ENSOLUM

July 1, 2022

District 1
New Mexico Oil Conservation Division
1625 North French Drive
Hobbs, New Mexico 88240

Re: Closure Request
MCA 328
Incident Number NAPP2201143320
Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of Maverick Natural Resources, LLC (Maverick), has prepared this Closure Request to document site assessment, excavation, and soil sampling activities performed at the MCA 328 flow line release (Site). The purpose of the site assessment, excavation, and soil sampling activities was to address impacts to soil resulting from a release of crude oil and produced water within the pasture area at the Site. Based on the excavation activities and analytical results from the soil sampling events, Maverick is submitting this Closure Request, describing remediation that has occurred and requesting closure for Incident Number NAPP2201143320.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit N, Section 22, Township 17 South, Range 35 East, in Lea County, New Mexico (32.816111° N, 103.4475°W) and is associated with oil and gas exploration and production operations on New Mexico State Land.

On January 6, 2022, a casing vent malfunctioned due to freezing temperatures, and resulted in a flow line release of approximately 5.04 barrels (bbls) of produced water and 0.1 bbls of crude oil onto the surrounding pasture. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; however, there were no free-standing fluids to recover. 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 20, 2022. The release was assigned Incident Number NAPP2201143320.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized 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). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be between 50 feet and 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth

to groundwater data is New Mexico Office of the State Engineer (NMOSE) well RA-12521, located approximately 0.2 miles southwest of the Site. The groundwater well has a reported depth to groundwater of 92 feet bgs and a total depth of 105 feet bgs. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a freshwater pond, located approximately 2,532 feet southwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

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 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 requirement 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 AND LABORATORY ANALYTICAL RESULTS

On June 28, 2022, Ensolum personnel were at the Site to oversee site assessment and excavation activities based on information provided on the Form C-141 and visible surface staining observed in the pasture release area. Four lateral delineation soil samples (SS01 through SS04) were collected around the visible release extent at a depth of 0.5 feet bgs to confirm the lateral extent of the release.

Stained soil was excavated from the release area as indicated by visible staining and field screening activities. Excavation activities were performed via hand shoveling and back-hoe. To direct excavation activities, soil was field screened for volatile aromatic hydrocarbons utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The excavation was completed to depths ranging from 1-foot to 3 feet bgs. Photographic documentation is included in Appendix B.

Following removal of stained soil, 5-point composite soil samples were collected every 200 square feet from the floor and sidewalls of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS03 were collected from the floor of the excavation at depths ranging from 1-foot to 3 feet bgs. Due to the shallow 1-foot depth of the northern portion of the excavation, soil from the sidewalls was incorporated into the floor samples. Composite soil sample SW01 was collected from the sidewalls of the southern portion of the excavation from depths ranging from the ground surface to 3 feet bgs. The release extent, delineation soil sample locations, and excavation soil samples locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

The delineation and excavation soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported 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 measured approximately 500 square feet in aerial extent. A total of approximately 40 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Disposal Facility in Hobbs, New Mexico. After completion of confirmation sampling, the excavation was secured with fencing.

Laboratory analytical results for excavation floor samples FS01 through FS03, excavation sidewall sample SW01, and lateral delineation soil samples SS01 through SS04 indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and compliant with the reclamation requirements. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix C.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the January 6, 2022, release of produced water and crude oil. Laboratory analytical results for the excavation soil samples indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and compliant with the reclamation requirements. Additionally, the release was laterally delineated to the most stringent Table 1 Closure Criteria. Based on the soil sample analytical results, no further remediation was required. Maverick will backfill the excavation with material purchased locally and recontoured the Site to match pre-existing site conditions. The disturbed pasture area will be re-seeded with an approved BLM seed mixture.

Excavation of impacted soil has mitigated impacts at this Site. Depth to groundwater has been estimated to be greater than 50 feet bgs and no sensitive receptors were identified near the release extent. Maverick believes these remedial actions are protective of human health, the environment, and groundwater and respectfully requests closure for Incident Number NAPP2201143320. The Final C-141 is included in Appendix D.

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

Sincerely,
Ensolum, LLC

Kalei Jennings
Senior Scientist

Dan Moir
Senior Managing Scientist

cc: Thomas Haigood, Maverick Natural Resources
New Mexico State Land Office

Appendices:

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

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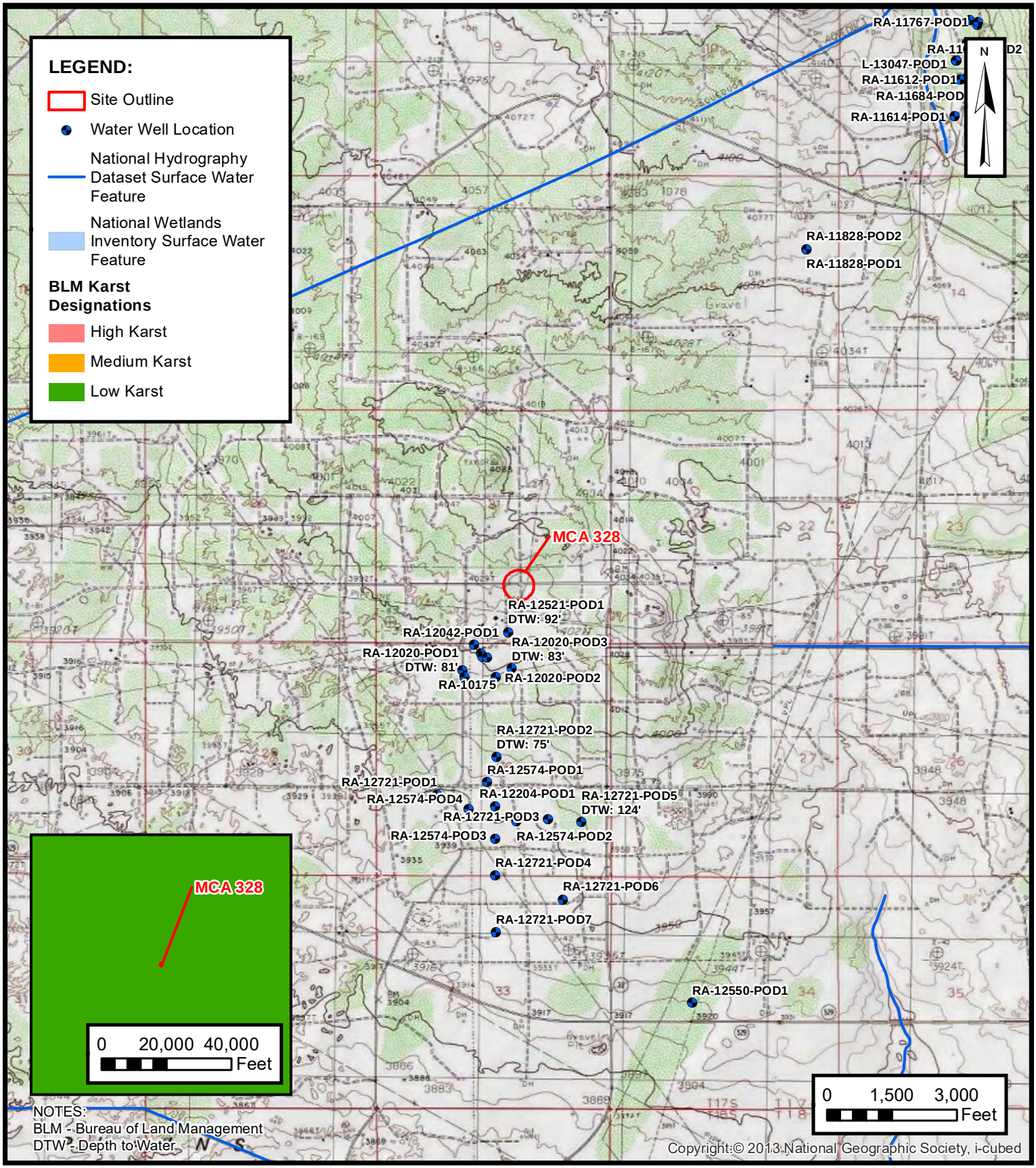
FIGURES



