



December 1, 2023

New Mexico Oil Conservation Division

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

**Re: Closure Request
SEMU Permian #37
Incident Number NAPP2305453661
Lea County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of Maverick Permian, LLC (Maverick), has prepared this *Closure Request* to document assessment, excavation, and soil sampling activities performed at the Semu Permian #37 (Site). The purpose of the assessment, excavation, and soil sampling activities was to address impacts to soil resulting from a release of crude oil and produced water at the Site. Based on the excavation activities and laboratory analytical results for the soil sampling events, Maverick is submitting this *Closure Request*, describing remediation that has occurred and requesting closure for Incident Number NAPP2305453661.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit L, Section 19, Township 20 South, Range 38 East, in Lea County, New Mexico (32.5566346°, -103.1960617°) and is associated with oil and gas exploration and production operations on Private Land.

On February 7, 2023, a surface flowline ruptured, resulting in the release of approximately 3 barrels (bbls) of crude oil and 15 bbls of produced water onto the surrounding pasture. No released fluids were recovered. Maverick reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on February 17, 2023. The release was assigned Incident Number NAPP2305453661.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented 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 51 and 100 feet below ground surface (bgs) based on the nearest available groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 323307103113601 located 0.34 miles southeast of the Site. The groundwater well has reported depth to groundwater of 82.73 feet

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bgs. Several other wells within a 1.5 mile radius of the site indicate regional depth to groundwater between 51 and 100 feet bgs. The most recent well is New Mexico Office of the State Engineer (NMOSE) well L-15414-POD1, located 1.0 mile east of the Site. The groundwater well was drilled during November 2022 to a depth of 103 feet bgs and no groundwater was encountered. 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 Monument Draw, a dry wash, located approximately 2.5 miles south 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 from a 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 I 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 applies 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 ACTIVITIES

On February 16, 2023, Ensolum personnel were at the Site to evaluate the release extent based on information provided on the Form C-141 and visible surface staining observed in the pasture release area. Three initial assessment soil samples (SS01 through SS03) were collected within the release extent from a depth of 0.5 feet bgs to assess the surficial soil within the release. The release extent and soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site visit and a photographic log is included in Appendix B.

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

Laboratory analytical results for assessment soil samples SS01 through SS03 indicated TPH-GRO/TPH-DRO and total TPH concentrations exceeded the Site Closure Criteria. The laboratory analytical results are summarized in Table 1.

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On March 20, 2023, Ensolum personnel returned to the site to complete additional assessment activities to delineate the vertical extent of the release. Five boreholes (BH01 through BH05) were advanced via hand auger within the release extent to a depth of 5 feet bgs. Soil from the boreholes was field screened at 1-foot intervals for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Field screening results and observations for the boreholes were logged on lithologic soil sampling logs, which are included in Appendix C. Delineation samples were collected from each borehole at depths of 1-foot and 5 feet bgs. The soil samples were collected, handled, and analyzed as described above.

Laboratory analytical results for the delineation samples collected from boreholes BH01, BH03, and BH04 indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirements, where applicable. Laboratory analytical results for the delineation samples collected from boreholes BH02 and BH05 indicated that the 1-foot bgs samples exceeded the Site Closure Criteria and/or reclamation requirements for TPH and chloride. The soil samples collected at 5 feet bgs from boreholes BH02 and BH05 were compliant with the Site Closure Criteria, and defined the vertical extent of the release. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D.

EXCAVATION AND DELINEATION ACTIVITIES

Between November 1, 2023, and November 14, 2023, Ensolum personnel were at the Site to oversee excavation of impacted soil resulting from the February 7, 2023, crude oil and produced water release. To direct excavation activities, soil was field screened for VOCs and chloride. Excavation activities were performed utilizing a track-mounted backhoe and transport vehicles. The excavation was completed to depths ranging from 1-foot to 14 feet bgs.

Following removal of impacted 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 FS20, FS02A, and FS04A were collected from the floor of the excavation at depths ranging from 1-foot to 14 feet bgs. Composite soil samples SW01 through SW14 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 14 feet bgs. The excavation soil samples were handled and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations were mapped utilizing a handheld GPS and are presented on Figure 3. Photographic documentation was completed during the Site visits and a photographic log is included in Appendix B.

Potholes PH01 and PH02 were advanced within the open excavation to depths of 12 feet and 16 feet bgs, respectively, and boreholes BH02 and BH05 were deepened to a depth of 6 feet bgs. Final depth of the potholes and boreholes was determined by field screening results indicating compliance with the most stringent Table I Closure Criteria. Soil from the potholes and boreholes was field screened at 1-foot intervals for VOCs and chloride. Field screening results and observations for the potholes and boreholes were logged on lithologic soil sampling logs, which are included in Appendix C. Discrete delineation samples collected from the potholes and boreholes at depths ranging from 6 feet to 16 feet bgs. Additionally, lateral delineation samples SS01 through SS06 were collected around the excavation extent to confirm the lateral extent of the surface release. The delineation soil sample locations are presented on Figure 2. The excavation and delineation soil samples were handled following the same procedures as described above and submitted to Cardinal Laboratories for analysis of BTEX, TPH, and chloride.

Laboratory analytical results for excavation floor samples FS01, FS02A, FS03, FS04A, and FS05 through FS20 and excavation sidewall samples SW01 through SW14, collected from the final excavation

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extent, indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirements for samples collected in the top four feet. Laboratory analytical results for excavation floor samples FS02 and FS04 initially exceeded the Site Closure Criteria for TPH-GRO/TPH-DRO; additional soil was removed from these areas and subsequent floor samples FS02A and FS04A were compliant.

Laboratory analytical results for the delineation samples collected from the potholes and boreholes indicated all COC concentrations were compliant with the Site Closure Criteria. Additionally, the final depth delineation samples from potholes PH01 and PH02 and boreholes BH01 through BH05, collected at depths ranging from 5 feet to 16 feet bgs, were compliant with the most stringent Table I Closure Criteria and provided vertical delineation of the release. Laboratory analytical results for lateral assessment samples SS01 through SS06 indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria and provided lateral delineation of the surface release. Laboratory analytical results are summarized on Table 1 and the complete laboratory analytical reports are included as Appendix D.

The excavation measured approximately 3,925 square feet in areal extent. A total of approximately 1,600 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the Sundance Disposal Facility located in Eunice, New Mexico.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the February 7, 2023, release of crude oil and produced water. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirements, where applicable. Additionally, the release was laterally and vertically delineated to below the most stringent Table I Closure Criteria. Based on the laboratory analytical results, no further remediation is required. The excavation was backfilled with material purchased locally and recontoured to match pre-existing conditions. The disturbed area was seeded with a landowner approved seed mix.


Delineation and excavation of impacted soil have mitigated impacts at this Site. Depth to groundwater has been determined to be greater than 51 feet bgs and no sensitive receptors were identified near the release extent. Maverick believes the remedial actions completed are protective of human health, the environment, and groundwater and respectfully requests closure for Incident NAPP2305453661. NMOCD notifications are included in Appendix E and the final Form C-141 is included in Appendix F.

If you have any questions or comments, please contact Ms. Aimee Cole at (720) 384-7365 or acole@ensolum.com.

Sincerely,
Ensolum, LLC



Julianna Falcomata
Staff Geologist



Aimee Cole
Senior Managing Scientist

cc: Bryce Wagoner, Maverick Natural Resources

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Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Photographic Log
Appendix C	Lithologic Soil Sampling Logs
Appendix D	Laboratory Analytical Reports & Chain of Custody Documentation
Appendix E	NMOCD Notifications
Appendix F	Final C-141



