



August 10, 2022

District 1  
New Mexico Oil Conservation Division  
1625 N. French Dr.  
Hobbs, New Mexico 88240

**Re: Closure Request Addendum  
MCA 330  
Incident Number NAPP2201136360  
Lea County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of Maverick Natural Resources, LLC (Maverick), has prepared the following addendum to a Closure Request submitted on July 13, 2022, for the MCA 330 (Site; Figure 1). This Addendum provides an update to the excavation and soil sampling activities completed at the Site, in response to the denial by the New Mexico Oil Conservation Division (NMOCD) of a previously submitted Closure Request. In the denial, NMOCD expressed concern that the depth to groundwater has not been adequately determined. NMOCD requested that Maverick conduct additional investigation of depth to groundwater or complete additional remediation activities in the areas of floor samples FS01 and FS02. Based on the additional excavation activities performed at the Site and laboratory analytical results from the soil sampling events, Maverick is submitting this Closure Request, describing remediation that has occurred and requesting closure for Incident Number NAPP2201136360.

## BACKGROUND

The Site is located in Unit N, Section 23, Township 17 South, Range 32 East, in Lea County, New Mexico (32.816301° N, 103.741083°W) and is associated with oil and gas exploration and production operations on Bureau of Land Management (BLM) Federal Land.

On January 4, 2022, a flowline malfunctioned, and resulted in a release of approximately 12.16 barrels (bbls) of produced water and 3.04 bbls of crude oil onto the surrounding pasture. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; approximately 3.2 bbls of produced water and 0.08 bbls of crude oil were recovered. The previous operator (ConocoPhillips Company) reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on January 19, 2022. The release was assigned Incident Number NAPP2201136360.

A Closure Request detailing site characterization according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC) was included in a previously submitted closure request. Based on the site characterization, the following the Closure Criteria were applied:

- Benzene: 10 milligrams per kilogram (mg/kg)

Ensolum, LLC | Environmental, Engineering & Hydrogeologic Consultants  
601 North Marienfeld Street | Midland, TX 79701 | [ensolum.com](http://ensolum.com)  
Texas PG Firm No. 50588 | Texas PE Firm No. F-21843

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

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

Site assessment and excavation activities were conducted at the Site and closure was requested based on laboratory analytical results for the excavation floor confirmation soil samples indicating benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria. Laboratory analytical results for the excavation sidewall confirmation soil samples indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations in the top four feet of the subsurface were compliant with the Site Closure Criteria and compliant with the reclamation standard. Additionally, the release was laterally delineated to the most stringent Table 1 Closure Criteria.

On July 13, 2022, NMOCD denied the Closure Request for Incident Number NAPP2201136360 for the following reasons:

- *“The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and the data should be no more than 25 years old, and the well construction information should be provided in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.19 NMAC in lieu of drilling to determine the depth to groundwater. Based on the DTW criteria you are not vertically delineated at FS01 or FS02. Please submit a revised closure report to the OCD portal by August 15, 2022.”*

## ADDITIONAL EXCAVATION ACTIVITIES

To address the denial, Ensolum personnel returned to the Site on July 14, 2022, to oversee excavation activities to remove additional soil from the floor of the excavation in the areas around floor samples FS01 and FS02. To direct excavation activities, soil was field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The excavation was completed to a depth of 4.5 feet bgs. Upon completion of excavation activities, 5-point composite soil samples FS01A and FS02A were collected from the floor of the excavation from a depth of 4.5 feet bgs.

The excavation soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of 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 EPA Method 300.0. The excavation extent and excavation soil sample locations are depicted on Figure 2. Photographic documentation was conducted during excavation activities and photos are included in Appendix A.

## LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for floor samples FS01A and FS02A indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and

compliant with the most stringent Table 1 Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical report is included as Appendix B.

## CLOSURE REQUEST

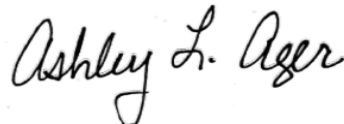
Site assessment and excavation activities were conducted at the Site to address the January 4, 2022, release of produced water and crude oil. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and compliant with the most stringent Table 1 Closure Criteria. Based on the final excavation soil sample laboratory analytical results, Maverick respectfully request NFA for Incident Number NAPP2201136360. The Final C-141 is included in Appendix C and required NMOCD communications are included as Appendix D.

If you have any questions or comments, please contact Ms. Kalei Jennings at (817) 683-2503 or [kjennings@ensolum.com](mailto:kjennings@ensolum.com).