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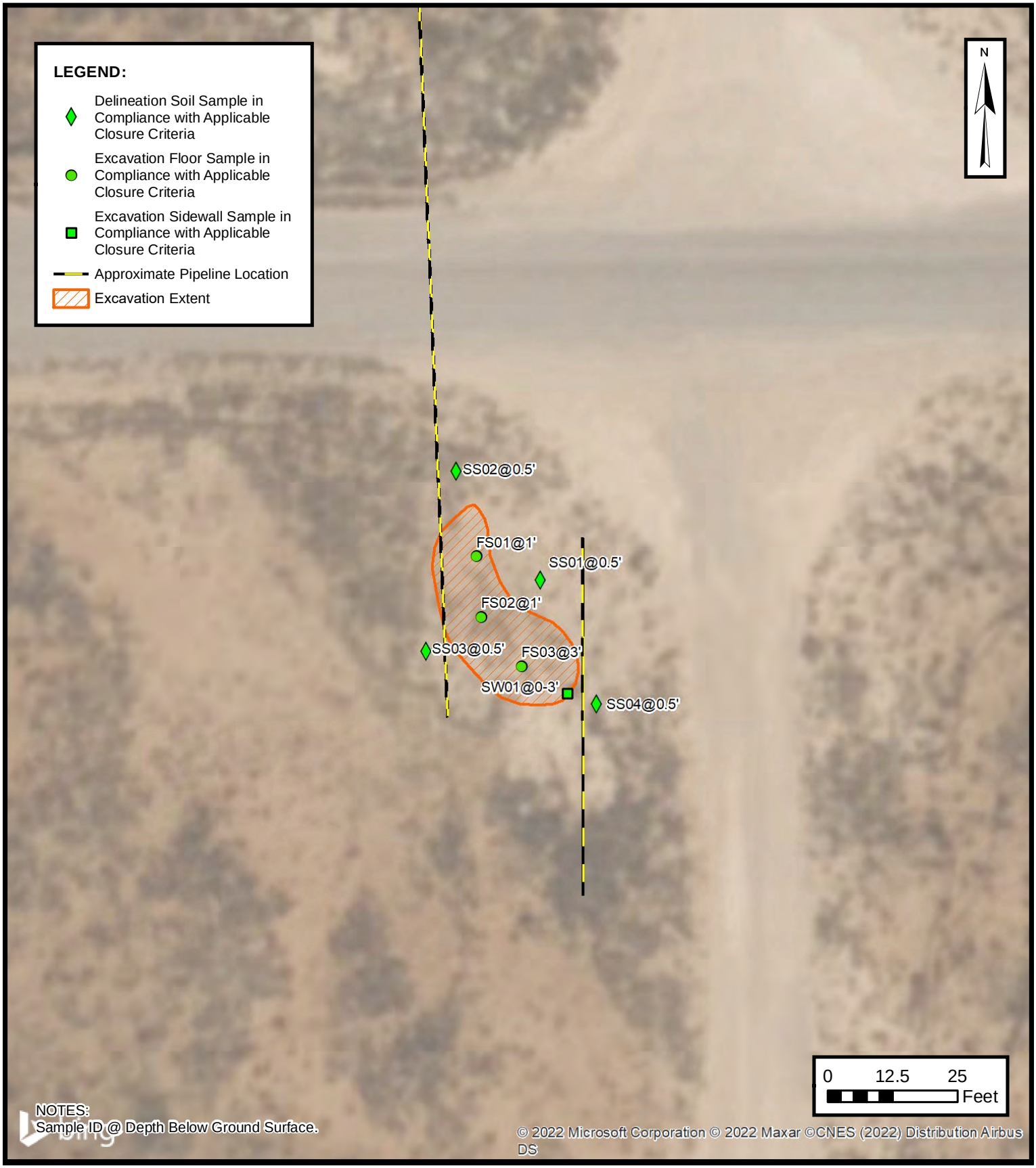
Environmental & Hydrogeologic Consultants

SITE RECEPTOR MAP

MAVERICK NATURAL RESOURCES, LLC
MCA 328
NAPP2201143320
Unit N, Sec 23, T17S, R32E
Lea County, New Mexico

FIGURE
1



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EXCAVATION AND DELINEATION SOIL SAMPLE LOCATIONS

MAVERICK NATURAL RESOURCES, LLC
MCA 328
NAPP2201143320
Unit N, Sec 23, T17S, R32E
Lea County, New Mexico

FIGURE
2

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
MCA 328
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	06/28/2022	0.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	10.0*
SS02	06/28/2022	0.5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	14.7*
SS03	06/28/2022	0.5	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	11.8*
SS04	06/28/2022	0.5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	16.9*
Excavation Floor Soil Samples										
FS01	06/28/2022	1	<0.00200	<0.00401	<50.0	71.1	<50.0	71.1	71.1	21.8*
FS02	06/28/2022	1	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	554*
FS03	06/28/2022	3	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	15.7*
Excavation Sidewall Soil Samples										
SW01	06/28/2022	0-3	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	199*

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 1 Closure Criteria or reclamation standard where applicable.
GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
"* indicates sample was collected in area to be reclaimed after remediation is complete; reclamation standard for chloride in the top 4 feet is 600 mg/kg"□

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APPENDIX A

Referenced Well Records

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: RA 12521 **Subbasin:** RA **Cross Reference:** -

Primary Purpose: MON MONITORING WELL

Primary Status: PMT PERMIT

Total Acres: **Subfile:** - **Header:** -

Total Diversion: 0 **Cause/Case:** -

Owner: PHILLIPS 66

Contact: BECKY HESSLEN

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	609310	EXPL	2017-06-30	PMT	LOG	RA 12521 POD1	T	0	0	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
RA 12521 POD1		Shallow	3	3	4	21	17S	32E	615127	3631271	MW-24

New Mexico Office of the State Engineer
Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Twn	Rng	X	Y
	RA 12521 POD1	3	3	4	21	17S	32E	615127	3631271

Driller License: 1456 **Driller Company:** WHITE DRILLING COMPANY

Driller Name: WHITE, JOHN W

Drill Start Date: 07/21/2017 **Drill Finish Date:** 07/26/2017 **Plug Date:**

Log File Date: 08/22/2017 **PCW Rcv Date:** **Source:** Shallow

Pump Type: **Pipe Discharge Size:** **Estimated Yield:**

Casing Size: 2.00 **Depth Well:** 105 feet **Depth Water:** 92 feet

Water Bearing Stratifications:	Top	Bottom	Description
	85	101	Sandstone/Gravel/Conglomerate
	101	105	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	75	105

National Water Information System: Web Interface

USGS Water Resources (Cooperator Access)

Data Category: Site Information GO | Geographic Area: United States GO

Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Full News

USGS 324954103420301 17S.33E.18.322332

Available data for this site SUMMARY OF ALL AVAILABLE DATA GO

Well Site

DESCRIPTION:
Latitude 32°49'59", Longitude 103°42'15" NAD27
Lea County, New Mexico , Hydrologic Unit 13060011
Well depth: 220 feet
Land surface altitude: 4,224.00 feet above NGVD29.
Well completed in "High Plains aquifer" (N100HGHPLN) national aquifer.
Well completed in "Ogallala Formation" (121OGLL) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1961-03-13	1986-03-26	4
Revisions	Unavailable (site:0) (timeseries:0)		

OPERATION:

Record for this site is maintained by the USGS New Mexico Water Science Center
Email questions about this site to New Mexico Water Science Center Water-Data Inquiries