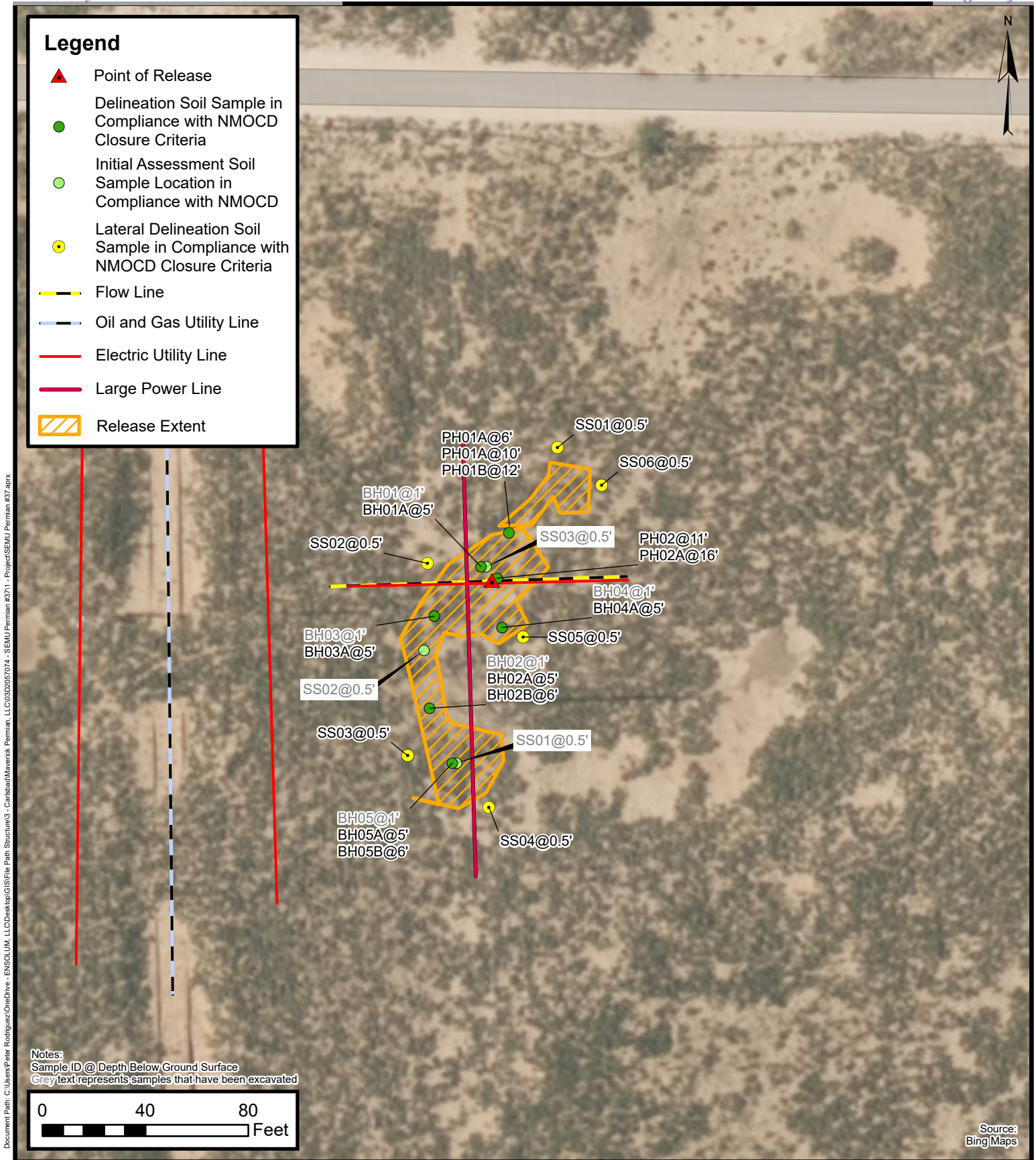
FIGURES

Site Receptor Map

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 Unit L, Sec 19, T20S, R38E
 Lea County, New Mexico

FIGURE

1










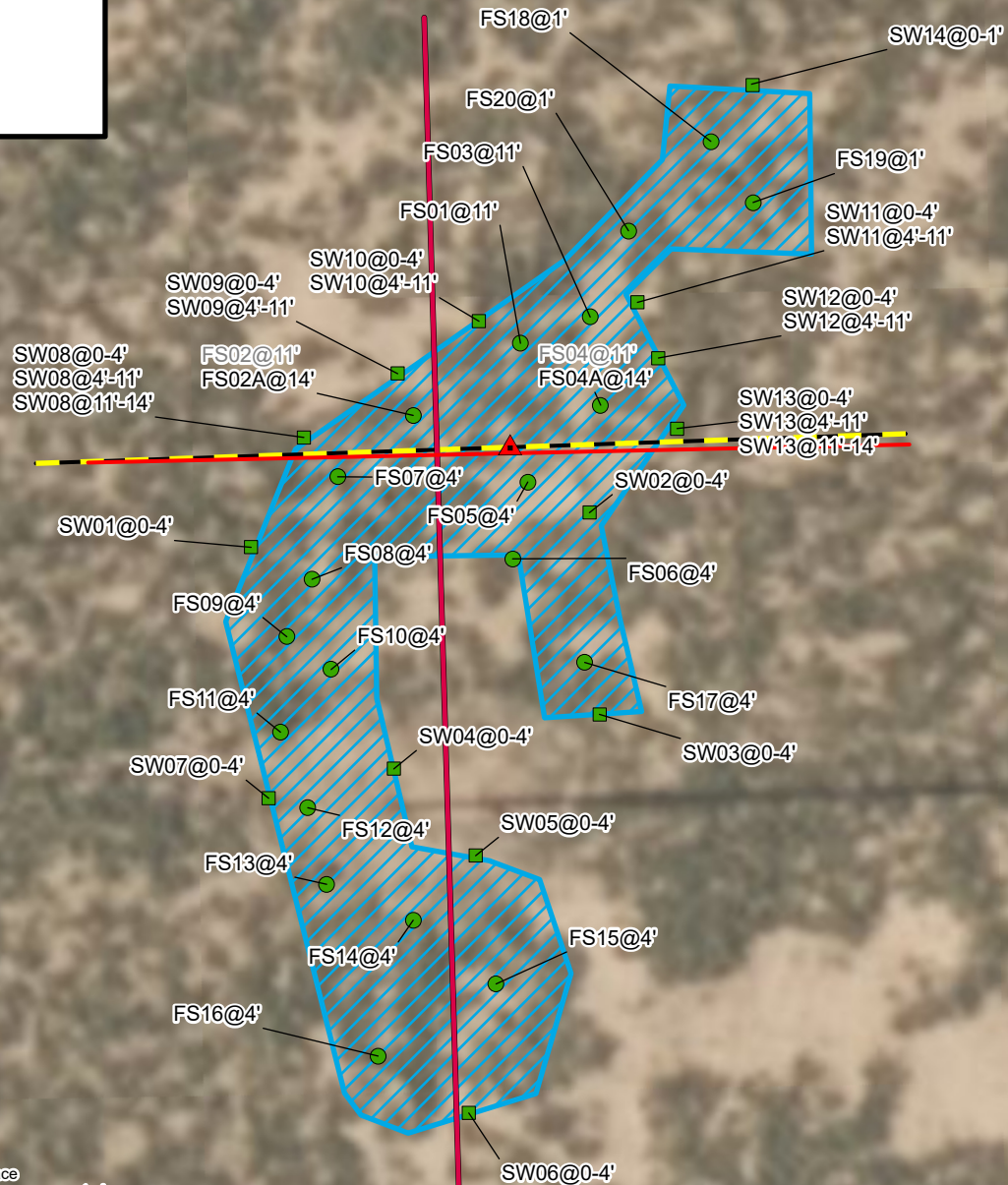
Delineation Soil Sample Locations

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FIGURE
2

Legend

-  Point of Release
-  Excavation Floor Sample in Compliance with NMOCD Closure Criteria
-  Excavation Sidewall Soil Sample in Compliance with NMOCD Closure Criteria
-  Flow Line
-  Electric Utility Line
-  Large Power Line
-  Excavation Extent



Notes:
 Sample ID @ Depth Below Ground Surface
 Grey text represents samples that have been excavated

0 20 40
 Feet

Source:
 Bing Maps



Excavation Soil Sample Locations

Maverick Permian, LLC
 SEMU Permian #37
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 Unit L, Sec 19, T20S, R38E
 Lea County, New Mexico

FIGURE
 3



TABLES

TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS SEMU Permian #37 Maverick Permian, LLC Lea County, New Mexico										
Sample Designation	Date	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	600 / 10,000
Initial Assessment Soil Samples										
SS01	02/16/2023	0.5'	0.262	33.1	2,480	17,500	<997	19,980	20,000	571
SS02	02/16/2023	0.5'	<0.198	47	2,600	12,200	<999	14,800	14,800	688
SS03	02/16/2023	0.5'	0.524	110	3,800	11,900	<998	15,700	15,700	702
Delineation Soil Samples										
BH01*	03/20/2023	1'	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	73.2
BH01A	03/20/2023	5'	<0.0398	<0.0797	<50.0	<50.0	<50.0	<50.0	<50.0	83.9
BH02*	03/20/2023	1'	0.108	20.6	782	3010	<249	3,792	3,790	948
BH02A	03/20/2023	5'	<0.0402	<0.0805	<50.0	<50.0	<50.0	<50.0	<50.0	1,350
BH02B	11/3/2023	6'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
BH03*	03/20/2023	1'	<0.0403	<0.0806	<50.0	54.3	<50.0	54	54.3	180
BH03A	03/20/2023	5'	<0.0398	<0.0797	<49.9	260	<49.9	260	260	372
BH04*	03/20/2023	1'	<0.0398	<0.0795	<49.9	<49.9	<49.9	<49.9	<49.9	49.4
BH04A	03/20/2023	5'	<0.0399	<0.0798	<49.8	<49.8	<49.8	<49.8	<49.8	89.2
BH05*	03/20/2023	1'	<0.100	15.2	1030	7680	<498	8,710	8,710	626
BH05A	03/20/2023	5'	<0.0398	0.117	<50.0	255	<50.0	255	255	1,950
BH05B	11/3/2023	6'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
PH01A	11/1/2023	6'	<0.050	<0.300	<10.0	33.9	<10.0	33.9	33.9	320
PH01B	11/1/2023	10'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
PH01C	11/1/2023	12'	<0.050	<0.300	<10.0	<0.050	<0.300	<10.0	10	<16.0
PH02	11/8/2023	11'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,380
PH02A	11/8/2023	16'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
 SEMU Permian #37
 Maverick Permian, LLC
 Lea County, New Mexico

Sample Designation	Date	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	600 / 10,000
Lateral Delineation Soil Samples										
SS01	11/2/2023	0.5'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS02	11/2/2023	0.5'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS03	11/2/2023	0.5'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS04	11/2/2023	0.5'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS05	11/2/2023	0.5'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS06	11/2/2023	0.5'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
Excavation Floor Soil Samples										
FS01	11/2/2023	11'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,560
FS02	11/2/2023	11'	<0.050	<0.300	20	1,760	397	1,780	2,177	224
FS02A	11/9/2023	14'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,640
FS03	11/2/2023	11'	<0.050	<0.300	<10.0	12.3	<10.0	12.3	12.3	2,480
FS04	11/2/2023	11'	<0.050	<0.300	17.0	1,620	367	1,637	2,004	208
FS04A	11/9/2023	14'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,640
FS05	11/1/2023	4'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS06	11/1/2023	4'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS07	11/2/2023	4'	<0.050	<0.300	<10.0	12.4	<10.0	12.4	12.4	384
FS08	11/2/2023	4'	<0.050	<0.300	<10.0	36.4	<10.0	36.4	36.4	48.0
FS09	11/2/2023	4'	<0.050	<0.300	<10.0	17.9	<10.0	17.9	17.9	416
FS10	11/2/2023	4'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,080
FS11	11/2/2023	4'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	352
FS12	11/2/2023	4'	<0.050	<0.300	<10.0	11.0	<10.0	11.0	11.0	368
FS13	11/2/2023	4'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,120

TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS SEMU Permian #37 Maverick Permian, LLC Lea County, New Mexico										
Sample Designation	Date	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	600 / 10,000
FS14	11/3/2023	4'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS15	11/3/2023	4'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS16	11/3/2023	4'	<0.050	<0.300	<10.0	197	24.0	197	221	864
FS17	11/3/2023	4'	<0.050	<0.300	<10.0	214	29.6	214	244	880
FS18*	11/8/2023	1'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS19*	11/8/2023	1'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS20*	11/8/2023	1'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
Excavation Sidewall Soil Samples										
SW01*	11/1/2023	0-4'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SW02*	11/1/2023	0-4'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SW03*	11/3/2023	0-4'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW04*	11/3/2023	0-4'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW05*	11/3/2023	0-4'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW06*	11/3/2023	0-4'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SW07*	11/3/2023	0-4'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW08*	11/3/2023	0-4'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW08	11/3/2023	4-11'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW08	11/14/2023	11-14	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW09*	11/3/2023	0-4'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW09	11/3/2023	4-11'	<0.050	<0.300	<10.0	56.9	<10.0	56.9	56.9	32.0
SW10*	11/3/2023	0-4'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SW10	11/3/2023	4-11'	<0.050	<0.300	<10.0	24.8	34.2	24.8	59	32.0

TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS SEMU Permian #37 Maverick Permian, LLC Lea County, New Mexico										
Sample Designation	Date	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	600 / 10,000
SW11*	11/3/2023	0-4'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW11	11/3/2023	4-11'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW12*	11/3/2023	0-4'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW12	11/3/2023	4-11'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW13*	11/3/2023	0-4'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW13	11/3/2023	4-11'	<0.050	<0.300	<10.0	37.3	<10.0	37.3	37.3	32.0
SW13	11/14/2023	11-14	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW14*	11/8/2023	0-1'	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

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

Grey text represents samples that have been excavated

* indicates sample was collected in area to be reclaimed after remediation is complete; reclamation standard in the top 4 feet is 600 mg/kg for chloride and 100 mg/kg for TPH.



APPENDIX A

Referenced Well Records



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

OSE OIT DEC 21 2022 PM3:14

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) L-15414-POD1		WELL TAG ID NO.		OSE FILE NO(S). L-15414			
	WELL OWNER NAME(S) MAVRICK NATURAL RESOURCES				PHONE (OPTIONAL) 928-241-1862			
	WELL OWNER MAILING ADDRESS 1410 NW COUNTY RD				CITY STATE ZIP HOBBS NM 88240			
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE		MINUTES 33	SECONDS 23.46	N		
		LONGITUDE		-103	10	41.55	W	
* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84								
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE SEMU BURGER B 108								
2. DRILLING & CASING INFORMATION	LICENSE NO. WD-1184		NAME OF LICENSED DRILLER RUSSELL SOUTHERLAND			NAME OF WELL DRILLING COMPANY WEST TEXAS WATER WELL SERVICE		
	DRILLING STARTED 11/10/2022		DRILLING ENDED 11/10/2022		DEPTH OF COMPLETED WELL (FT) 103	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)	
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) N/A		
	DRILLING FLUID: <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY:							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
				NO CASING IN HOLE				
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
				N/A				

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 04/30/19)

FILE NO.	POD NO.	TRN NO.
LOCATION	WELL TAG ID NO.	PAGE 1 OF 2



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USGS Water Resources

Data Category:

Groundwater

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United States

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Groundwater levels for the Nation

 Important: [Next Generation Monitoring Location Page](#)

Search Results -- 1 sites found

Agency code = usgs
site_no list =

- 323307103113601

Minimum number of levels = 1
[Save file of selected sites](#) to local disk for future upload

USGS 323307103113601 20S.38E.19.312141

Lea County, New Mexico
Latitude 32°33'07", Longitude 103°11'36" NAD27
Land-surface elevation 3,534 feet above NAVD88
The depth of the well is 115 feet below land surface.
This well is completed in the High Plains aquifer (N100HGHPLN) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1954-04-02			D62610		3454.12	NGVD29	1		Z		A
1954-04-02			D62611		3455.23	NAVD88	1		Z		A
1954-04-02			D72019	78.77			1		Z		A
1961-02-28			D62610		3453.28	NGVD29	1		Z		A
1961-02-28			D62611		3454.39	NAVD88	1		Z		A
1961-02-28			D72019	79.61			1		Z		A
1966-03-08			D62610		3446.84	NGVD29	1		Z		A
1966-03-08			D62611		3447.95	NAVD88	1		Z		A
1966-03-08			D72019	86.05			1		Z		A
1968-04-08			D62610		3451.86	NGVD29	1		Z		A
1968-04-08			D62611		3452.97	NAVD88	1		Z		A
1968-04-08			D72019	81.03			1		Z		A
1971-01-28			D62610		3451.34	NGVD29	1		Z		A
1971-01-28			D62611		3452.45	NAVD88	1		Z		A
1971-01-28			D72019	81.55			1		Z		A
1976-01-29			D62610		3450.16	NGVD29	1		Z		A
1976-01-29			D62611		3451.27	NAVD88	1		Z		A
1976-01-29			D72019	82.73			1		Z		A

Explanation		
Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	Z	Other.