Sincerely,  
**Ensolum, LLC**



Kalei Jennings  
Senior Scientist



Ashley Ager, P. G.  
Program Director

cc: Thomas Haigood, Maverick Natural Resources  
Bureau of Land Management

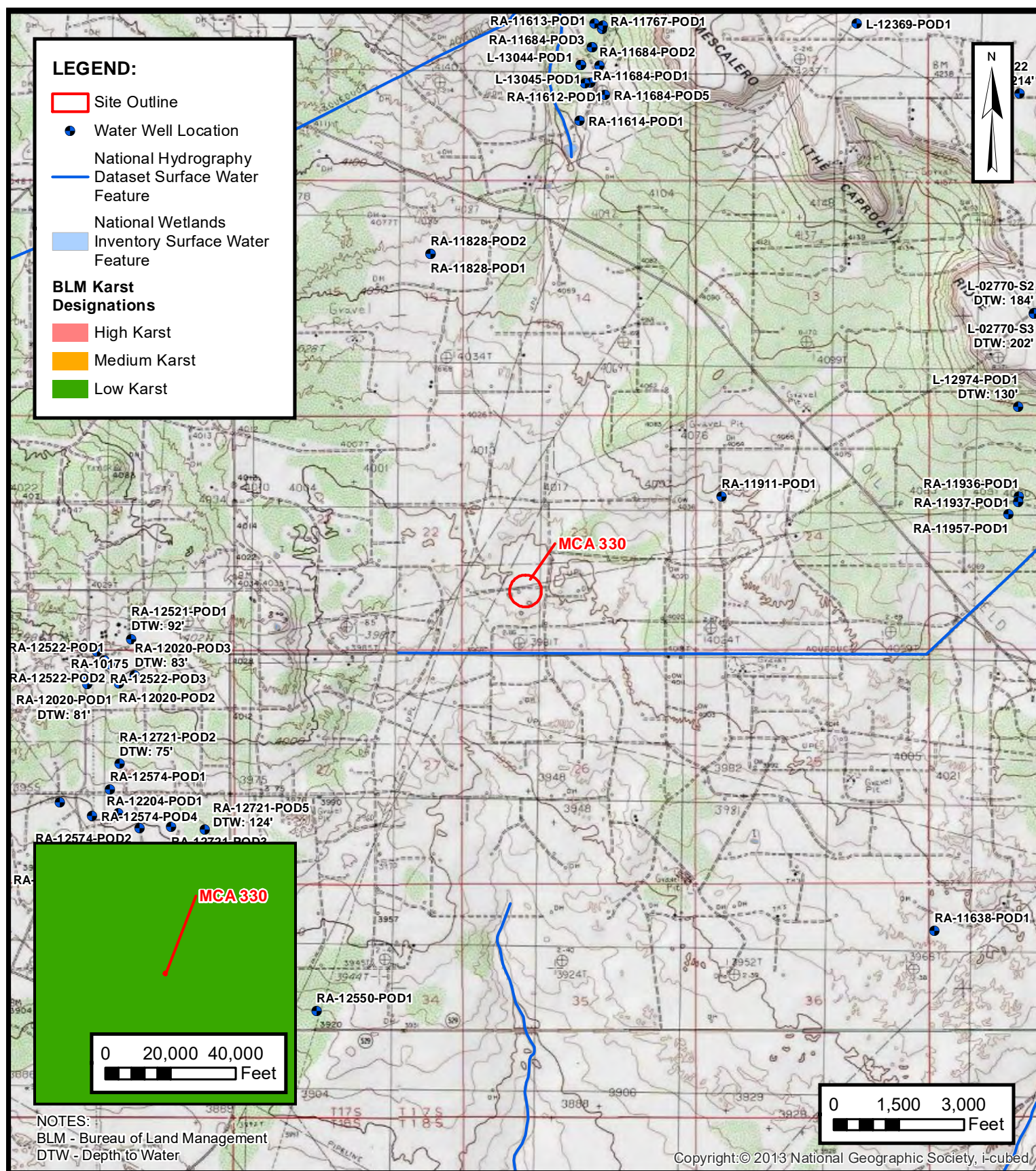
### Appendices:

Figure 1	Site Receptor Map
Figure 2	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Photographic Log
Appendix B	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix C	Final C-141
Appendix D	NMOCD Notifications