---

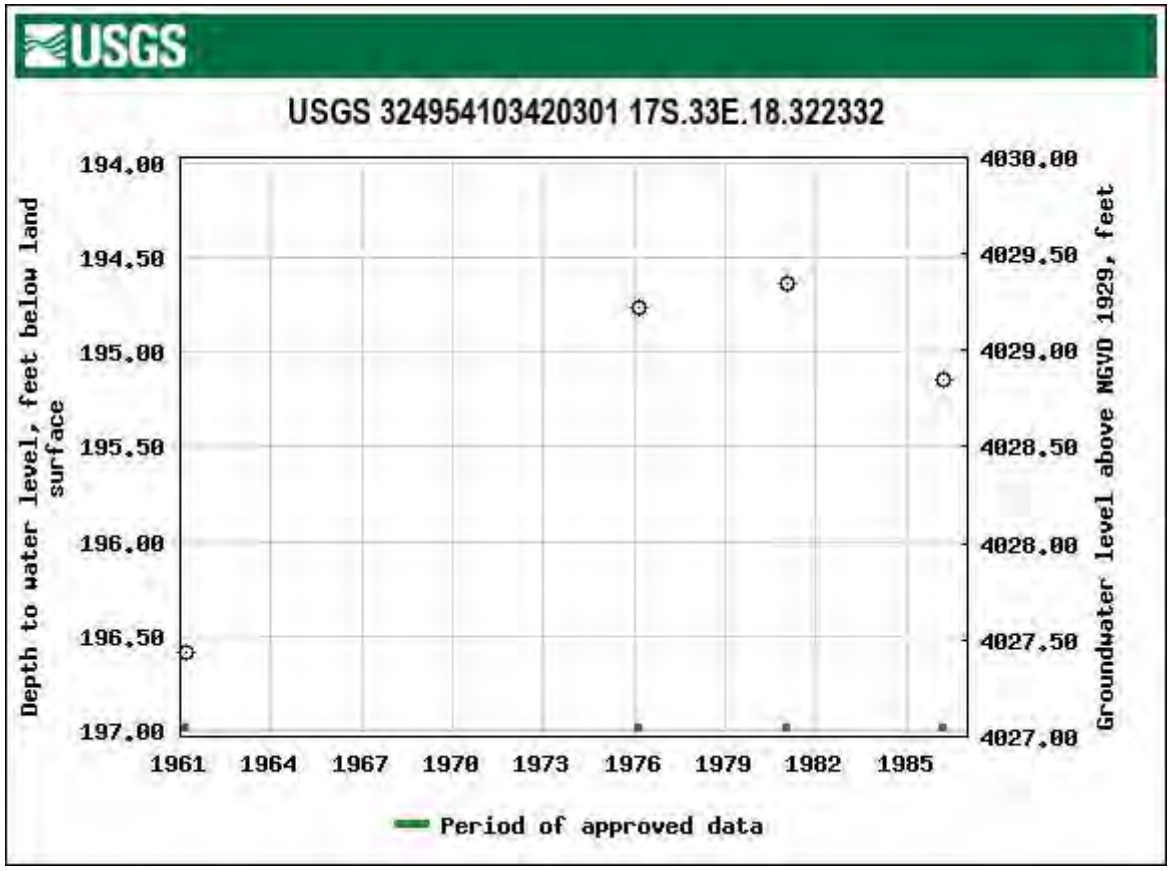
Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Accessibility FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

Title: NWIS Site Information for USA: Site Inventory
URL: https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=324954103420301

Page Contact Information: New Mexico Water Data Support Team
Page Last Modified: 2022-02-23 14:15:33 EST
0.26 0.25 caww02


USGS
USGS 324954103420301 17S.33E.18.322332
Depth to water level, feet below land surface
194.00
194.50
195.00
195.50
196.00
196.50
197.00
Groundwater level above NGVD 1929, feet
4030.00
4029.50
4029.00
4028.50
4028.00
4027.50
4027.00
1961
1964
1967
1970
1973
1976
1979
1982
1985
Period of approved data

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APPENDIX B

Photographic Log

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Photographic Log
Maverick Natural Resources
MCA 328
Incident Number NAPP2201143320

Photograph 1
Date: June 28, 2022
Description: View of release area prior to excavation activities.

Photograph 2
Date: June 28, 2022
Description: View of release area prior to excavation activities.

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Photographic Log
Maverick Natural Resources
MCA 328
Incident Number NAPP2201143320

Photograph 1
Date: June 28, 2022
Description: View of excavation activities.

Photograph 2
Date: June 28, 2022
Description: View of excavation activities.

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APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2482-1
Laboratory Sample Delivery Group: 0302057003
Client Project/Site: MCA 328

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Kalei Jennings

JKramer

Authorized for release by:
6/30/2022 3:50:51 PM

Jessica Kramer, Project Manager
(432)704-5440
Jessica.Kramer@et.eurofinsus.com

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 328

Laboratory Job ID: 890-2482-1
SDG: 0302057003

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: MCA 328

Job ID: 890-2482-1
SDG: 0302057003

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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 328

Job ID: 890-2482-1
SDG: 0302057003

Job ID: 890-2482-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2482-1

Receipt
The samples were received on 6/28/2022 4:34 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 29.0°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-28678 and analytical batch 880-28710 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample 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.

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

HPLC/IC
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 328

Job ID: 890-2482-1
SDG: 0302057003

Client Sample ID: FS01

Lab Sample ID: 890-2482-1
Matrix: Solid
Date Collected: 06/28/22 12:10
Date Received: 06/28/22 16:34
Sample Depth: 1'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/29/22 15:01	06/30/22 12:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/29/22 15:01	06/30/22 12:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/29/22 15:01	06/30/22 12:51	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		06/29/22 15:01	06/30/22 12:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/29/22 15:01	06/30/22 12:51	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		06/29/22 15:01	06/30/22 12:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*06/29/22 15:01*	*06/30/22 12:51*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*06/29/22 15:01*	*06/30/22 12:51*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			06/30/22 15:11	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**71.1**		50.0		mg/Kg			06/30/22 15:56	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	<50.0	U	50.0		mg/Kg		06/30/22 11:00	06/30/22 15:01	1
Diesel Range Organics (Over C10-C28)	**71.1**		50.0		mg/Kg		06/30/22 11:00	06/30/22 15:01	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/30/22 11:00	06/30/22 15:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*06/30/22 11:00*	*06/30/22 15:01*	*1*
o-Terphenyl	*98*		*70 - 130*	*06/30/22 11:00*	*06/30/22 15:01*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**21.8**		4.97		mg/Kg			06/30/22 14:58	1

Client Sample ID: FS02

Lab Sample ID: 890-2482-2
Matrix: Solid
Date Collected: 06/28/22 14:00
Date Received: 06/28/22 16:34
Sample Depth: 1'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		06/29/22 15:01	06/30/22 13:11	1
Toluene	<0.00202	U	0.00202		mg/Kg		06/29/22 15:01	06/30/22 13:11	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		06/29/22 15:01	06/30/22 13:11	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		06/29/22 15:01	06/30/22 13:11	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		06/29/22 15:01	06/30/22 13:11	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		06/29/22 15:01	06/30/22 13:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*06/29/22 15:01*	*06/30/22 13:11*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: MCA 328

Job ID: 890-2482-1
SDG: 0302057003

Client Sample ID: FS02

Date Collected: 06/28/22 14:00
Date Received: 06/28/22 16:34
Sample Depth: 1'

Lab Sample ID: 890-2482-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*06/29/22 15:01*	*06/30/22 13:11*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			06/30/22 15:11	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	mg/Kg			06/30/22 15:56	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	mg/Kg		06/30/22 11:00	06/30/22 15:23	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		06/30/22 11:00	06/30/22 15:23	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		06/30/22 11:00	06/30/22 15:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*06/30/22 11:00*	*06/30/22 15:23*	*1*
o-Terphenyl	*99*		*70 - 130*	*06/30/22 11:00*	*06/30/22 15:23*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**554**		4.99	mg/Kg			06/30/22 15:25	1

Client Sample ID: SW01

Date Collected: 06/28/22 14:45
Date Received: 06/28/22 16:34
Sample Depth: 0-3'

Lab Sample ID: 890-2482-3

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		06/29/22 15:01	06/30/22 13:32	1
Toluene	<0.00200	U	0.00200	mg/Kg		06/29/22 15:01	06/30/22 13:32	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/29/22 15:01	06/30/22 13:32	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		06/29/22 15:01	06/30/22 13:32	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/29/22 15:01	06/30/22 13:32	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		06/29/22 15:01	06/30/22 13:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*06/29/22 15:01*	*06/30/22 13:32*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*06/29/22 15:01*	*06/30/22 13:32*	*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			06/30/22 15:11	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	mg/Kg			06/30/22 15:56	1

Client Sample Results

Client: Ensolum
Project/Site: MCA 328

Job ID: 890-2482-1
SDG: 0302057003

Client Sample ID: SW01

Date Collected: 06/28/22 14:45
Date Received: 06/28/22 16:34
Sample Depth: 0-3'

Lab Sample ID: 890-2482-3

Matrix: Solid

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		mg/Kg		06/30/22 11:00	06/30/22 15:45	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		06/30/22 11:00	06/30/22 15:45	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/30/22 11:00	06/30/22 15:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*06/30/22 11:00*	*06/30/22 15:45*	*1*
o-Terphenyl	*93*		*70 - 130*	*06/30/22 11:00*	*06/30/22 15:45*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**199**		4.97		mg/Kg			06/30/22 15:35	1