Section	Code	Description
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>



Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2023-08-07 11:32:11 EDT

0.29 0.26 nadww01



APPENDIX B

Photographic Log

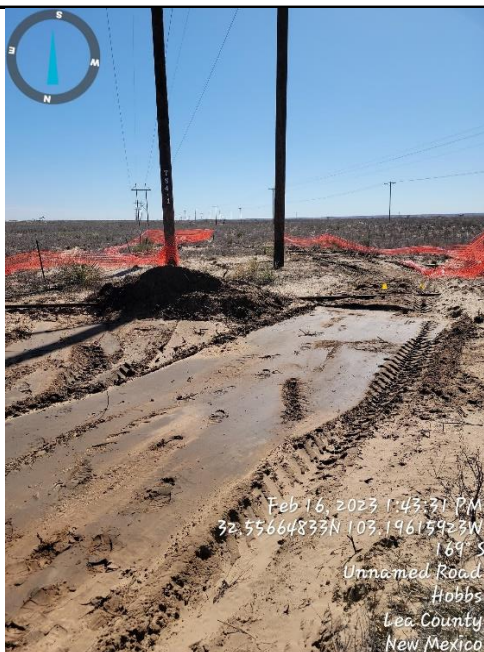


Photographic Log

Maverick Permian, LLC

SEMU Permian #37

Incident Number: NAPP2305453661



Photograph 1 Date: 2/16/2023

Description Soil staining in release

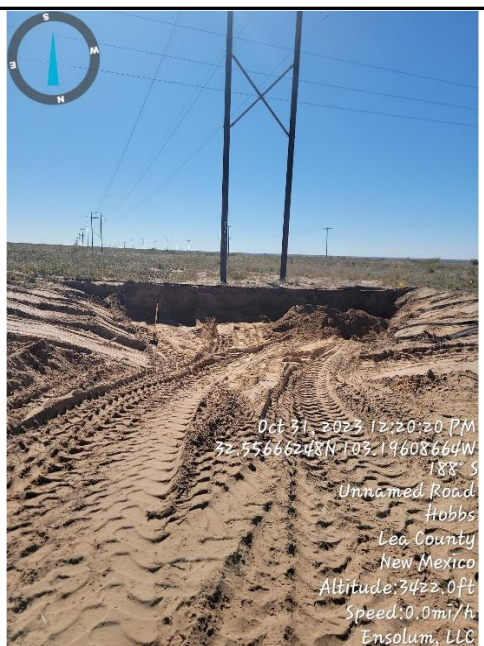
View: South



Photograph 2 Date: 2/16/2023

Description: Soil staining in release

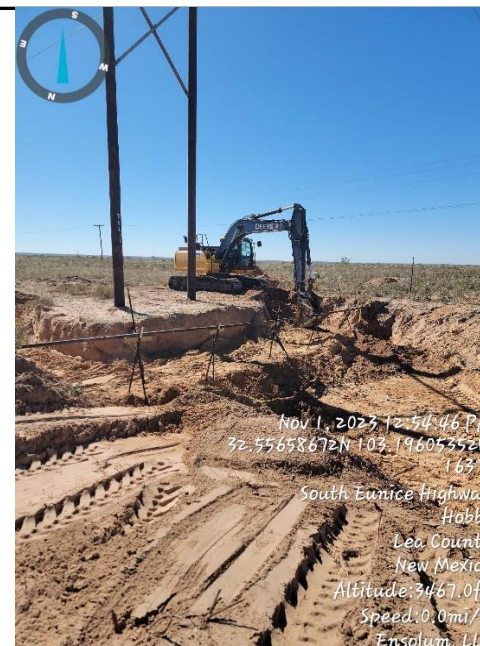
View: North



Photograph 3 Date: 10/30/2023

Description Excavation in progress

View: South



Photograph 4 Date: 11/1/2023

Description: Excavation in progress

View: Southeast

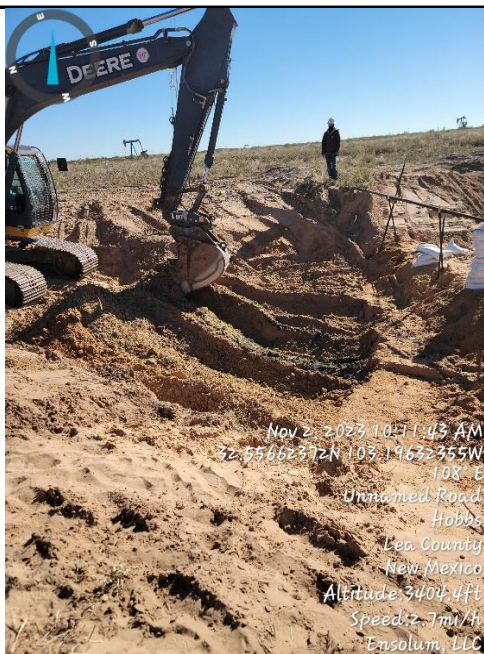


Photographic Log

Maverick Permian, LLC

SEMU Permian #37

Incident Number: NAPP2305453661



Photograph 1 Date: 11/2/2023

Description: Excavation in progress

View: East



Photograph 2 Date: 11/2/2023

Description: Excavation in progress

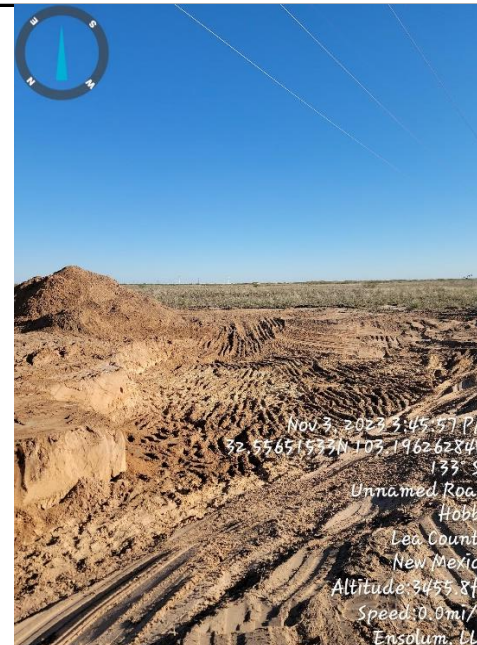
View: Southwest



Photograph 3 Date: 11/3/2023

Description: Completed excavation

View: South



Photograph 4 Date: 11/3/2023


Description: Completed excavation


View: Southeast





APPENDIX C


Lithologic Soil Sampling Logs


								Sample Name: BH01		Date: 03/20/23			
								Site Name: SEMU Permian 37					
								Incident Number: nAPP230545366					
								Job Number: 03D2057074					
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Dmitry Nikanorov		Method: Hand auger			
Coordinates: 32.556613, -103.196176								Hole Diameter: ~4"		Total Depth: 5 ft bgs			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.													
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions					
						0							
N	<173	1.8	N	BH01A	1	1	SP	SP, poorly graded sand, fine, yellow color, no stain, no odor					
N	<173	0.8	N	BH01B	2	2	SP	SAA					
N	<173	0.7	N	BH01C	3	3	SP	SAA					
N	<173	0.8	N	BH01D	4	4	SP	SAA					
N	<173	0.3	N	BH01E	5	5	SP	SAA					
								TD at 5 ft bgs					


		Sample Name: BH02		Date: 11/3/23				
		Site Name: SEMU Permian 37						
		Incident Number: NAPP2305453661						
		Job Number: 03C2057074						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.5564630, -103.1962422			Hole Diameter: ~3'	Total Depth: 6 ft bgs				
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	1,325	1057.0	Y		1	0-1	SP	SAND (1'): fine grained, poorly graded, trace amounts of silt, light brown, heavy odor, non cohesive, non plastic.
Dry	1,508	1034.0	Y		2	2	SP	SAA
Dry	1,478	1,049	Y		3	3	SP	SAA
Dry	1,928	927	Y		4	4	SP	SAA
Dry	274	120.7	N	BH02A	5	5	SP	SAND (5'): fine grained, poorly graded, trace amounts of silt, light brown, no odor, non cohesive, non plastic.
Dry	<168	4.7	N	BH02B	6	6	SP	SAA
TD reached @ 6' bgs								

 ENSOLUM								Sample Name: BH03		Date: 03/20/23	
								Site Name: SEMU Permian 37			
								Incident Number: nAPP230545366			
								Job Number: 03D2057074			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Dmitry Nikanorov		Method: Hand auger	
Coordinates: 32.556561, -103.196234								Hole Diameter: ~4"		Total Depth: 5 ft bgs	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
						0					
N	<173	33.5	Y	BH03A	1	1	SP	Poorly graded fine sand, lightly stained, some odor, light brown			
N	173	247.0	Y	BH03B	2	2	SP	SAA			
N	<173	118.7	Y	BH03C	3	3	SP	SAA			
N	<173	15.7	Y	BH03D	4	4	SP	SAA			
N	<173	21.2	Y	BH03E	5	5	SP	SAA			
								TD at 5 ft bgs			

 ENSOLUM								Sample Name: BH04		Date: 03/20/23	
								Site Name: SEMU Permian 37			
								Incident Number: nAPP230545366			
								Job Number: 03D2057074			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Dmitry Nikanorov		Method: Hand auger	
Coordinates: 32.556548, -103.196149								Hole Diameter: ~4"		Total Depth: 5 ft bgs	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
						0					
N	<173	3.7	N	BH04	1	1	SP	Poorly graded fine sand, lightly brown color, no stain, little odor			
N	<173	2.4	N	BH04	2	2	SP	SAA			
N	<173	4.0	N	BH04	3	3	SP	SAA			
N	<173	6.4	N	BH04	4	4	SP	SAA			
N	<173	1.1	N	BH04	5	5	SP	SAA			
								TD at 5 ft bgs			

 ENSOLUM		Sample Name: BH05		Date: 11/3/23				
		Site Name: SEMU Permian 37						
		Incident Number: NAPP2305453661						
		Job Number: 03C2057074						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.5564042, -103.1962140			Logged By: J.Falcomata		Method: Trackhoe			
			Hole Diameter: ~3'		Total Depth: 6 ft bgs			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Dry	202	627.3	Y		1	0-1	SP	SAND (1'): fine grained, poorly graded, trace amounts of silt, light brown, heavy odor, non cohesive, non plastic.
Dry	416	574.7	Y		2	2	SP	SAA
Dry	398	431.2	Y		3	3	SP	SAA
Dry	576	178.4	Y		4	4	SP	SAA
Dry	576	62.1	N	BH05A	5	5	SP	SAND (5'): fine grained, poorly graded, trace amounts of silt, light brown, no odor, non cohesive, non plastic.
Dry	<168	8.6	N	BH05B	6	6	SP	SAA
TD reached @ 6' bgs								

 ENSOLUM								Sample Name: PH01		Date: 11/1/23	
								Site Name: SEMU Permian 37			
								Incident Number: NAPP2305453661			
								Job Number: 03C2057074			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: J.Falcomata		Method: Trackhoe	
Coordinates: 32.5566690, -103.1961149								Hole Diameter: ~3'		Total Depth: 12 ft bgs	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
Open excavation from 0-5'											
Dry	274	120.7	N	PH01A	6	6	SP	SAND (6'): fine grained, poorly graded, trace amounts of silt, light brown, no odor, non cohesive, non plastic.			
	207	98.4				7					
	178	50.6				8					
	<168	24.8				9					
Dry	<168	6.7	N	PH01B	10	10	SP	SAND (10'): fine grained, poorly graded, trace amounts of silt, light brown, no odor, non cohesive, non plastic.			
	<168	3.6				11					
Dry	<168	0.3	N	PH01C	12	12	SP	SAND (12'): fine grained, poorly graded, trace amounts of silt, medium brown, no odor, non cohesive, non plastic.			
TD reached @ 12' bgs											

 ENSOLUM								Sample Name: PH02		Date: 11/8/2023	
								Site Name: SEMU Permian 37			
								Incident Number: NAPP2305453661			
								Job Number:			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: J.Falcomata		Method: Trackhoe	
Coordinates: 32.556600, -103.196152								Hole Diameter:		Total Depth: 16 ft bgs	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
Open excavation from 0 - 8 feet											
Dry	<168	16.8	N	-	-	8	SP-SM	SAND (8'): fine grained, light brown to tan, non plastic, non cohesive, strong hydrocarbon odor.			
Dry	<168	12.6	N	PH02	11	11	SP-SM	SAA			
Dry	<168	5.9	N	-	-	14	SP-SM	SAND (14'): fine grained, light brown, non plastic, non cohesive, moderate hydrocarbon odor.			
Dry	<168	0.8	N	PH02A	16	16	SP-SM	SAND (16'): fine grained, light brown, non plastic, non cohesive, no odor.			
TD @ 16' bgs											



APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation



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

November 15, 2023

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: SEMU PERMIAN 37

Enclosed are the results of analyses for samples received by the laboratory on 11/14/23 11:40.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/14/2023
 Reported: 11/15/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346, -103.1960617

Sampling Date: 11/08/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: PH 02 @ 11' (H236218-01)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/14/2023	ND	1.85	92.5	2.00	7.65		
Toluene*	<0.050	0.050	11/14/2023	ND	1.96	98.1	2.00	10.3		
Ethylbenzene*	<0.050	0.050	11/14/2023	ND	1.98	98.8	2.00	12.2		
Total Xylenes*	<0.150	0.150	11/14/2023	ND	6.02	100	6.00	13.5		
Total BTEX	<0.300	0.300	11/14/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1380	16.0	11/14/2023	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2023	ND	200	99.8	200	3.63	
DRO >C10-C28*	<10.0	10.0	11/15/2023	ND	203	101	200	2.06	
EXT DRO >C28-C36	<10.0	10.0	11/15/2023	ND					

Surrogate: 1-Chlorooctane 84.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.4 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/14/2023
 Reported: 11/15/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346, -103.1960617

Sampling Date: 11/08/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: PH 02 @ 16' (H236218-02)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/14/2023	ND	1.85	92.5	2.00	7.65		
Toluene*	<0.050	0.050	11/14/2023	ND	1.96	98.1	2.00	10.3		
Ethylbenzene*	<0.050	0.050	11/14/2023	ND	1.98	98.8	2.00	12.2		
Total Xylenes*	<0.150	0.150	11/14/2023	ND	6.02	100	6.00	13.5		
Total BTEx	<0.300	0.300	11/14/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 129 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/14/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2023	ND	200	99.8	200	3.63	
DRO >C10-C28*	<10.0	10.0	11/15/2023	ND	203	101	200	2.06	
EXT DRO >C28-C36	<10.0	10.0	11/15/2023	ND					