FIGURES



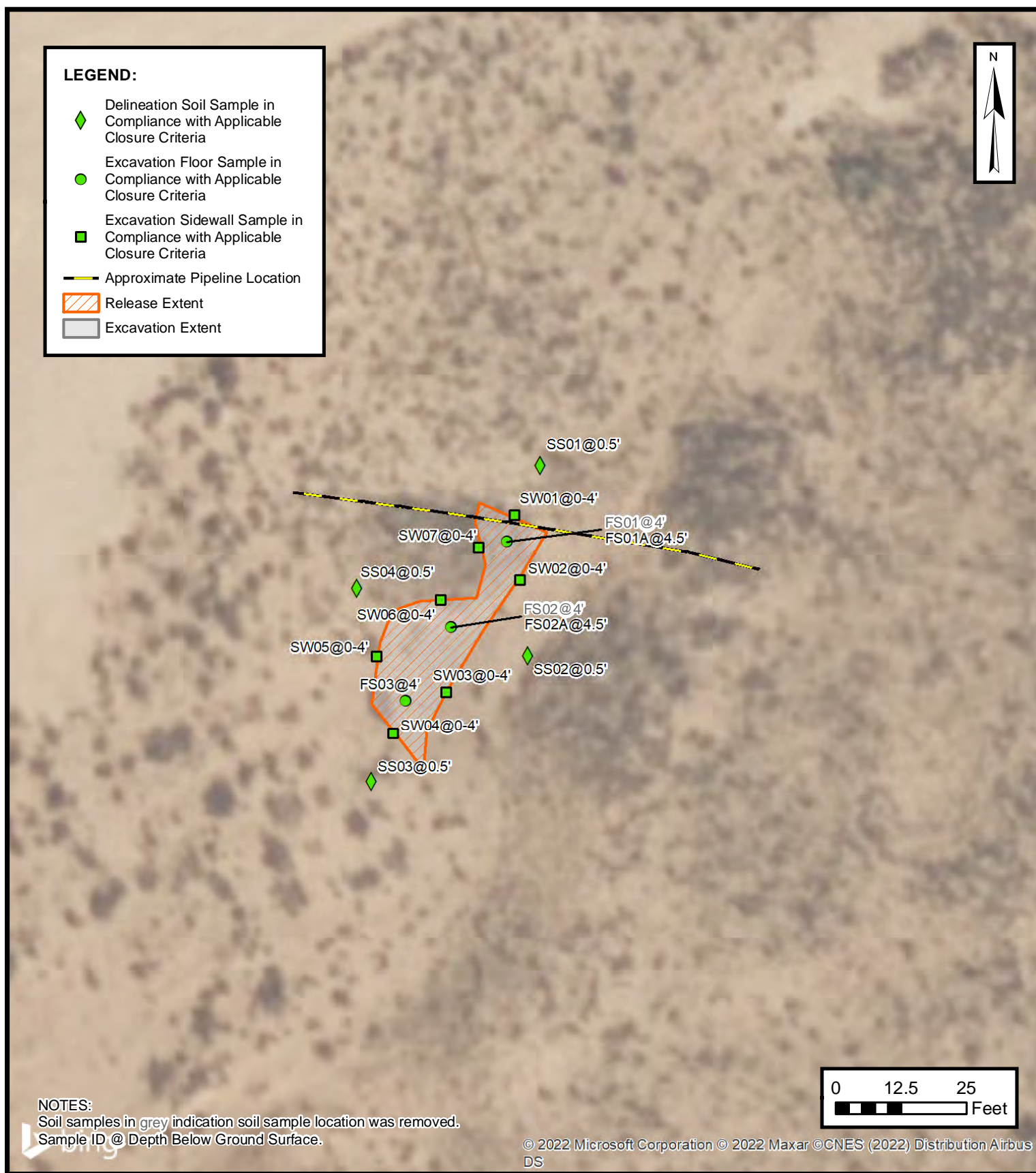


## SITE RECEPTOR MAP

MAVERICK NATURAL RESOURCES, LLC  
MCA 330  
NAPP2201136360  
Unit N, Sec 23, T17S, R32E  
Lea County, New Mexico

**FIGURE**  
**1**





### EXCAVATION SOIL SAMPLE LOCATIONS

MAVERICK NATURAL RESOURCES, LLC

MCA 330

NAPP2201136360

Unit N, Sec 23, T17S, R32E

Lea County, New Mexico

FIGURE

2



TABLES



**TABLE 1**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
 MCA 330  
 Maverick Natural Resources, LLC  
 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 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
Delineation Soil Samples										
SS01	06/23/2022	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	11.0*
SS02	06/23/2022	0.5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	20.7*
SS03	06/23/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	10.8*
SS04	06/23/2022	0.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	18.8*
Excavation Floor Soil Samples										
FS01	06/23/2022	4.0	<0.00201	0.148	<50.0	188	65.9	188	254	160
FS01A	07/14/2022	4.5	<0.00199	<0.00398	<15.0	<15.0	<15.0	<15.0	<15.0	324
FS02	06/28/2022	4.0	<0.0401	<0.0802	<50.0	903	129	903	1,030	179
FS02A	07/14/2022	4.5	<0.00200	<0.00399	<15.0	<15.0	<15.0	<15.0	<15.0	392
FS03	06/28/2022	4.0	<0.00201	0.0136	<50.0	55.8	<50.0	55.8	55.8	63.6
Excavation Sidewall Soil Samples										
SW01	06/28/2022	0-4	<0.00200	<0.00399	<50.0	39.3	51.1	39.3	90.4	5.03*
SW02	06/28/2022	0-4	<0.00199	<0.00398	<50.0	<50.0	50.5	<50.0	50.5	83.0*
SW03	06/28/2022	0-4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	11.4*
SW04	06/28/2022	0-4	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	8.70*
SW05	06/28/2022	0-4	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	11.1*
SW06	06/28/2022	0-4	<0.0200	<0.0401	<50.0	25.5	67.3	25.5	92.8	8.95*
SW07	06/28/2022	0-4	<0.00201	<0.00402	<50.0	40.6	49.9	40.6	90.5	8.72*

**Notes:**

bgs: below ground surface

BTEX: Benzene, Toluene, Ethylbenzene, and Total Xylenes

DRO: Diesel Range Organics

I.D: Identification

mg/kg: milligrams per kilogram

GRO - gasoline range organics

NMOCD: New Mexico Oil Conservation Division

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

\* indicates sample was collected in area to be reclaimed after remediation is complete; the reclamation criteria applies to these samples

Concentrations in **bold** represent samples that exceed the applicable standard

Gray text represent sample locations that have been excavated





## APPENDIX A

### Photographic Log

**Photographic Log**

Maverick Natural Resources, LLC

MCA 330

Incident Number NAPP2201136360

Date & Time: Thu, Jun 23, 2022, 15:25:49 MDT  
Position: +032.816399° / -103.741017° (±16.3ft)  
Altitude: 4005ft (±9.8ft)  
Datum: WGS-84  
Azimuth/Bearing: 191° S11W 3396mils True (±12°)  
Elevation Angle: -26.9°  
Horizon Angle: -00.2°  
Zoom: 0.5X



Photograph 1

Date: June 28, 2022

Description: View of release area during excavation activities.