Surrogate Summary

Client: Ensolum
Project/Site: MCA 328

Job ID: 890-2482-1
SDG: 0302057003

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-16436-A-31-C MS	Matrix Spike	101	99
880-16436-A-31-D MSD	Matrix Spike Duplicate	109	91
890-2482-1	FS01	105	100
890-2482-2	FS02	100	96
890-2482-3	SW01	100	100
LCS 880-28678/1-A	Lab Control Sample	99	97
LCSD 880-28678/2-A	Lab Control Sample Dup	99	95
MB 880-28678/5-A	Method Blank	101	98

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)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-16373-A-21-C MS	Matrix Spike	100	96
880-16373-A-21-D MSD	Matrix Spike Duplicate	99	99
890-2482-1	FS01	89	98
890-2482-2	FS02	89	99
890-2482-3	SW01	87	93
LCS 880-28614/2-A	Lab Control Sample	79	75
LCSD 880-28614/3-A	Lab Control Sample Dup	82	83
MB 880-28614/1-A	Method Blank	111	125

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: MCA 328

Job ID: 890-2482-1
SDG: 0302057003

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-28678/5-A
Matrix: Solid
Analysis Batch: 28710

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 28678

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/29/22 15:01	06/30/22 12:01	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/29/22 15:01	06/30/22 12:01	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/29/22 15:01	06/30/22 12:01	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/29/22 15:01	06/30/22 12:01	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/29/22 15:01	06/30/22 12:01	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/29/22 15:01	06/30/22 12:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*06/29/22 15:01*	*06/30/22 12:01*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*06/29/22 15:01*	*06/30/22 12:01*	*1*

Lab Sample ID: LCS 880-28678/1-A
Matrix: Solid
Analysis Batch: 28710

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 28678

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08532		mg/Kg		85	70 - 130		
Toluene			0.100	0.09806		mg/Kg		98	70 - 130		
Ethylbenzene			0.100	0.08863		mg/Kg		89	70 - 130		
m-Xylene & p-Xylene			0.200	0.1788		mg/Kg		89	70 - 130		
o-Xylene			0.100	0.1012		mg/Kg		101	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 880-28678/2-A
Matrix: Solid
Analysis Batch: 28710

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 28678

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08687		mg/Kg		87	70 - 130	2	35
Toluene			0.100	0.09372		mg/Kg		94	70 - 130	5	35
Ethylbenzene			0.100	0.08625		mg/Kg		86	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1738		mg/Kg		87	70 - 130	3	35
o-Xylene			0.100	0.09882		mg/Kg		99	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: 880-16436-A-31-C MS
Matrix: Solid
Analysis Batch: 28710

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 28678

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U F1	0.100	0.07794		mg/Kg		78	70 - 130		
Toluene	<0.00201	U	0.100	0.08319		mg/Kg		83	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: MCA 328

Job ID: 890-2482-1
SDG: 0302057003

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

Lab Sample ID: 880-16436-A-31-C MS
Matrix: Solid
Analysis Batch: 28710

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 28678

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U F1	0.100	0.07129		mg/Kg		71	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.1432		mg/Kg		71	70 - 130
o-Xylene	<0.00201	U	0.100	0.08106		mg/Kg		81	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 880-16436-A-31-D MSD
Matrix: Solid
Analysis Batch: 28710

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 28678

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F1	0.0990	0.06358	F1	mg/Kg		64	70 - 130	20	35
Toluene	<0.00201	U	0.0990	0.07789		mg/Kg		79	70 - 130	7	35
Ethylbenzene	<0.00201	U F1	0.0990	0.06727	F1	mg/Kg		68	70 - 130	6	35
m-Xylene & p-Xylene	<0.00402	U F1	0.198	0.1373	F1	mg/Kg		69	70 - 130	4	35
o-Xylene	<0.00201	U	0.0990	0.07979		mg/Kg		81	70 - 130	2	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*

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

Lab Sample ID: MB 880-28614/1-A
Matrix: Solid
Analysis Batch: 28713

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 28614

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/29/22 08:55	06/30/22 12:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/29/22 08:55	06/30/22 12:30	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/29/22 08:55	06/30/22 12:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*06/29/22 08:55*	*06/30/22 12:30*	*1*
o-Terphenyl	*125*		*70 - 130*	*06/29/22 08:55*	*06/30/22 12:30*	*1*

Lab Sample ID: LCS 880-28614/2-A
Matrix: Solid
Analysis Batch: 28713

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 28614

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	1015		mg/Kg		102	70 - 130
Diesel Range Organics (Over C10-C28)			1000	766.3		mg/Kg		77	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: MCA 328

Job ID: 890-2482-1
SDG: 0302057003

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

Lab Sample ID: LCS 880-28614/2-A
Matrix: Solid
Analysis Batch: 28713

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 28614

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	79		70 - 130
o-Terphenyl	75		70 - 130

Lab Sample ID: LCSD 880-28614/3-A
Matrix: Solid
Analysis Batch: 28713

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 28614

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1192		mg/Kg		119	70 - 130	16	20
Diesel Range Organics (Over C10-C28)			1000	896.8		mg/Kg		90	70 - 130	16	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	82		70 - 130
o-Terphenyl	83		70 - 130

Lab Sample ID: 880-16373-A-21-C MS
Matrix: Solid
Analysis Batch: 28713

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 28614

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	1186		mg/Kg		119	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	996	1095		mg/Kg		110	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	96		70 - 130

Lab Sample ID: 880-16373-A-21-D MSD
Matrix: Solid
Analysis Batch: 28713

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 28614

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	<49.9	U	996	1209		mg/Kg		121	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U	996	1121		mg/Kg		113	70 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	99		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: MCA 328

Job ID: 890-2482-1
SDG: 0302057003

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-28711/1-A
Matrix: Solid
Analysis Batch: 28753

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			06/30/22 14:30	1

Lab Sample ID: LCS 880-28711/2-A
Matrix: Solid
Analysis Batch: 28753

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	257.4		mg/Kg		103	90 - 110		

Lab Sample ID: LCSD 880-28711/3-A
Matrix: Solid
Analysis Batch: 28753

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	263.2		mg/Kg		105	90 - 110	2	20

Lab Sample ID: 890-2482-1 MS
Matrix: Solid
Analysis Batch: 28753

Client Sample ID: FS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	21.8		249	269.3		mg/Kg		100	90 - 110		

Lab Sample ID: 890-2482-1 MSD
Matrix: Solid
Analysis Batch: 28753

Client Sample ID: FS01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	21.8		249	270.2		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: MCA 328

Job ID: 890-2482-1
SDG: 0302057003

GC VOA

Prep Batch: 28678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2482-1	FS01	Total/NA	Solid	5035	
890-2482-2	FS02	Total/NA	Solid	5035	
890-2482-3	SW01	Total/NA	Solid	5035	
MB 880-28678/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-28678/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-28678/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-16436-A-31-C MS	Matrix Spike	Total/NA	Solid	5035	
880-16436-A-31-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 28710

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2482-1	FS01	Total/NA	Solid	8021B	28678
890-2482-2	FS02	Total/NA	Solid	8021B	28678
890-2482-3	SW01	Total/NA	Solid	8021B	28678
MB 880-28678/5-A	Method Blank	Total/NA	Solid	8021B	28678
LCS 880-28678/1-A	Lab Control Sample	Total/NA	Solid	8021B	28678
LCSD 880-28678/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	28678
880-16436-A-31-C MS	Matrix Spike	Total/NA	Solid	8021B	28678
880-16436-A-31-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	28678

Analysis Batch: 28764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2482-1	FS01	Total/NA	Solid	Total BTEX	
890-2482-2	FS02	Total/NA	Solid	Total BTEX	
890-2482-3	SW01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 28614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2482-1	FS01	Total/NA	Solid	8015NM Prep	
890-2482-2	FS02	Total/NA	Solid	8015NM Prep	
890-2482-3	SW01	Total/NA	Solid	8015NM Prep	
MB 880-28614/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-28614/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-28614/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-16373-A-21-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-16373-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 28713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2482-1	FS01	Total/NA	Solid	8015B NM	28614
890-2482-2	FS02	Total/NA	Solid	8015B NM	28614
890-2482-3	SW01	Total/NA	Solid	8015B NM	28614
MB 880-28614/1-A	Method Blank	Total/NA	Solid	8015B NM	28614
LCS 880-28614/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	28614
LCSD 880-28614/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	28614
880-16373-A-21-C MS	Matrix Spike	Total/NA	Solid	8015B NM	28614
880-16373-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	28614