Surrogate: 1-Chlorooctane 95.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/14/2023
 Reported: 11/15/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346, -103.1960617

Sampling Date: 11/14/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SW 08 @ 11-14' (H236218-03)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/14/2023	ND	1.85	92.5	2.00	7.65		
Toluene*	<0.050	0.050	11/14/2023	ND	1.96	98.1	2.00	10.3		
Ethylbenzene*	<0.050	0.050	11/14/2023	ND	1.98	98.8	2.00	12.2		
Total Xylenes*	<0.150	0.150	11/14/2023	ND	6.02	100	6.00	13.5		
Total BTEX	<0.300	0.300	11/14/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 118 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/14/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2023	ND	200	99.8	200	3.63	
DRO >C10-C28*	<10.0	10.0	11/15/2023	ND	203	101	200	2.06	
EXT DRO >C28-C36	<10.0	10.0	11/15/2023	ND					

Surrogate: 1-Chlorooctane 81.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/14/2023
 Reported: 11/15/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346, -103.1960617

Sampling Date: 11/14/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SW 13 @ 11-14' (H236218-04)

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/14/2023	ND	1.85	92.5	2.00	7.65		
Toluene*	<0.050	0.050	11/14/2023	ND	1.96	98.1	2.00	10.3		
Ethylbenzene*	<0.050	0.050	11/14/2023	ND	1.98	98.8	2.00	12.2		
Total Xylenes*	<0.150	0.150	11/14/2023	ND	6.02	100	6.00	13.5		
Total BTX	<0.300	0.300	11/14/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/14/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2023	ND	200	99.8	200	3.63	
DRO >C10-C28*	<10.0	10.0	11/15/2023	ND	203	101	200	2.06	
EXT DRO >C28-C36	<10.0	10.0	11/15/2023	ND					

Surrogate: 1-Chlorooctane 83.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.4 % 49.1-148

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Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

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

November 15, 2023

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: SEMU PERMIAN 37

Enclosed are the results of analyses for samples received by the laboratory on 11/10/23 9:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at

www.tceq.texas.gov/field/ga/lab_accred_certif.html.

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

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

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:ENSOLUM
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220Project: SEMU PERMIAN 37
Project Number: 03D2057074 (32.5566346,-103.
Project Manager: AIMEE COLE
Fax To:Reported:
15-Nov-23 09:48

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FS 02 A @ 14'	H236167-01	Soil	09-Nov-23 09:50	10-Nov-23 09:35
FS 04 A @ 14'	H236167-02	Soil	09-Nov-23 09:55	10-Nov-23 09:35

11/15/23 - Client changed the sample ID on -01 (see COC). This is the revised report and will replace the one sent on 11/13/23.

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

Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220

Project: SEMU PERMIAN 37
Project Number: 03D2057074 (32.5566346,-103.
Project Manager: AIMEE COLE
Fax To:

Reported:
15-Nov-23 09:48

FS 02 A @ 14'
H236167-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1640		16.0	mg/kg	4	3111015	AC	10-Nov-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3111008	JH	10-Nov-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3111008	JH	10-Nov-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3111008	JH	10-Nov-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3111008	JH	10-Nov-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3111008	JH	10-Nov-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134 3111008 JH 10-Nov-23 8021B

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3111006	MS	10-Nov-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3111006	MS	10-Nov-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3111006	MS	10-Nov-23	8015B	

Surrogate: 1-Chlorooctane 117 % 48.2-134 3111006 MS 10-Nov-23 8015B

Surrogate: 1-Chlorooctadecane 113 % 49.1-148 3111006 MS 10-Nov-23 8015B

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220

Project: SEMU PERMIAN 37
Project Number: 03D2057074 (32.5566346,-103.
Project Manager: AIMEE COLE
Fax To:

Reported:
15-Nov-23 09:48

FS 04 A @ 14'**H236167-02 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	1760		16.0	mg/kg	4	3111022	HM	10-Nov-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3111008	JH	10-Nov-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3111008	JH	10-Nov-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3111008	JH	10-Nov-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3111008	JH	10-Nov-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3111008	JH	10-Nov-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			107 %	71.5-134		3111008	JH	10-Nov-23	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3111006	MS	10-Nov-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3111006	MS	10-Nov-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3111006	MS	10-Nov-23	8015B	

Surrogate: 1-Chlorooctane			117 %	48.2-134		3111006	MS	10-Nov-23	8015B	
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Surrogate: 1-Chlorooctadecane			113 %	49.1-148		3111006	MS	10-Nov-23	8015B	
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Analytical Results For:

ENSOLUM
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220

Project: SEMU PERMIAN 37
Project Number: 03D2057074 (32.5566346,-103.
Project Manager: AIMEE COLE
Fax To:

Reported:
15-Nov-23 09:48

Inorganic Compounds - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3111015 - 1:4 DI Water										
Blank (3111015-BLK1)				Prepared & Analyzed: 10-Nov-23						
Chloride	ND	16.0	mg/kg							
LCS (3111015-BS1)				Prepared & Analyzed: 10-Nov-23						
Chloride	400	16.0	mg/kg	400		100	80-120			
LCS Dup (3111015-BSD1)				Prepared & Analyzed: 10-Nov-23						
Chloride	416	16.0	mg/kg	400		104	80-120	3.92	20	
Batch 3111022 - 1:4 DI Water										
Blank (3111022-BLK1)				Prepared & Analyzed: 10-Nov-23						
Chloride	ND	16.0	mg/kg							
LCS (3111022-BS1)				Prepared & Analyzed: 10-Nov-23						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (3111022-BSD1)				Prepared & Analyzed: 10-Nov-23						
Chloride	416	16.0	mg/kg	400		104	80-120	3.77	20	

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Analytical Results For:

ENSOLUM
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220

Project: SEMU PERMIAN 37
Project Number: 03D2057074 (32.5566346,-103.
Project Manager: AIMEE COLE
Fax To:

Reported:
15-Nov-23 09:48

Volatile Organic Compounds by EPA Method 8021 - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 3111008 - Volatiles**Blank (3111008-BLK1)**

Prepared & Analyzed: 10-Nov-23

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0559		mg/kg	0.0500		112	71.5-134			

LCS (3111008-BS1)

Prepared: 10-Nov-23 Analyzed: 13-Nov-23

Benzene	1.78	0.050	mg/kg	2.00		89.1	82.8-130			
Toluene	1.76	0.050	mg/kg	2.00		87.9	86-128			
Ethylbenzene	1.90	0.050	mg/kg	2.00		95.0	85.9-128			
m,p-Xylene	3.82	0.100	mg/kg	4.00		95.5	89-129			
o-Xylene	1.88	0.050	mg/kg	2.00		94.1	86.1-125			
Total Xylenes	5.70	0.150	mg/kg	6.00		95.1	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	0.0542		mg/kg	0.0500		108	71.5-134			

LCS Dup (3111008-BSD1)

Prepared & Analyzed: 10-Nov-23

Benzene	2.16	0.050	mg/kg	2.00		108	82.8-130	19.1	15.8	QR-04
Toluene	2.04	0.050	mg/kg	2.00		102	86-128	14.9	15.9	
Ethylbenzene	2.14	0.050	mg/kg	2.00		107	85.9-128	11.8	16	
m,p-Xylene	4.19	0.100	mg/kg	4.00		105	89-129	9.30	16.2	
o-Xylene	2.08	0.050	mg/kg	2.00		104	86.1-125	9.81	16.7	
Total Xylenes	6.27	0.150	mg/kg	6.00		105	88.2-128	9.47	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0502		mg/kg	0.0500		100	71.5-134			

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Analytical Results For:

ENSOLUM
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220

Project: SEMU PERMIAN 37
Project Number: 03D2057074 (32.5566346,-103.
Project Manager: AIMEE COLE
Fax To:

Reported:
15-Nov-23 09:48

Petroleum Hydrocarbons by GC FID - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 3111006 - General Prep - Organics**Blank (3111006-BLK1)**

Prepared & Analyzed: 10-Nov-23

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	53.2		mg/kg	50.0		106	48.2-134			
Surrogate: 1-Chlorooctadecane	51.5		mg/kg	50.0		103	49.1-148			

LCS (3111006-BS1)

Prepared & Analyzed: 10-Nov-23

GRO C6-C10	188	10.0	mg/kg	200		93.9	66.4-123			
DRO >C10-C28	173	10.0	mg/kg	200		86.5	66.5-118			
Total TPH C6-C28	361	10.0	mg/kg	400		90.2	77.6-123			
Surrogate: 1-Chlorooctane	61.7		mg/kg	50.0		123	48.2-134			
Surrogate: 1-Chlorooctadecane	62.2		mg/kg	50.0		124	49.1-148			

LCS Dup (3111006-BSD1)

Prepared & Analyzed: 10-Nov-23

GRO C6-C10	190	10.0	mg/kg	200		95.0	66.4-123	1.18	17.7	
DRO >C10-C28	171	10.0	mg/kg	200		85.4	66.5-118	1.19	21	
Total TPH C6-C28	361	10.0	mg/kg	400		90.2	77.6-123	0.0504	18.5	
Surrogate: 1-Chlorooctane	59.4		mg/kg	50.0		119	48.2-134			
Surrogate: 1-Chlorooctadecane	60.5		mg/kg	50.0		121	49.1-148			