Date & Time: Tue, Jun 28, 2022, 12:21:59 MDT  
Position: +032.816207° / -103.741148° (±31.5ft)  
Altitude: 4003ft (±16.0ft)  
Datum: WGS-84  
Azimuth/Bearing: 025° N25E 0444mils True (±10°)  
Elevation Angle: -19.8°  
Horizon Angle: -01.3°  
Zoom: 0.5X



Photograph 2

Date: June 28, 2022

Description: View of release area during excavation activities.



## APPENDIX B

### Laboratory Analytical Reports

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Environment Testing  
America

## ANALYTICAL REPORT

Eurofins Midland  
1211 W. Florida Ave  
Midland, TX 79701  
Tel: (432)704-5440

Laboratory Job ID: 880-16984-1

Laboratory Sample Delivery Group: 32.816301, -103.741083  
Client Project/Site: MCA 330

For:

Ensolum  
705 W. Wadley  
Suite 210  
Midland, Texas 79701

Attn: Kalei Jennings

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:

7/19/2022 9:14:50 AM

Jessica Kramer, Project Manager  
(432)704-5440

[Jessica.Kramer@et.eurofinsus.com](mailto:Jessica.Kramer@et.eurofinsus.com)

### LINKS

Review your project  
results through



Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Client: Ensolum  
Project/Site: MCA 330

Laboratory Job ID: 880-16984-1  
SDG: 32.816301, -103.741083

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## Definitions/Glossary

Client: Ensolum  
Project/Site: MCA 330

Job ID: 880-16984-1  
SDG: 32.816301, -103.741083

## Qualifiers

## GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

## GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

## HPLC/IC

Qualifier	Qualifier Description
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/Site: MCA 330

Job ID: 880-16984-1  
SDG: 32.816301, -103.741083

**Job ID: 880-16984-1**

**Laboratory: Eurofins Midland**

### Narrative

#### Job Narrative 880-16984-1

#### Receipt

The samples were received on 7/15/2022 3:07 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 0.4°C

#### GC VOA

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

#### GC Semi VOA

Method 8015MOD\_NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-29867 and analytical batch 880-29786 was outside control limits. Sample non-homogeneity is suspected.

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: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-29855 and analytical batch 880-29880 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

## Client Sample Results

Client: Ensolum  
Project/Site: MCA 330

Job ID: 880-16984-1  
SDG: 32.816301, -103.741083

Client Sample ID: FS01A

Lab Sample ID: 880-16984-1

Date Collected: 07/14/22 10:51

Matrix: Solid

Date Received: 07/15/22 15:07

Sample Depth: 4.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		07/17/22 12:29	07/18/22 13:42	1
Toluene	<0.00199	U	0.00199	mg/Kg		07/17/22 12:29	07/18/22 13:42	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		07/17/22 12:29	07/18/22 13:42	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		07/17/22 12:29	07/18/22 13:42	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		07/17/22 12:29	07/18/22 13:42	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		07/17/22 12:29	07/18/22 13:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	07/17/22 12:29	07/18/22 13:42	1
1,4-Difluorobenzene (Surr)	93		70 - 130	07/17/22 12:29	07/18/22 13:42	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			07/18/22 17:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	15.0 mg/Kg			07/18/22 09:00	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	15.0 mg/Kg		07/15/22 16:00	07/16/22 00:22	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	15.0 mg/Kg		07/15/22 16:00	07/16/22 00:22	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	15.0 mg/Kg		07/15/22 16:00	07/16/22 00:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130	07/15/22 16:00	07/16/22 00:22	1
o-Terphenyl	104		70 - 130	07/15/22 16:00	07/16/22 00:22	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	324		4.97	mg/Kg			07/16/22 12:06	1

Client Sample ID: FS02A

Lab Sample ID: 880-16984-2

Date Collected: 07/14/22 10:57

Matrix: Solid

Date Received: 07/15/22 15:07

Sample Depth: 4.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		07/17/22 12:29	07/18/22 14:08	1
Toluene	<0.00200	U	0.00200	mg/Kg		07/17/22 12:29	07/18/22 14:08	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		07/17/22 12:29	07/18/22 14:08	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		07/17/22 12:29	07/18/22 14:08	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		07/17/22 12:29	07/18/22 14:08	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		07/17/22 12:29	07/18/22 14:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		70 - 130	07/17/22 12:29	07/18/22 14:08	1

Eurofins Midland



## Client Sample Results

Client: Ensolum  
Project/Site: MCA 330

Job ID: 880-16984-1  
SDG: 32.816301, -103.741083

Client Sample ID: FS02A

Lab Sample ID: 880-16984-2

Date Collected: 07/14/22 10:57

Matrix: Solid

Date Received: 07/15/22 15:07

Sample Depth: 4.5

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	91		70 - 130	07/17/22 12:29	07/18/22 14:08	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			07/18/22 17:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	15.0 mg/Kg			07/18/22 09:00	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	15.0 mg/Kg		07/15/22 16:00	07/16/22 00:43	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	15.0 mg/Kg		07/15/22 16:00	07/16/22 00:43	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	15.0 mg/Kg		07/15/22 16:00	07/16/22 00:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130			07/15/22 16:00	07/16/22 00:43	1
o-Terphenyl	113		70 - 130			07/15/22 16:00	07/16/22 00:43	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	392		4.96	mg/Kg			07/16/22 12:14	1