QC Association Summary

Client: Ensolum
Project/Site: MCA 328

Job ID: 890-2482-1
SDG: 0302057003

GC Semi VOA

Analysis Batch: 28773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2482-1	FS01	Total/NA	Solid	8015 NM	
890-2482-2	FS02	Total/NA	Solid	8015 NM	
890-2482-3	SW01	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 28711

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2482-1	FS01	Soluble	Solid	DI Leach	
890-2482-2	FS02	Soluble	Solid	DI Leach	
890-2482-3	SW01	Soluble	Solid	DI Leach	
MB 880-28711/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-28711/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-28711/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2482-1 MS	FS01	Soluble	Solid	DI Leach	
890-2482-1 MSD	FS01	Soluble	Solid	DI Leach	

Analysis Batch: 28753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2482-1	FS01	Soluble	Solid	300.0	28711
890-2482-2	FS02	Soluble	Solid	300.0	28711
890-2482-3	SW01	Soluble	Solid	300.0	28711
MB 880-28711/1-A	Method Blank	Soluble	Solid	300.0	28711
LCS 880-28711/2-A	Lab Control Sample	Soluble	Solid	300.0	28711
LCSD 880-28711/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	28711
890-2482-1 MS	FS01	Soluble	Solid	300.0	28711
890-2482-1 MSD	FS01	Soluble	Solid	300.0	28711

Lab Chronicle

Client: Ensolum
Project/Site: MCA 328

Job ID: 890-2482-1
SDG: 0302057003

Client Sample ID: FS01

Date Collected: 06/28/22 12:10
Date Received: 06/28/22 16:34

Lab Sample ID: 890-2482-1

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			4.99 g	5 mL	28678	06/29/22 15:01	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	28710	06/30/22 12:51	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			28764	06/30/22 15:11	SM	XEN MID
Total/NA	Analysis	8015 NM		1			28773	06/30/22 15:56	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	28614	06/30/22 11:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			28713	06/30/22 15:01	SM	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	28711	06/30/22 08:22	CH	XEN MID
Soluble	Analysis	300.0		1			28753	06/30/22 14:58	CH	XEN MID

Client Sample ID: FS02

Date Collected: 06/28/22 14:00
Date Received: 06/28/22 16:34

Lab Sample ID: 890-2482-2

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			4.95 g	5 mL	28678	06/29/22 15:01	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	28710	06/30/22 13:11	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			28764	06/30/22 15:11	SM	XEN MID
Total/NA	Analysis	8015 NM		1			28773	06/30/22 15:56	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	28614	06/30/22 11:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			28713	06/30/22 15:23	SM	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	28711	06/30/22 08:22	CH	XEN MID
Soluble	Analysis	300.0		1			28753	06/30/22 15:25	CH	XEN MID

Client Sample ID: SW01

Date Collected: 06/28/22 14:45
Date Received: 06/28/22 16:34

Lab Sample ID: 890-2482-3

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			5.01 g	5 mL	28678	06/29/22 15:01	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	28710	06/30/22 13:32	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			28764	06/30/22 15:11	SM	XEN MID
Total/NA	Analysis	8015 NM		1			28773	06/30/22 15:56	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	28614	06/30/22 11:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			28713	06/30/22 15:45	SM	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	28711	06/30/22 08:22	CH	XEN MID
Soluble	Analysis	300.0		1			28753	06/30/22 15:35	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 328

Job ID: 890-2482-1
SDG: 0302057003

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

Method Summary

Client: Ensolum
Project/Site: MCA 328

Job ID: 890-2482-1
SDG: 0302057003

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

Sample Summary

Client: Ensolum
Project/Site: MCA 328

Job ID: 890-2482-1
SDG: 0302057003

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2482-1	FS01	Solid	06/28/22 12:10	06/28/22 16:34	1'
890-2482-2	FS02	Solid	06/28/22 14:00	06/28/22 16:34	1'
890-2482-3	SW01	Solid	06/28/22 14:45	06/28/22 16:34	1'

Chain of Custody

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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

Work Order No: _____

CIP - cooling in process

www.xenco.com Page 1 of 1

Project Manager:	Kalei Jennings	Bill to: (if different)	
Company Name:	Ensolum	Company Name:	
Address:	3122 Nat. Parks Hwy	Address:	
City, State ZIP:	Carlsbad NM 88220	City, State ZIP:	
Phone:	817 683 2503	Email:	kjennings@ensolum.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	MCA 328	Turn Around	
Project Number:	03020057003	☐ Routine ☑ Rush	
Project Location:	Eddy County, NM	Due Date:	24 hour
Sampler's Name:	Liz Creel	TAT starts the day received by the lab, if received by 4:30pm	
PO #:	NA		

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	Yes (No)
Samples Received Intact:	(Yes) No	Thermometer ID:	TNM OD7
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	30.2
Total Containers:		Corrected Temperature:	29.0

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	BTEX	TPH	Chloride
FS01	S	6/28/22	1210	1'	C	1	X	X	X
FS02			1400						
FS03			1500						
SW01			1445						

Liz Creel 6/28/22

890-2482 Chain of Custody

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

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_2 Na Sr Tl 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 Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Amanda Stuf	6/28/22 1634	4		
3			6		
5					

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2482-1
SDG Number: 0302057003

Login Number: 2482
List Number: 1
Creator: Stutzman, Amanda

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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-2482-1
SDG Number: 0302057003

Login Number: 2482
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 06/30/22 12:06 PM

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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 880-16415-1
Laboratory Sample Delivery Group: 03D2057003
Client Project/Site: MCA 328

For:
Ensolum
705 W. Wadley
Suite 210
Midland, Texas 79701

Attn: Kalei Jennings

JKramer

Authorized for release by:
6/30/2022 2:53:21 PM

Jessica Kramer, Project Manager
(432)704-5440
Jessica.Kramer@et.eurofinsus.com

Client: Ensolum
Project/Site: MCA 328

Laboratory Job ID: 880-16415-1
SDG: 03D2057003

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: MCA 328

Job ID: 880-16415-1
SDG: 03D2057003

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 328

Job ID: 880-16415-1
SDG: 03D2057003

Job ID: 880-16415-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-16415-1

Receipt
The samples were received on 6/29/2022 9:18 AM. 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
Method 8021B: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-28624 and analytical batch 880-28610 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample 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.

GC Semi VOA
Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-28627 and analytical batch 880-28605 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

HPLC/IC
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 328

Job ID: 880-16415-1
SDG: 03D2057003

Client Sample ID: FS03

Lab Sample ID: 880-16415-1
Matrix: Solid
Date Collected: 06/28/22 15:50
Date Received: 06/29/22 09:18
Sample Depth: 3'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		06/29/22 12:00	06/30/22 06:06	1
Toluene	<0.00202	U	0.00202		mg/Kg		06/29/22 12:00	06/30/22 06:06	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		06/29/22 12:00	06/30/22 06:06	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		06/29/22 12:00	06/30/22 06:06	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		06/29/22 12:00	06/30/22 06:06	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		06/29/22 12:00	06/30/22 06:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*06/29/22 12:00*	*06/30/22 06:06*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*06/29/22 12:00*	*06/30/22 06:06*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			06/30/22 15:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			06/30/22 09:27	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	<50.0	U	50.0		mg/Kg		06/29/22 09:57	06/29/22 13:18	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/29/22 09:57	06/29/22 13:18	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/29/22 09:57	06/29/22 13:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*06/29/22 09:57*	*06/29/22 13:18*	*1*
o-Terphenyl	*106*		*70 - 130*	*06/29/22 09:57*	*06/29/22 13:18*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**15.7**		5.00		mg/Kg			06/29/22 20:44	1

Client Sample ID: SS01

Lab Sample ID: 880-16415-2
Matrix: Solid
Date Collected: 06/28/22 16:00
Date Received: 06/29/22 09:18
Sample Depth: 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/29/22 12:00	06/30/22 06:27	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/29/22 12:00	06/30/22 06:27	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/29/22 12:00	06/30/22 06:27	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		06/29/22 12:00	06/30/22 06:27	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/29/22 12:00	06/30/22 06:27	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		06/29/22 12:00	06/30/22 06:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*06/29/22 12:00*	*06/30/22 06:27*	*1*