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

QR-04	The RPD for the BS/BSD was outside of historical limits.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: PROSOLUN LLC		P.O. #:		BILL TO				ANALYSIS REQUEST							
Project Manager: Paul Cole		Company:													
Address: 612 Nat'l Parks Hwy		Attn:		State: NM		Zip: 88220									
City: Darkwood		Address:		City:		State:		Zip:							
Phone #: 720-584-7865		Fax #:		City:		State:		Zip:							
Project #: 08D2057014		Project Owner: Mosierick		City:		State:		Zip:							
Project Name: SEM Perimeter		City:		State:		Zip:									
Project Location: 32.5560316, -103.1960617		Phone #:		City:		State:		Zip:							
Sampler Name: William Falcornado		Fax #:		City:		State:		Zip:							
FOR LAB USE ONLY		P.O. #:		Company:		Attn:		Address:		City:		State:		Zip:	
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL	
H236167		* 14		1		1		X		X		X		X	
1		2		3		4		5		6		7		8	
2		3		4		5		6		7		8		9	
3		4		5		6		7		8		9		10	
4		5		6		7		8		9		10		11	
5		6		7		8		9		10		11		12	
6		7		8		9		10		11		12		13	
7		8		9		10		11		12		13		14	
8		9		10		11		12		13		14		15	
9		10		11		12		13		14		15		16	
10		11		12		13		14		15		16		17	
11		12		13		14		15		16		17		18	
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13		14		15		16		17		18		19		20	
14		15		16		17		18		19		20		21	
15		16		17		18		19		20		21		22	
16		17		18		19		20		21		22		23	
17		18		19		20		21		22		23		24	
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20		21		22		23		24		25		26		27	
21		22		23		24		25		26		27		28	
22		23		24		25		26		27		28		29	
23		24		25		26		27		28		29		30	
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93		94		95		96		97		98		99		100	
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95		96		97		98		99		100		101		102	
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106		107		108		109		110		111		112		113	
107		108		109		110		111		112		113		114	
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117		118		119		120		121		122		123		124	
118		119		120		121		122		123		124		125	
119		120		121		122		123		124		125		126	
120		121		122		123		124		125		126		127	
121		122		123		124		125		126		127		128	
122		123		124		125		126		127		128		129	
123		124		125		126		127		128		129		130	
124		125		126		127		128		129		130		131	
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127		128		129		130		131		132		133		134	
128		129		130		131		132		133		134		135	
129		130		131		132		133		134		135		136	
130		131		132		133		134		135		136		137	
131		132		133		134		135		136					



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

November 06, 2023

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: SEMU PERMIAN 37

Enclosed are the results of analyses for samples received by the laboratory on 11/01/23 14:10.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/01/2023
 Reported: 11/06/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346,-103.1960617

Sampling Date: 11/01/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: FS 05 @ 4' (H235991-01)

BTEx 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/04/2023	ND	1.92	95.9	2.00	1.00	
Toluene*	<0.050	0.050	11/04/2023	ND	2.03	102	2.00	0.342	
Ethylbenzene*	<0.050	0.050	11/04/2023	ND	2.03	102	2.00	0.975	
Total Xylenes*	<0.150	0.150	11/04/2023	ND	6.17	103	6.00	0.640	
Total BTEx	<0.300	0.300	11/04/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/06/2023	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/03/2023	ND	210	105	200	2.75	
DRO >C10-C28*	<10.0	10.0	11/03/2023	ND	217	108	200	1.37	
EXT DRO >C28-C36	<10.0	10.0	11/03/2023	ND					

Surrogate: 1-Chlorooctane 87.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/01/2023
 Reported: 11/06/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346,-103.1960617

Sampling Date: 11/01/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: FS 06 @ 4' (H235991-02)

BTEX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/04/2023	ND	1.92	95.9	2.00	1.00		
Toluene*	<0.050	0.050	11/04/2023	ND	2.03	102	2.00	0.342		
Ethylbenzene*	<0.050	0.050	11/04/2023	ND	2.03	102	2.00	0.975		
Total Xylenes*	<0.150	0.150	11/04/2023	ND	6.17	103	6.00	0.640		
Total BTEX	<0.300	0.300	11/04/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/06/2023	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/03/2023	ND	210	105	200	2.75	
DRO >C10-C28*	<10.0	10.0	11/03/2023	ND	217	108	200	1.37	
EXT DRO >C28-C36	<10.0	10.0	11/03/2023	ND					

Surrogate: 1-Chlorooctane 114 % 48.2-134

Surrogate: 1-Chlorooctadecane 136 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/01/2023
 Reported: 11/06/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346,-103.1960617

Sampling Date: 11/01/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: PH 01 A @ 6' (H235991-03)

BTEx 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/04/2023	ND	1.92	95.9	2.00	1.00		
Toluene*	<0.050	0.050	11/04/2023	ND	2.03	102	2.00	0.342		
Ethylbenzene*	<0.050	0.050	11/04/2023	ND	2.03	102	2.00	0.975		
Total Xylenes*	<0.150	0.150	11/04/2023	ND	6.17	103	6.00	0.640		
Total BTEX	<0.300	0.300	11/04/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	320	16.0	11/06/2023	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/03/2023	ND	210	105	200	2.75	
DRO >C10-C28*	33.9	10.0	11/03/2023	ND	217	108	200	1.37	
EXT DRO >C28-C36	<10.0	10.0	11/03/2023	ND					

Surrogate: 1-Chlorooctane 91.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/01/2023
 Reported: 11/06/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346,-103.1960617

Sampling Date: 11/01/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: PH 01 C @ 12' (H235991-04)

BTEx 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/04/2023	ND	1.92	95.9	2.00	1.00		
Toluene*	<0.050	0.050	11/04/2023	ND	2.03	102	2.00	0.342		
Ethylbenzene*	<0.050	0.050	11/04/2023	ND	2.03	102	2.00	0.975		
Total Xylenes*	<0.150	0.150	11/04/2023	ND	6.17	103	6.00	0.640		
Total BTEX	<0.300	0.300	11/04/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/06/2023	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/03/2023	ND	210	105	200	2.75	
DRO >C10-C28*	<10.0	10.0	11/03/2023	ND	217	108	200	1.37	
EXT DRO >C28-C36	<10.0	10.0	11/03/2023	ND					

Surrogate: 1-Chlorooctane 99.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 119 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/01/2023
 Reported: 11/06/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346,-103.1960617

Sampling Date: 11/01/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SW 01 @ 0-4' (H235991-05)

BTX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/04/2023	ND	1.92	95.9	2.00	1.00		
Toluene*	<0.050	0.050	11/04/2023	ND	2.03	102	2.00	0.342		
Ethylbenzene*	<0.050	0.050	11/04/2023	ND	2.03	102	2.00	0.975		
Total Xylenes*	<0.150	0.150	11/04/2023	ND	6.17	103	6.00	0.640		
Total BTX	<0.300	0.300	11/04/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/06/2023	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/03/2023	ND	210	105	200	2.75	
DRO >C10-C28*	<10.0	10.0	11/03/2023	ND	217	108	200	1.37	
EXT DRO >C28-C36	<10.0	10.0	11/03/2023	ND					

Surrogate: 1-Chlorooctane 95.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 114 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/01/2023
 Reported: 11/06/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346,-103.1960617

Sampling Date: 11/01/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SW 02 @ 0-4' (H235991-06)

BTX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/04/2023	ND	1.92	95.9	2.00	1.00		
Toluene*	<0.050	0.050	11/04/2023	ND	2.03	102	2.00	0.342		
Ethylbenzene*	<0.050	0.050	11/04/2023	ND	2.03	102	2.00	0.975		
Total Xylenes*	<0.150	0.150	11/04/2023	ND	6.17	103	6.00	0.640		
Total BTX	<0.300	0.300	11/04/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/06/2023	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/03/2023	ND	210	105	200	2.75	
DRO >C10-C28*	<10.0	10.0	11/03/2023	ND	217	108	200	1.37	
EXT DRO >C28-C36	<10.0	10.0	11/03/2023	ND					

Surrogate: 1-Chlorooctane 92.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 113 % 49.1-148

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Notes and Definitions

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

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

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Cardinal LLC</u> Project Manager: <u>James Cole</u> Address: <u>812 Nati Parts Hwy</u> City: <u>Portbeal</u> State: <u>Wm</u> zip: <u>88220</u> Phone #: <u>(720) 284-1365</u> Fax #: <u></u> Project #: <u>0620057074</u> Project Owner: <u>Maverick</u> Project Name: <u>Sun Fernwah 37</u> Project Location: <u>(32.5566346, -103.1960677)</u> Sampler Name: <u>Shanna Falcornova</u> Fax #: <u></u>				P.O. #: <u></u> Company: <u></u> Attn: <u></u> Address: <u></u> City: <u></u> State: <u></u> Zip: <u></u> Phone #: <u></u>					
FOR LAB USE ONLY				BILL TO		ANALYSIS REQUEST			
Lab I.D. <u>H35991</u>		Sample I.D.		MATRIX <input checked="" type="checkbox"/> GROUNDWATER <input type="checkbox"/> WASTEWATER <input checked="" type="checkbox"/> SOIL <input type="checkbox"/> OIL <input type="checkbox"/> SLUDGE <input type="checkbox"/> OTHER : <u></u> <input checked="" type="checkbox"/> ACID/BASE: <input checked="" type="checkbox"/> ICE / COOL <input type="checkbox"/> OTHER : <u></u>		PRESERV. <u></u>		SAMPLING	
Reinquinshed By: <u>[Signature]</u>		Date: <u>11-1-23</u>		Received By: <u>[Signature]</u>		Verbal Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phon. #: <u></u>			
Reinquinshed By: <u>[Signature]</u>		Date: <u>11-1-23</u>		Received By: <u>[Signature]</u>		Verbal Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phon. #: <u></u>			
Delivered By: (Circle One) Sampler - UPS - Bus - Other: <u></u>		Observed Temp. °C <u>4.9</u>		Sample Condition Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>		CHECKED BY: <u>[Signature]</u>			
Turnaround Time: <u>1 APR 2005 05:30:01</u>		Thermometer ID #140 <u></u>		Bacteria (only) Sample Condition Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>		Corrected Temp. °C <u></u>			



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November 08, 2023

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: SEMU PERMIAN 37

Enclosed are the results of analyses for samples received by the laboratory on 11/02/23 14:47.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is fluid and cursive, with the first name "Celey" and last name "Keene" clearly distinguishable.