## Surrogate Summary

Client: Ensolum  
Project/Site: MCA 330

Job ID: 880-16984-1  
SDG: 32.816301, -103.741083

## 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)
880-16984-1	FS01A	102	93
880-16984-1 MS	FS01A	113	104
880-16984-1 MSD	FS01A	111	88
880-16984-2	FS02A	117	91
LCS 880-29886/1-A	Lab Control Sample	100	103
LCSD 880-29886/2-A	Lab Control Sample Dup	90	87
MB 880-29886/5-A	Method Blank	79	88

## Surrogate Legend

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)
880-16984-1	FS01A	90	104
880-16984-2	FS02A	98	113
890-2557-A-1-D MS	Matrix Spike	82	90
890-2557-A-1-E MSD	Matrix Spike Duplicate	83	91
LCS 880-29867/2-A	Lab Control Sample	111	127
LCSD 880-29867/3-A	Lab Control Sample Dup	93	104
MB 880-29867/1-A	Method Blank	101	121

## Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

## QC Sample Results

Client: Ensolum  
Project/Site: MCA 330

Job ID: 880-16984-1  
SDG: 32.816301, -103.741083

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

Lab Sample ID: MB 880-29886/5-A

Matrix: Solid

Analysis Batch: 29895

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 29886

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000400	U	0.000400	mg/Kg		07/17/22 12:29	07/18/22 13:14	1
Toluene	<0.000400	U	0.000400	mg/Kg		07/17/22 12:29	07/18/22 13:14	1
Ethylbenzene	<0.000400	U	0.000400	mg/Kg		07/17/22 12:29	07/18/22 13:14	1
m-Xylene & p-Xylene	<0.000800	U	0.000800	mg/Kg		07/17/22 12:29	07/18/22 13:14	1
o-Xylene	<0.000400	U	0.000400	mg/Kg		07/17/22 12:29	07/18/22 13:14	1
Xylenes, Total	<0.000800	U	0.000800	mg/Kg		07/17/22 12:29	07/18/22 13:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		70 - 130	07/17/22 12:29	07/18/22 13:14	1
1,4-Difluorobenzene (Surr)	88		70 - 130	07/17/22 12:29	07/18/22 13:14	1

Lab Sample ID: LCS 880-29886/1-A

Matrix: Solid

Analysis Batch: 29895

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 29886

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1136		mg/Kg		114	70 - 130
Toluene	0.100	0.09979		mg/Kg		100	70 - 130
Ethylbenzene	0.100	0.1044		mg/Kg		104	70 - 130
m-Xylene & p-Xylene	0.200	0.2057		mg/Kg		103	70 - 130
o-Xylene	0.100	0.1101		mg/Kg		110	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: LCSD 880-29886/2-A

Matrix: Solid

Analysis Batch: 29895

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 29886

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08653		mg/Kg		87	70 - 130	27	35
Toluene	0.100	0.08126		mg/Kg		81	70 - 130	20	35
Ethylbenzene	0.100	0.08703		mg/Kg		87	70 - 130	18	35
m-Xylene & p-Xylene	0.200	0.1740		mg/Kg		87	70 - 130	17	35
o-Xylene	0.100	0.09271		mg/Kg		93	70 - 130	17	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		70 - 130
1,4-Difluorobenzene (Surr)	87		70 - 130

Lab Sample ID: 880-16984-1 MS

Matrix: Solid

Analysis Batch: 29895

Client Sample ID: FS01A

Prep Type: Total/NA

Prep Batch: 29886

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.101	0.09726		mg/Kg		96	70 - 130
Toluene	<0.00199	U	0.101	0.1008		mg/Kg		100	70 - 130

Eurofins Midland

## QC Sample Results

Client: Ensolum  
Project/Site: MCA 330

Job ID: 880-16984-1  
SDG: 32.816301, -103.741083

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

Lab Sample ID: 880-16984-1 MS

Matrix: Solid

Analysis Batch: 29895

Client Sample ID: FS01A

Prep Type: Total/NA

Prep Batch: 29886

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.101	0.1073		mg/Kg		106	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.202	0.2096		mg/Kg		104	70 - 130
o-Xylene	<0.00199	U	0.101	0.1131		mg/Kg		112	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	113		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: 880-16984-1 MSD

Matrix: Solid

Analysis Batch: 29895

Client Sample ID: FS01A

Prep Type: Total/NA

Prep Batch: 29886

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	<0.00199	U	0.101	0.09709		mg/Kg		97	70 - 130	0	35
Toluene	<0.00199	U	0.101	0.09884		mg/Kg		98	70 - 130	2	35
Ethylbenzene	<0.00199	U	0.101	0.1031		mg/Kg		102	70 - 130	4	35
m-Xylene & p-Xylene	<0.00398	U	0.201	0.2037		mg/Kg		101	70 - 130	3	35
o-Xylene	<0.00199	U	0.101	0.1081		mg/Kg		107	70 - 130	5	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		70 - 130
1,4-Difluorobenzene (Surr)	88		70 - 130

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

Lab Sample ID: MB 880-29867/1-A

Matrix: Solid

Analysis Batch: 29786

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 29867

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	15.0 mg/Kg		07/15/22 14:19	07/15/22 20:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	15.0 mg/Kg		07/15/22 14:19	07/15/22 20:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	15.0 mg/Kg		07/15/22 14:19	07/15/22 20:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130	07/15/22 14:19	07/15/22 20:28	1
o-Terphenyl	121		70 - 130	07/15/22 14:19	07/15/22 20:28	1

Lab Sample ID: LCS 880-29867/2-A

Matrix: Solid

Analysis Batch: 29786

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 29867

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	976.0		mg/Kg		98	70 - 130
Diesel Range Organics (Over C10-C28)	1000	996.5		mg/Kg		100	70 - 130