Eurofins Midland

Client Sample Results

Client: Ensolum
Project/Site: MCA 328

Job ID: 880-16415-1
SDG: 03D2057003

Client Sample ID: SS01

Lab Sample ID: 880-16415-2
Matrix: Solid
Date Collected: 06/28/22 16:00
Date Received: 06/29/22 09:18
Sample Depth: 0.5'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*06/29/22 12:00*	*06/30/22 06:27*	*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			06/30/22 15:24	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	mg/Kg			06/30/22 09:27	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	mg/Kg		06/29/22 09:57	06/29/22 13:40	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		06/29/22 09:57	06/29/22 13:40	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		06/29/22 09:57	06/29/22 13:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*94*		*70 - 130*	*06/29/22 09:57*	*06/29/22 13:40*	*1*
o-Terphenyl	*100*		*70 - 130*	*06/29/22 09:57*	*06/29/22 13:40*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.0**		4.98	mg/Kg			06/29/22 21:08	1

Client Sample ID: SS02

Lab Sample ID: 880-16415-3
Matrix: Solid
Date Collected: 06/28/22 16:03
Date Received: 06/29/22 09:18
Sample Depth: 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		06/29/22 12:00	06/30/22 06:47	1
Toluene	<0.00199	U	0.00199	mg/Kg		06/29/22 12:00	06/30/22 06:47	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		06/29/22 12:00	06/30/22 06:47	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		06/29/22 12:00	06/30/22 06:47	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		06/29/22 12:00	06/30/22 06:47	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		06/29/22 12:00	06/30/22 06:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*06/29/22 12:00*	*06/30/22 06:47*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*06/29/22 12:00*	*06/30/22 06:47*	*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			06/30/22 15:24	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	mg/Kg			06/30/22 09:27	1

Client Sample Results

Client: Ensolum
Project/Site: MCA 328

Job ID: 880-16415-1
SDG: 03D2057003

Client Sample ID: SS02

Lab Sample ID: 880-16415-3

Date Collected: 06/28/22 16:03
Matrix: Solid
Date Received: 06/29/22 09:18
Sample Depth: 0.5'

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		mg/Kg		06/29/22 09:57	06/29/22 14:01	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		06/29/22 09:57	06/29/22 14:01	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/29/22 09:57	06/29/22 14:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*06/29/22 09:57*	*06/29/22 14:01*	*1*
o-Terphenyl	*102*		*70 - 130*	*06/29/22 09:57*	*06/29/22 14:01*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**14.7**		4.98		mg/Kg			06/29/22 21:16	1

Client Sample ID: SS03

Lab Sample ID: 880-16415-4

Date Collected: 06/28/22 16:05
Matrix: Solid
Date Received: 06/29/22 09:18
Sample Depth: 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/29/22 12:00	06/30/22 07:07	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/29/22 12:00	06/30/22 07:07	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/29/22 12:00	06/30/22 07:07	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		06/29/22 12:00	06/30/22 07:07	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/29/22 12:00	06/30/22 07:07	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		06/29/22 12:00	06/30/22 07:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*06/29/22 12:00*	*06/30/22 07:07*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*06/29/22 12:00*	*06/30/22 07:07*	*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			06/30/22 15:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			06/30/22 09:27	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	<50.0	U	50.0		mg/Kg		06/29/22 09:57	06/29/22 14:23	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/29/22 09:57	06/29/22 14:23	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/29/22 09:57	06/29/22 14:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*06/29/22 09:57*	*06/29/22 14:23*	*1*
o-Terphenyl	*98*		*70 - 130*	*06/29/22 09:57*	*06/29/22 14:23*	*1*

Client Sample Results

Client: Ensolum
Project/Site: MCA 328

Job ID: 880-16415-1
SDG: 03D2057003

Client Sample ID: SS03

Lab Sample ID: 880-16415-4
Matrix: Solid
Date Collected: 06/28/22 16:05
Date Received: 06/29/22 09:18
Sample Depth: 0.5'

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.8		4.98		mg/Kg			06/29/22 21:23	1

Client Sample ID: SS04

Lab Sample ID: 880-16415-5
Matrix: Solid
Date Collected: 06/28/22 16:07
Date Received: 06/29/22 09:18
Sample Depth: 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/29/22 12:00	06/30/22 07:28	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/29/22 12:00	06/30/22 07:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/29/22 12:00	06/30/22 07:28	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		06/29/22 12:00	06/30/22 07:28	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/29/22 12:00	06/30/22 07:28	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		06/29/22 12:00	06/30/22 07:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*06/29/22 12:00*	*06/30/22 07:28*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*06/29/22 12:00*	*06/30/22 07:28*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			06/30/22 15:24	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		mg/Kg			06/30/22 09:27	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		mg/Kg		06/29/22 09:57	06/29/22 14:44	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		06/29/22 09:57	06/29/22 14:44	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/29/22 09:57	06/29/22 14:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*06/29/22 09:57*	*06/29/22 14:44*	*1*
o-Terphenyl	*104*		*70 - 130*	*06/29/22 09:57*	*06/29/22 14:44*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16.9		5.04		mg/Kg			06/29/22 21:31	1

Surrogate Summary

Client: Ensolum
Project/Site: MCA 328

Job ID: 880-16415-1
SDG: 03D2057003

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)
880-16414-A-21-A MS	Matrix Spike	107	103
880-16414-A-21-B MSD	Matrix Spike Duplicate	113	101
880-16415-1	FS03	109	95
880-16415-2	SS01	104	92
880-16415-3	SS02	105	97
880-16415-4	SS03	105	95
880-16415-5	SS04	103	95
LCS 880-28624/1-A	Lab Control Sample	107	98
LCSD 880-28624/2-A	Lab Control Sample Dup	110	102
MB 880-28616/5-A	Method Blank	99	96
MB 880-28624/5-A	Method Blank	99	97

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)
880-16414-A-21-E MS	Matrix Spike	107	97
880-16414-A-21-F MSD	Matrix Spike Duplicate	92	83
880-16415-1	FS03	100	106
880-16415-2	SS01	94	100
880-16415-3	SS02	93	102
880-16415-4	SS03	91	98
880-16415-5	SS04	96	104
LCS 880-28627/2-A	Lab Control Sample	99	104
LCSD 880-28627/3-A	Lab Control Sample Dup	90	93
MB 880-28627/1-A	Method Blank	99	111

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: MCA 328

Job ID: 880-16415-1
SDG: 03D2057003

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-28616/5-A
Matrix: Solid
Analysis Batch: 28610

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 28616

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/29/22 09:14	06/29/22 11:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/29/22 09:14	06/29/22 11:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/29/22 09:14	06/29/22 11:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/29/22 09:14	06/29/22 11:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/29/22 09:14	06/29/22 11:24	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/29/22 09:14	06/29/22 11:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*06/29/22 09:14*	*06/29/22 11:24*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*06/29/22 09:14*	*06/29/22 11:24*	*1*

Lab Sample ID: MB 880-28624/5-A
Matrix: Solid
Analysis Batch: 28610

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 28624

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/29/22 09:20	06/29/22 23:02	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/29/22 09:20	06/29/22 23:02	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/29/22 09:20	06/29/22 23:02	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/29/22 09:20	06/29/22 23:02	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/29/22 09:20	06/29/22 23:02	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/29/22 09:20	06/29/22 23:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*06/29/22 09:20*	*06/29/22 23:02*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*06/29/22 09:20*	*06/29/22 23:02*	*1*

Lab Sample ID: LCS 880-28624/1-A
Matrix: Solid
Analysis Batch: 28610

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 28624

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08406		mg/Kg		84	70 - 130		
Toluene			0.100	0.09562		mg/Kg		96	70 - 130		
Ethylbenzene			0.100	0.08441		mg/Kg		84	70 - 130		
m-Xylene & p-Xylene			0.200	0.1710		mg/Kg		86	70 - 130		
o-Xylene			0.100	0.1001		mg/Kg		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 880-28624/2-A
Matrix: Solid
Analysis Batch: 28610

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 28624

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09490		mg/Kg		95	70 - 130	12	35

QC Sample Results

Client: Ensolum
Project/Site: MCA 328

Job ID: 880-16415-1
SDG: 03D2057003

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

Lab Sample ID: LCSD 880-28624/2-A
Matrix: Solid
Analysis Batch: 28610

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 28624

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1002		mg/Kg		100	70 - 130	5	35
Ethylbenzene			0.100	0.08941		mg/Kg		89	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.1805		mg/Kg		90	70 - 130	5	35
o-Xylene			0.100	0.1055		mg/Kg		105	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