Celey D. Keene

Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/02/2023
 Reported: 11/08/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346, -103.1960617

Sampling Date: 11/02/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS 07 @ 4' (H236036-01)

BTX 8021B		mg/kg	Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/05/2023	ND	1.93	96.6	2.00	10.2	
Toluene*	<0.050	0.050	11/05/2023	ND	1.92	96.0	2.00	10.8	
Ethylbenzene*	<0.050	0.050	11/05/2023	ND	1.90	95.1	2.00	11.2	
Total Xylenes*	<0.150	0.150	11/05/2023	ND	5.96	99.3	6.00	10.1	
Total BTX	<0.300	0.300	11/05/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	11/06/2023	ND	448	112	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/05/2023	ND	203	101	200	2.28	
DRO >C10-C28*	12.4	10.0	11/05/2023	ND	184	92.1	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	11/05/2023	ND					

Surrogate: 1-Chlorooctane 88.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/02/2023
 Reported: 11/08/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346, -103.1960617

Sampling Date: 11/02/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS 08 @ 4' (H236036-02)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/05/2023	ND	1.93	96.6	2.00	10.2		
Toluene*	<0.050	0.050	11/05/2023	ND	1.92	96.0	2.00	10.8		
Ethylbenzene*	<0.050	0.050	11/05/2023	ND	1.90	95.1	2.00	11.2		
Total Xylenes*	<0.150	0.150	11/05/2023	ND	5.96	99.3	6.00	10.1		
Total BTEx	<0.300	0.300	11/05/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	11/06/2023	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/05/2023	ND	203	101	200	2.28	
DRO >C10-C28*	36.4	10.0	11/05/2023	ND	184	92.1	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	11/05/2023	ND					

Surrogate: 1-Chlorooctane 86.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/02/2023
 Reported: 11/08/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346, -103.1960617

Sampling Date: 11/02/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS 09 @ 4' (H236036-03)

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/05/2023	ND	1.90	95.2	2.00	11.6		
Toluene*	<0.050	0.050	11/05/2023	ND	1.90	94.9	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/05/2023	ND	1.88	93.9	2.00	12.2		
Total Xylenes*	<0.150	0.150	11/05/2023	ND	5.86	97.7	6.00	11.4		
Total BTX	<0.300	0.300	11/05/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	416	16.0	11/06/2023	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/05/2023	ND	203	101	200	2.28	
DRO >C10-C28*	17.9	10.0	11/05/2023	ND	184	92.1	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	11/05/2023	ND					

Surrogate: 1-Chlorooctane 99.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/02/2023
 Reported: 11/08/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346, -103.1960617

Sampling Date: 11/02/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS 10 @ 4' (H236036-04)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/05/2023	ND	1.90	95.2	2.00	11.6		
Toluene*	<0.050	0.050	11/05/2023	ND	1.90	94.9	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/05/2023	ND	1.88	93.9	2.00	12.2		
Total Xylenes*	<0.150	0.150	11/05/2023	ND	5.86	97.7	6.00	11.4		
Total BTEx	<0.300	0.300	11/05/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2080	16.0	11/06/2023	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/05/2023	ND	203	101	200	2.28	
DRO >C10-C28*	<10.0	10.0	11/05/2023	ND	184	92.1	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	11/05/2023	ND					

Surrogate: 1-Chlorooctane 93.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/02/2023
 Reported: 11/08/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346, -103.1960617

Sampling Date: 11/02/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS 11 @ 4' (H236036-05)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/05/2023	ND	1.90	95.2	2.00	11.6		
Toluene*	<0.050	0.050	11/05/2023	ND	1.90	94.9	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/05/2023	ND	1.88	93.9	2.00	12.2		
Total Xylenes*	<0.150	0.150	11/05/2023	ND	5.86	97.7	6.00	11.4		
Total BTEX	<0.300	0.300	11/05/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	352	16.0	11/06/2023	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/06/2023	ND	210	105	200	1.60	
DRO >C10-C28*	<10.0	10.0	11/06/2023	ND	201	100	200	4.80	
EXT DRO >C28-C36	<10.0	10.0	11/06/2023	ND					

Surrogate: 1-Chlorooctane 74.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/02/2023
 Reported: 11/08/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346, -103.1960617

Sampling Date: 11/02/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS 12 @ 4' (H236036-06)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/05/2023	ND	1.90	95.2	2.00	11.6		
Toluene*	<0.050	0.050	11/05/2023	ND	1.90	94.9	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/05/2023	ND	1.88	93.9	2.00	12.2		
Total Xylenes*	<0.150	0.150	11/05/2023	ND	5.86	97.7	6.00	11.4		
Total BTEX	<0.300	0.300	11/05/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	368	16.0	11/06/2023	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/06/2023	ND	210	105	200	1.60	
DRO >C10-C28*	11.0	10.0	11/06/2023	ND	201	100	200	4.80	
EXT DRO >C28-C36	<10.0	10.0	11/06/2023	ND					

Surrogate: 1-Chlorooctane 76.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.8 % 49.1-148

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Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/02/2023
 Reported: 11/08/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346, -103.1960617

Sampling Date: 11/02/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS 13 @ 4' (H236036-07)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/05/2023	ND	1.90	95.2	2.00	11.6		
Toluene*	<0.050	0.050	11/05/2023	ND	1.90	94.9	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/05/2023	ND	1.88	93.9	2.00	12.2		
Total Xylenes*	<0.150	0.150	11/05/2023	ND	5.86	97.7	6.00	11.4		
Total BTEx	<0.300	0.300	11/05/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2120	16.0	11/06/2023	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/06/2023	ND	210	105	200	1.60	
DRO >C10-C28*	<10.0	10.0	11/06/2023	ND	201	100	200	4.80	
EXT DRO >C28-C36	<10.0	10.0	11/06/2023	ND					

Surrogate: 1-Chlorooctane 82.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.8 % 49.1-148

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Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/02/2023
 Reported: 11/08/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346, -103.1960617

Sampling Date: 11/02/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SS 01 @ .5' (H236036-08)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/05/2023	ND	1.90	95.2	2.00	11.6		
Toluene*	<0.050	0.050	11/05/2023	ND	1.90	94.9	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/05/2023	ND	1.88	93.9	2.00	12.2		
Total Xylenes*	<0.150	0.150	11/05/2023	ND	5.86	97.7	6.00	11.4		
Total BTEx	<0.300	0.300	11/05/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/06/2023	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/06/2023	ND	210	105	200	1.60	
DRO >C10-C28*	<10.0	10.0	11/06/2023	ND	201	100	200	4.80	
EXT DRO >C28-C36	<10.0	10.0	11/06/2023	ND					

Surrogate: 1-Chlorooctane 75.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.8 % 49.1-148

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Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/02/2023
 Reported: 11/08/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346, -103.1960617

Sampling Date: 11/02/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SS 02 @ .5' (H236036-09)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/05/2023	ND	1.90	95.2	2.00	11.6		
Toluene*	<0.050	0.050	11/05/2023	ND	1.90	94.9	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/05/2023	ND	1.88	93.9	2.00	12.2		
Total Xylenes*	<0.150	0.150	11/05/2023	ND	5.86	97.7	6.00	11.4		
Total BTEX	<0.300	0.300	11/05/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/06/2023	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/06/2023	ND	210	105	200	1.60	
DRO >C10-C28*	<10.0	10.0	11/06/2023	ND	201	100	200	4.80	
EXT DRO >C28-C36	<10.0	10.0	11/06/2023	ND					

Surrogate: 1-Chlorooctane 68.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.2 % 49.1-148

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Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/02/2023
 Reported: 11/08/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346, -103.1960617

Sampling Date: 11/02/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SS 03 @ .5' (H236036-10)

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/05/2023	ND	1.90	95.2	2.00	11.6		
Toluene*	<0.050	0.050	11/05/2023	ND	1.90	94.9	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/05/2023	ND	1.88	93.9	2.00	12.2		
Total Xylenes*	<0.150	0.150	11/05/2023	ND	5.86	97.7	6.00	11.4		
Total BTX	<0.300	0.300	11/05/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/06/2023	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/06/2023	ND	210	105	200	1.60	
DRO >C10-C28*	<10.0	10.0	11/06/2023	ND	201	100	200	4.80	
EXT DRO >C28-C36	<10.0	10.0	11/06/2023	ND					

Surrogate: 1-Chlorooctane 77.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.9 % 49.1-148

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Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/02/2023
 Reported: 11/08/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346, -103.1960617

Sampling Date: 11/02/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SS 04 @ .5' (H236036-11)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/05/2023	ND	1.90	95.2	2.00	11.6		
Toluene*	<0.050	0.050	11/05/2023	ND	1.90	94.9	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/05/2023	ND	1.88	93.9	2.00	12.2		
Total Xylenes*	<0.150	0.150	11/05/2023	ND	5.86	97.7	6.00	11.4		
Total BTEx	<0.300	0.300	11/05/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/06/2023	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/06/2023	ND	210	105	200	1.60	
DRO >C10-C28*	<10.0	10.0	11/06/2023	ND	201	100	200	4.80	
EXT DRO >C28-C36	<10.0	10.0	11/06/2023	ND					

Surrogate: 1-Chlorooctane 79.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.4 % 49.1-148

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Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/02/2023
 Reported: 11/08/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346, -103.1960617