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## QC Sample Results

Client: Ensolum  
Project/Site: MCA 330

Job ID: 880-16984-1  
SDG: 32.816301, -103.741083

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

Lab Sample ID: LCS 880-29867/2-A

Matrix: Solid

Analysis Batch: 29786

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 29867

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	127		70 - 130

Lab Sample ID: LCSD 880-29867/3-A

Matrix: Solid

Analysis Batch: 29786

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 29867

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	997.8		mg/Kg		100	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	867.3		mg/Kg		87	70 - 130	14	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	93		70 - 130
o-Terphenyl	104		70 - 130

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-29855/1-A

Matrix: Solid

Analysis Batch: 29880

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			07/16/22 08:18	1

Lab Sample ID: LCS 880-29855/2-A

Matrix: Solid

Analysis Batch: 29880

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	265.4		mg/Kg		106	90 - 110

Lab Sample ID: LCSD 880-29855/3-A

Matrix: Solid

Analysis Batch: 29880

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	265.9		mg/Kg		106	90 - 110	0	20

Eurofins Midland

## QC Association Summary

Client: Ensolum  
Project/Site: MCA 330

Job ID: 880-16984-1  
SDG: 32.816301, -103.741083

## GC VOA

## Prep Batch: 29886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-16984-1	FS01A	Total/NA	Solid	5035	
880-16984-2	FS02A	Total/NA	Solid	5035	
MB 880-29886/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-29886/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-29886/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-16984-1 MS	FS01A	Total/NA	Solid	5035	
880-16984-1 MSD	FS01A	Total/NA	Solid	5035	

## Analysis Batch: 29895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-16984-1	FS01A	Total/NA	Solid	8021B	29886
880-16984-2	FS02A	Total/NA	Solid	8021B	29886
MB 880-29886/5-A	Method Blank	Total/NA	Solid	8021B	29886
LCS 880-29886/1-A	Lab Control Sample	Total/NA	Solid	8021B	29886
LCSD 880-29886/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	29886
880-16984-1 MS	FS01A	Total/NA	Solid	8021B	29886
880-16984-1 MSD	FS01A	Total/NA	Solid	8021B	29886

## Analysis Batch: 30006

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-16984-1	FS01A	Total/NA	Solid	Total BTEX	
880-16984-2	FS02A	Total/NA	Solid	Total BTEX	

## GC Semi VOA

## Analysis Batch: 29786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-16984-1	FS01A	Total/NA	Solid	8015B NM	29867
880-16984-2	FS02A	Total/NA	Solid	8015B NM	29867
MB 880-29867/1-A	Method Blank	Total/NA	Solid	8015B NM	29867
LCS 880-29867/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	29867
LCSD 880-29867/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	29867

## Prep Batch: 29867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-16984-1	FS01A	Total/NA	Solid	8015NM Prep	
880-16984-2	FS02A	Total/NA	Solid	8015NM Prep	
MB 880-29867/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-29867/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-29867/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

## Analysis Batch: 29906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-16984-1	FS01A	Total/NA	Solid	8015 NM	
880-16984-2	FS02A	Total/NA	Solid	8015 NM	

## HPLC/IC

## Leach Batch: 29855

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-16984-1	FS01A	Soluble	Solid	DI Leach	
880-16984-2	FS02A	Soluble	Solid	DI Leach	

Eurofins Midland

## QC Association Summary

Client: Ensolum  
Project/Site: MCA 330

Job ID: 880-16984-1  
SDG: 32.816301, -103.741083

## HPLC/IC (Continued)

## Leach Batch: 29855 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-29855/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-29855/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-29855/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

## Analysis Batch: 29880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-16984-1	FS01A	Soluble	Solid	300.0	29855
880-16984-2	FS02A	Soluble	Solid	300.0	29855
MB 880-29855/1-A	Method Blank	Soluble	Solid	300.0	29855
LCS 880-29855/2-A	Lab Control Sample	Soluble	Solid	300.0	29855
LCSD 880-29855/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	29855

## Lab Chronicle

Client: Ensolum  
Project/Site: MCA 330

Job ID: 880-16984-1  
SDG: 32.816301, -103.741083

Client Sample ID: FS01A

Lab Sample ID: 880-16984-1

Date Collected: 07/14/22 10:51

Matrix: Solid

Date Received: 07/15/22 15:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			29886	07/17/22 12:29	EL	XEN MID
Total/NA	Analysis	8021B		1	29895	07/18/22 13:42	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	30006	07/18/22 17:16	SM	XEN MID
Total/NA	Analysis	8015 NM		1	29906	07/18/22 09:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			29867	07/15/22 16:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1	29786	07/16/22 00:22	SM	XEN MID
Soluble	Leach	DI Leach			29855	07/15/22 15:12	SMC	XEN MID
Soluble	Analysis	300.0		1	29880	07/16/22 12:06	CH	XEN MID

Client Sample ID: FS02A

Lab Sample ID: 880-16984-2

Date Collected: 07/14/22 10:57

Matrix: Solid

Date Received: 07/15/22 15:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			29886	07/17/22 12:29	EL	XEN MID
Total/NA	Analysis	8021B		1	29895	07/18/22 14:08	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	30006	07/18/22 17:16	SM	XEN MID
Total/NA	Analysis	8015 NM		1	29906	07/18/22 09:00	SM	XEN MID
Total/NA	Prep	8015NM Prep			29867	07/15/22 16:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1	29786	07/16/22 00:43	SM	XEN MID
Soluble	Leach	DI Leach			29855	07/15/22 15:12	SMC	XEN MID
Soluble	Analysis	300.0		1	29880	07/16/22 12:14	CH	XEN MID