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

Lab Sample ID: MB 880-28627/1-A
Matrix: Solid
Analysis Batch: 28605

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 28627

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/29/22 09:57	06/29/22 10:05	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/29/22 09:57	06/29/22 10:05	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/29/22 09:57	06/29/22 10:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*06/29/22 09:57*	*06/29/22 10:05*	*1*
o-Terphenyl	*111*		*70 - 130*	*06/29/22 09:57*	*06/29/22 10:05*	*1*

Lab Sample ID: LCS 880-28627/2-A
Matrix: Solid
Analysis Batch: 28605

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 28627

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	874.4		mg/Kg		87	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1061		mg/Kg		106	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*104*		*70 - 130*

Lab Sample ID: LCSD 880-28627/3-A
Matrix: Solid
Analysis Batch: 28605

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 28627

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	791.5		mg/Kg		79	70 - 130	10	20
Diesel Range Organics (Over C10-C28)			1000	917.5		mg/Kg		92	70 - 130	15	20

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QC Sample Results

Client: Ensolum
Project/Site: MCA 328

Job ID: 880-16415-1
SDG: 03D2057003

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

Lab Sample ID: LCSD 880-28627/3-A
Matrix: Solid
Analysis Batch: 28605

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 28627

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	93		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-28628/1-A
Matrix: Solid
Analysis Batch: 28663

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			06/29/22 20:21	1

Lab Sample ID: LCS 880-28628/2-A
Matrix: Solid
Analysis Batch: 28663

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	255.2		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-28628/3-A
Matrix: Solid
Analysis Batch: 28663

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	253.3		mg/Kg		101	90 - 110	1	20

Lab Sample ID: 880-16415-1 MS
Matrix: Solid
Analysis Batch: 28663

Client Sample ID: FS03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	15.7		250	266.3		mg/Kg		100	90 - 110		

Lab Sample ID: 880-16415-1 MSD
Matrix: Solid
Analysis Batch: 28663

Client Sample ID: FS03
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	15.7		250	271.0		mg/Kg		102	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: MCA 328

Job ID: 880-16415-1
SDG: 03D2057003

GC VOA

Analysis Batch: 28610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-16415-1	FS03	Total/NA	Solid	8021B	28624
880-16415-2	SS01	Total/NA	Solid	8021B	28624
880-16415-3	SS02	Total/NA	Solid	8021B	28624
880-16415-4	SS03	Total/NA	Solid	8021B	28624
880-16415-5	SS04	Total/NA	Solid	8021B	28624
MB 880-28616/5-A	Method Blank	Total/NA	Solid	8021B	28616
MB 880-28624/5-A	Method Blank	Total/NA	Solid	8021B	28624
LCS 880-28624/1-A	Lab Control Sample	Total/NA	Solid	8021B	28624
LCSD 880-28624/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	28624

Prep Batch: 28616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-28616/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 28624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-16415-1	FS03	Total/NA	Solid	5035	
880-16415-2	SS01	Total/NA	Solid	5035	
880-16415-3	SS02	Total/NA	Solid	5035	
880-16415-4	SS03	Total/NA	Solid	5035	
880-16415-5	SS04	Total/NA	Solid	5035	
MB 880-28624/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-28624/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-28624/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 28768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-16415-1	FS03	Total/NA	Solid	Total BTEX	
880-16415-2	SS01	Total/NA	Solid	Total BTEX	
880-16415-3	SS02	Total/NA	Solid	Total BTEX	
880-16415-4	SS03	Total/NA	Solid	Total BTEX	
880-16415-5	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 28605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-16415-1	FS03	Total/NA	Solid	8015B NM	28627
880-16415-2	SS01	Total/NA	Solid	8015B NM	28627
880-16415-3	SS02	Total/NA	Solid	8015B NM	28627
880-16415-4	SS03	Total/NA	Solid	8015B NM	28627
880-16415-5	SS04	Total/NA	Solid	8015B NM	28627
MB 880-28627/1-A	Method Blank	Total/NA	Solid	8015B NM	28627
LCS 880-28627/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	28627
LCSD 880-28627/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	28627

Prep Batch: 28627

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-16415-1	FS03	Total/NA	Solid	8015NM Prep	
880-16415-2	SS01	Total/NA	Solid	8015NM Prep	
880-16415-3	SS02	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: MCA 328

Job ID: 880-16415-1
SDG: 03D2057003

GC Semi VOA (Continued)

Prep Batch: 28627 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-16415-4	SS03	Total/NA	Solid	8015NM Prep	
880-16415-5	SS04	Total/NA	Solid	8015NM Prep	
MB 880-28627/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-28627/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-28627/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 28731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-16415-1	FS03	Total/NA	Solid	8015 NM	
880-16415-2	SS01	Total/NA	Solid	8015 NM	
880-16415-3	SS02	Total/NA	Solid	8015 NM	
880-16415-4	SS03	Total/NA	Solid	8015 NM	
880-16415-5	SS04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 28628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-16415-1	FS03	Soluble	Solid	DI Leach	
880-16415-2	SS01	Soluble	Solid	DI Leach	
880-16415-3	SS02	Soluble	Solid	DI Leach	
880-16415-4	SS03	Soluble	Solid	DI Leach	
880-16415-5	SS04	Soluble	Solid	DI Leach	
MB 880-28628/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-28628/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-28628/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-16415-1 MS	FS03	Soluble	Solid	DI Leach	
880-16415-1 MSD	FS03	Soluble	Solid	DI Leach	

Analysis Batch: 28663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-16415-1	FS03	Soluble	Solid	300.0	28628
880-16415-2	SS01	Soluble	Solid	300.0	28628
880-16415-3	SS02	Soluble	Solid	300.0	28628
880-16415-4	SS03	Soluble	Solid	300.0	28628
880-16415-5	SS04	Soluble	Solid	300.0	28628
MB 880-28628/1-A	Method Blank	Soluble	Solid	300.0	28628
LCS 880-28628/2-A	Lab Control Sample	Soluble	Solid	300.0	28628
LCSD 880-28628/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	28628
880-16415-1 MS	FS03	Soluble	Solid	300.0	28628
880-16415-1 MSD	FS03	Soluble	Solid	300.0	28628

Lab Chronicle

Client: Ensolum
Project/Site: MCA 328

Job ID: 880-16415-1
SDG: 03D2057003

Client Sample ID: FS03
Date Collected: 06/28/22 15:50
Date Received: 06/29/22 09:18

Lab Sample ID: 880-16415-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			28624	06/29/22 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	28610	06/30/22 06:06	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	28768	06/30/22 15:24	SM	XEN MID
Total/NA	Analysis	8015 NM		1	28731	06/30/22 09:27	AJ	XEN MID
Total/NA	Prep	8015NM Prep			28627	06/29/22 09:57	DM	XEN MID
Total/NA	Analysis	8015B NM		1	28605	06/29/22 13:18	AJ	XEN MID
Soluble	Leach	DI Leach			28628	06/29/22 09:58	CH	XEN MID
Soluble	Analysis	300.0		1	28663	06/29/22 20:44	CH	XEN MID

Client Sample ID: SS01
Date Collected: 06/28/22 16:00
Date Received: 06/29/22 09:18

Lab Sample ID: 880-16415-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			28624	06/29/22 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	28610	06/30/22 06:27	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	28768	06/30/22 15:24	SM	XEN MID
Total/NA	Analysis	8015 NM		1	28731	06/30/22 09:27	AJ	XEN MID
Total/NA	Prep	8015NM Prep			28627	06/29/22 09:57	DM	XEN MID
Total/NA	Analysis	8015B NM		1	28605	06/29/22 13:40	AJ	XEN MID
Soluble	Leach	DI Leach			28628	06/29/22 09:58	CH	XEN MID
Soluble	Analysis	300.0		1	28663	06/29/22 21:08	CH	XEN MID

Client Sample ID: SS02
Date Collected: 06/28/22 16:03
Date Received: 06/29/22 09:18

