	Solid	8015NM Prep	

Eurofins Carlsbad

## QC Association Summary

Client: Ensolum  
Project/Site: MOC LOBO

Job ID: 890-8153-1  
SDG: 03C2284007

## GC Semi VOA (Continued)

## Prep Batch: 110070 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8153-6	SS 06	Total/NA	Solid	8015NM Prep	
MB 880-110070/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-110070/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-110070/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-58051-A-19-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-58051-A-19-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

## Analysis Batch: 110100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8153-1	SS 01	Total/NA	Solid	8015B NM	110070
890-8153-2	SS 02	Total/NA	Solid	8015B NM	110070
890-8153-3	SS 03	Total/NA	Solid	8015B NM	110070
890-8153-4	SS 04	Total/NA	Solid	8015B NM	110070
890-8153-5	SS 05	Total/NA	Solid	8015B NM	110070
890-8153-6	SS 06	Total/NA	Solid	8015B NM	110070
MB 880-110070/1-A	Method Blank	Total/NA	Solid	8015B NM	110070
LCS 880-110070/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	110070
LCSD 880-110070/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	110070
880-58051-A-19-C MS	Matrix Spike	Total/NA	Solid	8015B NM	110070
880-58051-A-19-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	110070

## HPLC/IC

## Leach Batch: 110082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8153-1	SS 01	Soluble	Solid	DI Leach	
890-8153-2	SS 02	Soluble	Solid	DI Leach	
890-8153-3	SS 03	Soluble	Solid	DI Leach	
890-8153-4	SS 04	Soluble	Solid	DI Leach	
890-8153-5	SS 05	Soluble	Solid	DI Leach	
890-8153-6	SS 06	Soluble	Solid	DI Leach	
MB 880-110082/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-110082/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-110082/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-8153-4 MS	SS 04	Soluble	Solid	DI Leach	
890-8153-4 MSD	SS 04	Soluble	Solid	DI Leach	

## Analysis Batch: 110088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-8153-1	SS 01	Soluble	Solid	300.0	110082
890-8153-2	SS 02	Soluble	Solid	300.0	110082
890-8153-3	SS 03	Soluble	Solid	300.0	110082
890-8153-4	SS 04	Soluble	Solid	300.0	110082
890-8153-5	SS 05	Soluble	Solid	300.0	110082
890-8153-6	SS 06	Soluble	Solid	300.0	110082
MB 880-110082/1-A	Method Blank	Soluble	Solid	300.0	110082
LCS 880-110082/2-A	Lab Control Sample	Soluble	Solid	300.0	110082
LCSD 880-110082/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	110082
890-8153-4 MS	SS 04	Soluble	Solid	300.0	110082
890-8153-4 MSD	SS 04	Soluble	Solid	300.0	110082

Eurofins Carlsbad

## Lab Chronicle

Client: Ensolum  
Project/Site: MOC LOBO

Job ID: 890-8153-1  
SDG: 03C2284007

**Client Sample ID: SS 01****Lab Sample ID: 890-8153-1****Date Collected: 05/12/25 14:35****Matrix: Solid****Date Received: 05/13/25 16:14**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	110098	05/14/25 08:48	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	110091	05/14/25 13:42	MNR	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	110070	05/13/25 14:57	FC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	110100	05/14/25 11:33	TKC	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	110082	05/14/25 07:53	SA	EET MID
Soluble	Analysis	300.0		1			110088	05/14/25 11:34	CH	EET MID

**Client Sample ID: SS 02****Lab Sample ID: 890-8153-2****Date Collected: 05/12/25 14:46****Matrix: Solid****Date Received: 05/13/25 16:14**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	110098	05/14/25 08:48	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	110091	05/14/25 14:02	MNR	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	110070	05/13/25 14:57	FC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	110100	05/14/25 11:49	TKC	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	110082	05/14/25 07:53	SA	EET MID
Soluble	Analysis	300.0		1			110088	05/14/25 11:41	CH	EET MID

**Client Sample ID: SS 03****Lab Sample ID: 890-8153-3****Date Collected: 05/12/25 14:43****Matrix: Solid****Date Received: 05/13/25 16:14**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	110098	05/14/25 08:48	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	110091	05/14/25 14:23	MNR	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	110070	05/13/25 14:57	FC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	110100	05/14/25 12:06	TKC	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	110082	05/14/25 07:53	SA	EET MID
Soluble	Analysis	300.0		1			110088	05/14/25 11:48	CH	EET MID

**Client Sample ID: SS 04****Lab Sample ID: 890-8153-4****Date Collected: 05/12/25 14:41****Matrix: Solid****Date Received: 05/13/25 16:14**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	110098	05/14/25 08:48	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	110091	05/14/25 14:43	MNR	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	110070	05/13/25 14:57	FC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	110100	05/14/25 12:22	TKC	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	110082	05/14/25 07:53	SA	EET MID
Soluble	Analysis	300.0		1	0 mL	1.0 mL	110088	05/14/25 11:55	CH	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum  
Project/Site: MOC LOBO