## Laboratory References:

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



Accreditation/Certification Summary

Client: Ensolum  
Project/Site: MCA 330

Job ID: 880-16984-1  
SDG: 32.816301, -103.741083

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	T104704400-22-24	06-30-23
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
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

## Method Summary

Client: Ensolum  
Project/Site: MCA 330

Job ID: 880-16984-1  
SDG: 32.816301, -103.741083

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

### Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

### Laboratory References:

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

Eurofins Midland

Sample Summary

Client: Ensolum  
Project/Site: MCA 330

Job ID: 880-16984-1  
SDG: 32.816301, -103.741083

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-16984-1	FS01A	Solid	07/14/22 10:51	07/15/22 15:07	4.5
880-16984-2	FS02A	Solid	07/14/22 10:57	07/15/22 15:07	4.5

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



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) 794-1296  
Hobbs NM (575) 392-7550 Carlsbad, NM (575) 988-3199

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Work Order Comments									
Program:	UST/PST	<input type="checkbox"/> PRP	<input type="checkbox"/> Brownfields	<input type="checkbox"/> RC	<input type="checkbox"/> Superfund	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State of Project:									
Reporting Level I/II	<input checked="" type="checkbox"/>	Level III	<input type="checkbox"/>	PST/UST	<input type="checkbox"/>	TRRP	<input type="checkbox"/>	Level IV	<input type="checkbox"/>
Deliverables	EDD	<input checked="" type="checkbox"/>	Adapt	<input type="checkbox"/>	Other				

[illegible]

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	T	BT	CH
FS01A	SL	7-14-72	1651	4.5	C	1	X	X	X
FS02A	SL	7-14-72	1057	4.5	C	1	X	X	X

402

880-16984 Chain of Custody



Sample Comments

880-16984 Chain of Custody

[illegible]

**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
1 <i>Matt Green</i>	<i>LF</i>	7/18/20	2		
3		18.07	4		
5			6		

## Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-16984-1

SDG Number: 32.816301, -103.741083

**Login Number: 16984****List Number: 1****Creator: Rodriguez, Leticia****List Source: Eurofins Midland**

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	





## APPENDIX C

Final C-141

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

State of New Mexico  
Energy Minerals and Natural  
Resources Department

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

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

Incident ID	
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # (assigned by OCD)
Contact mailing address	

### Location of Release Source

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# (if applicable)

Unit Letter	Section	Township	Range	County

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

### Nature and Volume of Release

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

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


Cause of Release

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

## Initial Response

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

<input type="checkbox"/> The source of the release has been stopped.	
<input type="checkbox"/> The impacted area has been secured to protect human health and the environment.	
<input type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
<input type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name _____	Title: _____
Signature: <u></u> _____	Date: _____
email: _____	Telephone: _____
<b><u>OCD Only</u></b>	
Received by: <u>Ramona Marcus</u>	Date: <u>1/19/2022</u>

# L48 Spill Volume Estimate Form

Received by OCD: 8/11/2022 9:40:39AM		Time & Number:	MCA 330 Well, Flowline Leak	Page 33 of 43	
		Asset Area:	Maljamar	NAPP2201136360	
		Release Discovery Date & Time:	1/4/2022 11:00		
		Release Type:	Oil Mixture		
		Provide any known details about the event:	Flowline leak coming from hammer union.		

## Spill Calculation - Subsurface Spill - Rectangle

Was the release on pad or off-pad?	See reference table below
Has it rained at least a half inch in the last 24 hours?	See reference table below

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Depth (in.)	Soil Spilled-Fluid Saturation	Estimated volume of each area (bbl.)	Total Estimated Volume of Spill (bbl.)	Percentage of Oil if Spilled Fluid is a Mixture	Total Estimated Volume of Spilled Oil (bbl.)	Total Estimated Volume of Spilled Liquid other than Oil (bbl.)
Rectangle A	10.0	15.0	5.00	15.32%	11.125	1.704	20.00%	0.341	1.363
Rectangle B	12.0	25.0	14.00	15.32%	62.300	9.544	20.00%	1.909	7.635
Rectangle C					0.000	0.000		0.000	0.000
Rectangle D					0.000	0.000		0.000	0.000
Rectangle E					0.000	0.000		0.000	0.000
Rectangle F					0.000	0.000		0.000	0.000
Rectangle G					0.000	0.000		0.000	0.000
Rectangle H					0.000	0.000		0.000	0.000
Rectangle I					0.000	0.000		0.000	0.000
Released to Imaging: 8/15/2022 11:27:21PAM					0.000	0.000		0.000	0.000
Total Volume Release:						11.249		2.250	8.999

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

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

CONDITIONS  
  
Action 73470

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 73470
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rmarcus	None	1/19/2022



Incident ID	NAPP2201136360
District RP	
Facility ID	
Application ID	

## Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>50-100</u> (feet bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

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

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

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Form C-141

Page 4

State of New Mexico  
Oil Conservation Division

Incident ID	NAPP2201136360
District RP	
Facility ID	
Application ID	

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

Printed Name: Thomas Haigood Title: HSE SpecialistSignature:  Date: 8/15/2022email: Thomas.Haigood@mavresources.com Telephone: 432-523-1807OCD Only