Lab Sample ID: 880-16415-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			28624	06/29/22 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	28610	06/30/22 06:47	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	28768	06/30/22 15:24	SM	XEN MID
Total/NA	Analysis	8015 NM		1	28731	06/30/22 09:27	AJ	XEN MID
Total/NA	Prep	8015NM Prep			28627	06/29/22 09:57	DM	XEN MID
Total/NA	Analysis	8015B NM		1	28605	06/29/22 14:01	AJ	XEN MID
Soluble	Leach	DI Leach			28628	06/29/22 09:58	CH	XEN MID
Soluble	Analysis	300.0		1	28663	06/29/22 21:16	CH	XEN MID

Client Sample ID: SS03
Date Collected: 06/28/22 16:05
Date Received: 06/29/22 09:18

Lab Sample ID: 880-16415-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			28624	06/29/22 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	28610	06/30/22 07:07	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	28768	06/30/22 15:24	SM	XEN MID

Eurofins Midland

Lab Chronicle

Client: Ensolum
Project/Site: MCA 328

Job ID: 880-16415-1
SDG: 03D2057003

Client Sample ID: SS03

Lab Sample ID: 880-16415-4
Matrix: Solid
Date Collected: 06/28/22 16:05
Date Received: 06/29/22 09:18

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1	28731	06/30/22 09:27	AJ	XEN MID
Total/NA	Prep	8015NM Prep			28627	06/29/22 09:57	DM	XEN MID
Total/NA	Analysis	8015B NM		1	28605	06/29/22 14:23	AJ	XEN MID
Soluble	Leach	DI Leach			28628	06/29/22 09:58	CH	XEN MID
Soluble	Analysis	300.0		1	28663	06/29/22 21:23	CH	XEN MID

Client Sample ID: SS04

Lab Sample ID: 880-16415-5
Matrix: Solid
Date Collected: 06/28/22 16:07
Date Received: 06/29/22 09:18

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			28624	06/29/22 12:00	MR	XEN MID
Total/NA	Analysis	8021B		1	28610	06/30/22 07:28	MR	XEN MID
Total/NA	Analysis	Total BTEX		1	28768	06/30/22 15:24	SM	XEN MID
Total/NA	Analysis	8015 NM		1	28731	06/30/22 09:27	AJ	XEN MID
Total/NA	Prep	8015NM Prep			28627	06/29/22 09:57	DM	XEN MID
Total/NA	Analysis	8015B NM		1	28605	06/29/22 14:44	AJ	XEN MID
Soluble	Leach	DI Leach			28628	06/29/22 09:58	CH	XEN MID
Soluble	Analysis	300.0		1	28663	06/29/22 21:31	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 328

Job ID: 880-16415-1
SDG: 03D2057003

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	T104704400-21-22	06-30-22

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 328

Job ID: 880-16415-1
SDG: 03D2057003

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

Sample Summary

Client: Ensolum
Project/Site: MCA 328

Job ID: 880-16415-1
SDG: 03D2057003

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-16415-1	FS03	Solid	06/28/22 15:50	06/29/22 09:18	3'
880-16415-2	SS01	Solid	06/28/22 16:00	06/29/22 09:18	0.5'
880-16415-3	SS02	Solid	06/28/22 16:03	06/29/22 09:18	0.5'
880-16415-4	SS03	Solid	06/28/22 16:05	06/29/22 09:18	0.5'
880-16415-5	SS04	Solid	06/28/22 16:07	06/29/22 09:18	0.5'

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: 16415

www.xenco.com Page 1 of 1

Project Manager:	Kalei Jennings	Bill to (if different)	Kalei Jennigns
Company Name:	Ensolum, LLC	Company Name.	Ensolum, LLC
Address.	601 N Marienfeld St Suite 400	Address.	601 N Marienfeld St Suite 400
City, State ZIP	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	817-683-2503	Email	kjennings@ensolum.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting Level II ☒ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables. EDD ☒ ADaPT ☐ Other:

Project Name:	MCA 328	Turn Around	
Project Number:	03D2057003	☐ Routine ☒ Rush	
Project Location		Due Date:	24 HR
Sampler's Name:	Hadlie Green	TAT starts the day received by the lab, if received by 4 30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank.	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	IR8
Cooler Custody Seals.	Yes No (N/A)	Correction Factor:	-.2
Sample Custody Seals.	Yes No (N/A)	Temperature Reading	.6
Total Containers.		Corrected Temperature	.4

Preservative Codes

None NO; DI Water H_2O; Cool Cool; MeOH Me; HCL. HC; HNO_3. HN; H_2SO_4 H_2; NaOH Na; H_3PO_4. HP; $NaHSO_4$ NABIS; $Na_2S_2O_3$. $NaSO_3$; Zn Acetate+NaOH Zn; NaOH+Ascorbic Acid SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA. 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
FS03	S	6-28-22	15:50	3'	C	1		X	X	X	
SS01	S	6-28-22	16:00	0.5'	C	1		X	X	X	
SS02	S	6-28-22	16:03	0.5'	C	1		X	X	X	
SS03	S	6-28-22	16:05	0.5'	C	1		X	X	X	
SS04	S	6-28-22	16:07	0.5'	C	1		X	X	X	

880-16415 Chain of Custody

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_2 Na Sr Tl 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 Tl 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
1 Kalei Jennings		6.29.22	2		
3		918	4		
5			6		

Revised Date: 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-16415-1
SDG Number: 03D2057003

Login Number: 16415
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	

ENSOLUM

APPENDIX D

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	NAPP2201143320
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)

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

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2201143320
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☐ 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

- ☐ The source of the release has been stopped.
- ☐ The impacted area has been secured to protect human health and the environment.
- ☐ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☐ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not 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: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Ramona Marcus Date: 1/21/2022

L48 Spill Volume Estimate Form

NAPP2201143320

Facility Name & Number:	MCA 328
Asset Area:	Maljamar
Release Discovery Date & Time:	01/06/2022 8:00am
Release Type:	Oil Mixture
Provide any known details about the event:	Flowline Leak due to freezing Temps.

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	40.0	12.0	8.00	8.00%	56.960	4.557	2.00%	0.091	4.466
Rectangle B	0.0	0.0	0.00	0.00%	0.000	0.000	0.00%	0.000	0.000
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
					0.000	0.000		0.000	0.000
					Total Volume Release:	4.557		0.091	4.466

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 73870

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 73870
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rmarcus	None	1/21/2022

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2201143320
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?	50-100 (feet bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ 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)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ 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?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ 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	NAPP2201143320
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: Jason Thomas Title: HSE Manager

Signature: Jason Thomas Date: 07/05/2022

email: Jason.Thomas@mavresources.com Telephone: 903-291-6513

OCD Only

Received by: _____ Date: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2201143320
District RP	
Facility ID	
Application ID	

Closure

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

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

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

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

Printed Name: Jason Thomas Title: HSE Manager

Signature: Jason Thomas Date: 07/05/2022

email: Jason.Thomas@mavresources.com Telephone: 903-291-6513

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: 07/13/2022

Printed Name: Jennifer Nobui Title: Environmental Specialist A

ENSOLUM

APPENDIX E

NMOCD Notifications

From: Nobui, Jennifer, EMNRD
To: Kalei Jennings
Cc: Bratcher, Mike, EMNRD; Hamlet, Robert, EMNRD; Harimon, Jocelyn, EMNRD
Subject: FW: [EXTERNAL] Maverick- Sampling Notification (Week of 06/27/22-07/01/22)
Date: Friday, June 24, 2022 11:30:50 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, June 23, 2022 3:01 PM
To: Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Subject: Fw: [EXTERNAL] Maverick- Sampling Notification (Week of 06/27/22-07/01/22)

From: Kalei Jennings <kjennings@ensolum.com>
Sent: Thursday, June 23, 2022 1:30 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Subject: [EXTERNAL] Maverick- Sampling Notification (Week of 06/27/22-07/01/22)

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 27, 2022.

Monday:

- Hudson 001 / NAPP2201142906
- MCA 328 / NAPP2201143320
- MCA 308 / NAPP2202535435

Tuesday:

- MCA 308 / NAPP2202535435

Wednesday:

- MCA 308 / NAPP2202535435

Thursday:

Friday:

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

From: Kalei Jennings <kjennings@ensolum.com>
Sent: Tuesday, June 21, 2022 8:33 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Cc: Thomas Haigood <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
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 123419

CONDITIONS

Operator: Maverick Permian LLC 1111 Bagby Street Suite 1600 Houston, TX 77002	OGRID: 331199
	Action Number: 123419
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved. Please note that 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 data should be no more than 25 years old. However, as the site has been remediated to the most stringent criteria, closure can be granted.	7/13/2022