Job ID: 890-8153-1  
SDG: 03C2284007

Client Sample ID: SS 05  
Date Collected: 05/12/25 14:39  
Date Received: 05/13/25 16:14

Lab Sample ID: 890-8153-5  
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	110097	05/14/25 08:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	110089	05/14/25 13:35	MNR	EET MID
Total/NA	Prep	8015NM Prep			9.96 g	10 mL	110070	05/13/25 14:57	FC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	110100	05/14/25 12:39	TKC	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	110082	05/14/25 07:53	SA	EET MID
Soluble	Analysis	300.0		1			110088	05/14/25 12:16	CH	EET MID

Client Sample ID: SS 06  
Date Collected: 05/12/25 14:37  
Date Received: 05/13/25 16:14

Lab Sample ID: 890-8153-6  
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	110097	05/14/25 08:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	110089	05/14/25 13:55	MNR	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	110070	05/13/25 14:57	FC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	110100	05/14/25 12:55	TKC	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	110082	05/14/25 07:53	SA	EET MID
Soluble	Analysis	300.0		1			110088	05/14/25 12:23	CH	EET MID

Laboratory References:  
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum  
Project/Site: MOC LOBO

Job ID: 890-8153-1  
SDG: 03C2284007

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400	06-30-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH

Method Summary

Client: Ensolum  
Project/Site: MOC LOBO

Job ID: 890-8153-1  
SDG: 03C2284007

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

- ASTM = ASTM International
- EPA = US Environmental Protection Agency
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

- EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440



Sample Summary

Client: Ensolum  
Project/Site: MOC LOBO

Job ID: 890-8153-1  
SDG: 03C2284007

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-8153-1	SS 01	Solid	05/12/25 14:35	05/13/25 16:14	0.5
890-8153-2	SS 02	Solid	05/12/25 14:46	05/13/25 16:14	0.5
890-8153-3	SS 03	Solid	05/12/25 14:43	05/13/25 16:14	0.5
890-8153-4	SS 04	Solid	05/12/25 14:41	05/13/25 16:14	0.5
890-8153-5	SS 05	Solid	05/12/25 14:39	05/13/25 16:14	0.5
890-8153-6	SS 06	Solid	05/12/25 14:37	05/13/25 16:14	0.5

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14



Environment Testing  
Xenco

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300  
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334  
El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1286  
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

# Chain of Custody

Work Order No: \_\_\_\_\_

www.xenco.com Page 1 of 1

Project Manager:	Jeremy Reich	Bill to: (if different)	Jeremy Reich
Company Name:	Ensolum LLC	Company Name:	Ensolum
Address:	3122 National Parks Hwy	Address:	
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	
Phone:	432-296-0627	Email:	jsantillana@ensolum.com, jreich@ensolum.com, kthompson@ensolum.com

Program: UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>	
State of Project:	
Reporting: Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>	Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other: _____

Project Name:	MOC Lobo	Turn Around	<input type="checkbox"/> Routine <input checked="" type="checkbox"/> Rush	Pres. Code	
Project Number:	03C2284007	Due Date:	24hr		
Project Location:	32.444437, -103.688210	TAT starts the day received by the lab, if received by 4:30pm			
Sampler's Name:	Uriel Santillana				
PO #:					
SAMPLE RECEIPT	Temp Blank: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wet Ice: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Thermometer ID: T-1000		
Samples Received Intact:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Correction Factor: -0.2			
Cooler Custody Seals:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Temperature Reading: 2.6			
Sample Custody Seals:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Corrected Temperature: 2.4			
Total Containers:					



890-8153 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	CHLORIDES (EPA: 3000.0)	TPH (8015)	BTEX (8021)	TEG - 8015D	TX1006	Preservative Codes	Sample Comments
SS01	S	5/12/2025	1435	0.5	G	1	X	X	X			None: NO DI Water: H <sub>2</sub> O	Incident #: nAPP2505953548
SS02			1446				X	X	X			Cool: Cool MeOH: Me	
SS03			1443				X	X	X			HCL: HC HNO <sub>3</sub> : HN	
SS04			1441				X	X	X			H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub> NaOH: Na	
SS05			1439				X	X	X			H <sub>3</sub> PO <sub>4</sub> : HP	
SS06			1437				X	X	X			NaHSO <sub>4</sub> : NABIS	
							X	X	X			Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub> : NaSO <sub>3</sub>	
							X	X	X			Zn Acetate+NaOH: Zn	
							X	X	X			NaOH+Ascorbic Acid: SAPC	