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

Form C-141

Page 6

State of New Mexico  
Oil Conservation Division

Incident ID	NAPP2201136360
District RP	
Facility ID	
Application ID	

## Closure

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

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

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

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Thomas Haigood Title: HSE Specialist  
Signature:  Date: 8/15/2022  
email: Thomas.Haigood@mavresources.com Telephone: 432-523-1807

**OCD Only**

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

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

Closure Approved by: Jennifer Nobui Date: 08/15/2022  
Printed Name: Jennifer Nobui Title: Environmental Specialist A



## APPENDIX D

### NMOCD Notifications

---

**From:** [Nobui, Jennifer, EMNRD](#)  
**To:** [Kalei Jennings](#)  
**Cc:** [Bratcher, Mike, EMNRD](#); [Hamlet, Robert, EMNRD](#); [Harimon, Jocelyn, EMNRD](#)  
**Subject:** FW: [EXTERNAL] COP- Sampling Notification (Week of 5/30/22-06/03/22)  
**Date:** Thursday, May 26, 2022 9:15:40 AM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)  
[image004.png](#)

---

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

Kalei

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

Thanks,  
Jennifer Nobui

---

**From:** Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>  
**Sent:** Thursday, May 26, 2022 8:06 AM  
**To:** Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@state.nm.us>  
**Subject:** Fw: [EXTERNAL] COP- Sampling Notification (Week of 5/30/22-06/03/22)

---

**From:** Kalei Jennings <[kjennings@ensolum.com](mailto:kjennings@ensolum.com)>  
**Sent:** Wednesday, May 25, 2022 4:27 PM  
**To:** Enviro, OCD, EMNRD <[OCD.Enviro@state.nm.us](mailto:OCD.Enviro@state.nm.us)>  
**Cc:** Beauvais, Charles R <[Charles.R.Beauvais@conocophillips.com](mailto:Charles.R.Beauvais@conocophillips.com)>; Kaushik, Rahul <[Rahul.Kaushik@conocophillips.com](mailto:Rahul.Kaushik@conocophillips.com)>  
**Subject:** [EXTERNAL] COP- Sampling Notification (Week of 5/30/22-06/03/22)

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

All,

COP plans to complete final sampling activities at the following sites the week of May 30, 2022.

Monday

- HOLIDAY

Tuesday



- VGEU 30-01 Flowline / NAPP2200643457

Wednesday

- VGEU 30-01 Flowline / NAPP2200643457

Thursday

- MCA 330 / NAPP2201136360

Friday

- MCA 330 / NAPP2201136360

Thank you,



**Kalei Jennings**

Senior Scientist

817-683-2503

**Ensolum, LLC**



**From:** [Nobui, Jennifer, EMNRD](#)  
**To:** [Kalei Jennings](#)  
**Cc:** [Bratcher, Mike, EMNRD](#); [Harimon, Jocelyn, EMNRD](#); [Hamlet, Robert, EMNRD](#)  
**Subject:** FW: [EXTERNAL] Sampling Notification (Week of 06/20/22-06/24/22)  
**Date:** Tuesday, June 21, 2022 12:04:02 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)  
[image004.png](#)

---

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

Kalei

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

Thanks

Jennifer Nobui

---

**From:** Enviro, OCD, EMNRD <[OCD.Enviro@state.nm.us](mailto:OCD.Enviro@state.nm.us)>  
**Sent:** Tuesday, June 21, 2022 8:34 AM  
**To:** Hamlet, Robert, EMNRD <[Robert.Hamlet@state.nm.us](mailto:Robert.Hamlet@state.nm.us)>; Nobui, Jennifer, EMNRD <[Jennifer.Nobui@state.nm.us](mailto:Jennifer.Nobui@state.nm.us)>; Harimon, Jocelyn, EMNRD <[Jocelyn.Harimon@state.nm.us](mailto:Jocelyn.Harimon@state.nm.us)>; Bratcher, Mike, EMNRD <[mike.bratcher@state.nm.us](mailto:mike.bratcher@state.nm.us)>  
**Subject:** Fw: [EXTERNAL] Sampling Notification (Week of 06/20/22-06/24/22)

---

**From:** Kalei Jennings <[kjennings@ensolum.com](mailto:kjennings@ensolum.com)>  
**Sent:** Tuesday, June 21, 2022 8:33 AM  
**To:** Enviro, OCD, EMNRD <[OCD.Enviro@state.nm.us](mailto:OCD.Enviro@state.nm.us)>  
**Cc:** Thomas Haigood <[Thomas.Haigood@mavresources.com](mailto:Thomas.Haigood@mavresources.com)>  
**Subject:** [EXTERNAL] Sampling Notification (Week of 06/20/22-06/24/22)

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

All,

Maverick Natural Resources plans to complete final sampling activities at the following sites the week of June 20, 2022.

Monday:

Tuesday:

Wednesday:

Thursday:

- MCA 330 / NAPP2201136360
- MCA 328 / NAPP2201143320

Friday:

- Hudson 001 / NAPP2201142906

Thank you,



**Kalei Jennings**

Senior Scientist

817-683-2503

**Ensolum, LLC**



**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
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Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 133066

CONDITIONS

Operator: Maverick Permian LLC 1111 Bagby Street Suite 1600 Houston, TX 77002	OGRID: 331199
	Action Number: 133066
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Approved.	8/15/2022