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM	Texas 11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO <sub>2</sub>	Na	Sr	Ti	Sn	U	V	Zn				
Circle Method(s) and Metal(s) to be analyzed		TCLP / SPLP 6010: 8RCRA		Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Mn	Mo	Ni	Se	Ag	Ti	U	Hg: 1631 / 245.1 / 7470 / 7471															

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	5/13/25 1600	<i>[Signature]</i>	<i>[Signature]</i>	5/13 1614
3		4			
5		6			

## Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-8153-1

SDG Number: 03C2284007

Login Number: 8153

List Number: 1

Creator: Bruns, Shannon

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

## Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-8153-1

SDG Number: 03C2284007

Login Number: 8153

List Number: 2

Creator: Laing, Edmundo

List Source: Eurofins Midland

List Creation: 05/14/25 07:50 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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

General Information  
Phone: (505) 629-6116

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

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

QUESTIONS

Action 464316

**QUESTIONS**

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID: 14744
	Action Number: 464316
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nAPP2505953548
Incident Name	NAPP2505953548 NEW WAVE LOBO FRAC BOOSTER @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Received

**Location of Release Source***Please answer all the questions in this group.*

Site Name	New Wave Lobo Frac Booster
Date Release Discovered	02/15/2025
Surface Owner	Federal

**Incident Details***Please answer all the questions in this group.*

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

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

Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Equipment Failure   Pipeline (Any)   Produced Water   Released: 78 BBL   Recovered: 0 BBL   Lost: 78 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

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

General Information  
Phone: (505) 629-6116

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

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

QUESTIONS, Page 2

Action 464316

**QUESTIONS (continued)**

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID: 14744
	Action Number: 464316
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

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

**Initial Response**

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

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

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

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

I hereby agree and sign off to the above statement	Name: Connor Walker Title: Senior Engineer Email: cwalker@mewbourne.com Date: 02/28/2025
--	---



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

General Information  
Phone: (505) 629-6116

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

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

QUESTIONS, Page 3

Action 464316

**QUESTIONS (continued)**

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID: 14744
	Action Number: 464316
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

<b>Site Characterization</b>	
<i>Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 51 and 75 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
<b>What is the minimum distance, between the closest lateral extents of the release and the following surface areas:</b>	
A continuously flowing watercourse or any other significant watercourse	Between 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between ½ and 1 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between 1 and 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

<b>Remediation Plan</b>	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
<b>Soil Contamination Sampling:</b> (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	10000
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	19.1
GRO+DRO (EPA SW-846 Method 8015M)	19.1
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
On what estimated date will the remediation commence	03/24/2025
On what date will (or did) the final sampling or liner inspection occur	06/12/2025
On what date will (or was) the remediation complete(d)	06/12/2025
What is the estimated surface area (in square feet) that will be reclaimed	6125
What is the estimated volume (in cubic yards) that will be reclaimed	530
What is the estimated surface area (in square feet) that will be remediated	6125
What is the estimated volume (in cubic yards) that will be remediated	530
<i>These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.</i>	
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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

General Information  
Phone: (505) 629-6116

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

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

QUESTIONS, Page 4

Action 464316

**QUESTIONS (continued)**

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID: 14744
	Action Number: 464316
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

<b>Remediation Plan (continued)</b>	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
<b>This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:</b>	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and <b>off-site</b> disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for <b>off-site</b> disposal	NORTH RANCH SURFACE WASTE MANAGEMENT FACILITY [fBAJ2129451934]
<b>OR</b> which OCD approved well (API) will be used for <b>off-site</b> disposal	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, out-of-state	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and <b>on-site</b> remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Not answered.
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Connor Walker Title: Senior Engineer Email: cwalker@mewbourne.com Date: 05/17/2025
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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

General Information  
Phone: (505) 629-6116

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

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

QUESTIONS, Page 5

Action 464316

QUESTIONS (continued)

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID: 14744
	Action Number: 464316
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

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

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

General Information  
Phone: (505) 629-6116

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

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

QUESTIONS, Page 6

Action 464316

**QUESTIONS (continued)**

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID: 14744
	Action Number: 464316
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

Sampling Event Information	
Last sampling notification (C-141N) recorded	463902
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/23/2025
What was the (estimated) number of samples that were to be gathered	32
What was the sampling surface area in square feet	6125

**Remediation Closure Request**

Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.

Requesting a remediation closure approval with this submission	No
--	----

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

General Information  
Phone: (505) 629-6116

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

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

CONDITIONS

Action 464316

## CONDITIONS

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID: 14744
	Action Number: 464316
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

## CONDITIONS

Created By	Condition	Condition Date
scott.rodgers	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. Confirmation samples should be collected every 200 ft2. All off pad areas must meet reclamation standards set forth in the OCD Spill Rule. The work will need to occur in 90 days after the work plan has been reviewed.	5/21/2025