Sampling Date: 11/02/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SS 05 @ .5' (H236036-12)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/05/2023	ND	1.90	95.2	2.00	11.6		
Toluene*	<0.050	0.050	11/05/2023	ND	1.90	94.9	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/05/2023	ND	1.88	93.9	2.00	12.2		
Total Xylenes*	<0.150	0.150	11/05/2023	ND	5.86	97.7	6.00	11.4		
Total BTEx	<0.300	0.300	11/05/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/06/2023	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/07/2023	ND	210	105	200	1.60	
DRO >C10-C28*	<10.0	10.0	11/07/2023	ND	201	100	200	4.80	
EXT DRO >C28-C36	<10.0	10.0	11/07/2023	ND					

Surrogate: 1-Chlorooctane 78.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.1 % 49.1-148

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Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/02/2023
 Reported: 11/08/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346, -103.1960617

Sampling Date: 11/02/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SS 06 @ .5' (H236036-13)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/05/2023	ND	1.90	95.2	2.00	11.6		
Toluene*	<0.050	0.050	11/05/2023	ND	1.90	94.9	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/05/2023	ND	1.88	93.9	2.00	12.2		
Total Xylenes*	<0.150	0.150	11/05/2023	ND	5.86	97.7	6.00	11.4		
Total BTEX	<0.300	0.300	11/05/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/06/2023	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/07/2023	ND	210	105	200	1.60	
DRO >C10-C28*	<10.0	10.0	11/07/2023	ND	201	100	200	4.80	
EXT DRO >C28-C36	<10.0	10.0	11/07/2023	ND					

Surrogate: 1-Chlorooctane 81.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/02/2023
 Reported: 11/08/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346, -103.1960617

Sampling Date: 11/02/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS 01 @ 11' (H236036-14)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/05/2023	ND	1.90	95.2	2.00	11.6		
Toluene*	<0.050	0.050	11/05/2023	ND	1.90	94.9	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/05/2023	ND	1.88	93.9	2.00	12.2		
Total Xylenes*	<0.150	0.150	11/05/2023	ND	5.86	97.7	6.00	11.4		
Total BTEx	<0.300	0.300	11/05/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2560	16.0	11/06/2023	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/07/2023	ND	210	105	200	1.60	
DRO >C10-C28*	<10.0	10.0	11/07/2023	ND	201	100	200	4.80	
EXT DRO >C28-C36	<10.0	10.0	11/07/2023	ND					

Surrogate: 1-Chlorooctane 76.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/02/2023
 Reported: 11/08/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346, -103.1960617

Sampling Date: 11/02/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS 02 @ 11' (H236036-15)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/05/2023	ND	1.90	95.2	2.00	11.6		
Toluene*	<0.050	0.050	11/05/2023	ND	1.90	94.9	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/05/2023	ND	1.88	93.9	2.00	12.2		
Total Xylenes*	<0.150	0.150	11/05/2023	ND	5.86	97.7	6.00	11.4		
Total BTEx	<0.300	0.300	11/05/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	11/06/2023	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	20.0	10.0	11/07/2023	ND	210	105	200	1.60	
DRO >C10-C28*	1760	10.0	11/07/2023	ND	201	100	200	4.80	
EXT DRO >C28-C36	397	10.0	11/07/2023	ND					

Surrogate: 1-Chlorooctane 99.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 120 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/02/2023
 Reported: 11/08/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346, -103.1960617

Sampling Date: 11/02/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS 03 @ 11' (H236036-16)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/05/2023	ND	1.90	95.2	2.00	11.6		
Toluene*	<0.050	0.050	11/05/2023	ND	1.90	94.9	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/05/2023	ND	1.88	93.9	2.00	12.2		
Total Xylenes*	<0.150	0.150	11/05/2023	ND	5.86	97.7	6.00	11.4		
Total BTEX	<0.300	0.300	11/05/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2480	16.0	11/06/2023	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/07/2023	ND	210	105	200	1.60	
DRO >C10-C28*	12.3	10.0	11/07/2023	ND	201	100	200	4.80	
EXT DRO >C28-C36	<10.0	10.0	11/07/2023	ND					

Surrogate: 1-Chlorooctane 91.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/02/2023
 Reported: 11/08/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.5566346, -103.1960617

Sampling Date: 11/02/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS 04 @ 11' (H236036-17)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/05/2023	ND	1.90	95.2	2.00	11.6		
Toluene*	<0.050	0.050	11/05/2023	ND	1.90	94.9	2.00	11.6		
Ethylbenzene*	<0.050	0.050	11/05/2023	ND	1.88	93.9	2.00	12.2		
Total Xylenes*	<0.150	0.150	11/05/2023	ND	5.86	97.7	6.00	11.4		
Total BTEX	<0.300	0.300	11/05/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	11/06/2023	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	17.0	10.0	11/07/2023	ND	210	105	200	1.60	
DRO >C10-C28*	1620	10.0	11/07/2023	ND	201	100	200	4.80	
EXT DRO >C28-C36	367	10.0	11/07/2023	ND					

Surrogate: 1-Chlorooctane 95.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager

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

Notes and Definitions

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

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

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: CRSOLUM, LLC		BILL TO		ANALYSIS REQUEST			
Project Manager: Amel Cole		P.O. #: A.A.					
Address: 8122 Batl Parts Hwy		Company:					
City: Carlsbad		Attn:					
State: NM Zip: 88220		Address:					
Phone #: 720-384-7305 Fax #:		City:					
Project #: D8D2057074 Project Owner: Mausenick		State:					
Project Location: Sam Perreira 37		Zip:					
Sampler Name: Monica Falcone		Phone #:					
Fax #:		PRESERV.					
FOR LAB USE ONLY		SAMPLING					
Lab I.D. H236036		Sample I.D.					
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						GROUNDWATER	
						WASTEWATER	
						SOIL	
						OIL	
						SLUDGE	
						OTHER :	
						ACID/BASE:	
						ICE / COOL	
						OTHER :	
		DATE		TIME			
ESD7 04'		11/12/23		11:00		X	
ESD8 04'				11:05		X	
ESD9 04'				11:10		X	
ESD10 04'				11:15			
ESD11 04'				11:20			
ESD12 04'				11:25			
ESD13 04'				11:30			
ESD14 04'				11:35			
ESD15 04'				11:40			
ESD16 04'				11:45			
ESD17 04'				11:50			
ESD18 04'				11:55			
ESD19 04'				12:00			
ESD20 04'				12:05			
ESD21 04'				12:10			
ESD22 04'				12:15			
ESD23 04'				12:20			
ESD24 04'				12:25			
ESD25 04'				12:30			
ESD26 04'				12:35			
ESD27 04'				12:40			
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ESD39 04'				13:40			
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ESD41 04'				13:50			
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ESD48 04'				14:25			
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ESD51 04'				14:40			
ESD52 04'				14:45			
ESD53 04'				14:50			
ESD54 04'				14:55			
ESD55 04'				15:00			
ESD56 04'				15:05			
ESD57 04'				15:10			
ESD58 04'				15:15			
ESD59 04'				15:20			
ESD60 04'				15:25			
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ESD62 04'				15:35			
ESD63 04'				15:40			
ESD64 04'				15:45			
ESD65 04'				15:50			
ESD66 04'				15:55			
ESD67 04'				16:00			
ESD68 04'				16:05			
ESD69 04'				16:10			
ESD70 04'				16:15			
ESD71 04'				16:20			
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ESD74 04'				16:35			
ESD75 04'				16:40			
ESD76 04'				16:45			
ESD77 04'				16:50			
ESD78 04'				16:55			
ESD79 04'				17:00			
ESD80 04'				17:05			
ESD81 04'				17:10			
ESD82 04'				17:15			
ESD83 04'				17:20			
ESD84 04'				17:25			
ESD85 04'				17:30			
ESD86 04'				17:35			
ESD87 04'				17:40			
ESD88 04'				17:45			
ESD89 04'				17:50			
ESD90 04'				17:55			
ESD91 04'				18:00			
ESD92 04'				18:05			
ESD93 04'				18:10			
ESD94 04'				18:15			
ESD95 04'				18:20			
ESD96 04'				18:25			
ESD97 04'				18:30			
ESD98 04'				18:35			
ESD99 04'				18:40			
ESD100 04'				18:45			
ESD101 04'				18:50			
ESD102 04'				18:55			
ESD103 04'				19:00			
ESD104 04'				19:05			
ESD105 04'				19:10			
ESD106 04'				19:15			
ESD107 04'				19:20			
ESD108 04'				19:25			
ESD109 04'				19:30			
ESD110 04'				19:35			
ESD111 04'				19:40			
ESD112 04'				19:45			
ESD113 04'				19:50			
ESD114 04'				19:55			
ESD115 04'				20:00			
ESD116 04'				20:05			
ESD117 04'				20:10			
ESD118 04'				20:15			
ESD119 04'				20:20			
ESD120 04'				20:25			
ESD121 04'				20:30			
ESD122 04'				20:35			
ESD123 04'				20:40			
ESD124 04'				20:45			
ESD125 04'				20:50			
ESD126 04'				20:55			
ESD127 04'				21:00			
ESD128 04'				21:05			
ESD129 04'				21:10			
ESD130 04'				21:15			
ESD131 04'				21:20			
ESD132 04'				21:25			
ESD133 04'				21:30			
ESD134 04'				21:35			
ESD135 04'				21:40			
ESD136 04'				21:45			
ESD137 04'				21:50			
ESD138 04'				21:55			
ESD139 04'				22:00			
ESD140 04'				22:05			
ESD141 04'				22:10			
ESD142 04'				22:15			
ESD143 04'				22:20			
ESD144 04'				22:25			
ESD145 04'				22:30			
ESD146 04'				22:35			
ESD147 04'				22:40			
ESD148 04'				22:45			
ESD149 04'				22:50			
ESD150 04'				22:55			
ESD151 04'				23:00			
ESD152 04'				23:05			
ESD153 04'				23:10			
ESD154 04'				23:15			
ESD155 04'				23:20			
ESD156 04'				23:25			
ESD157 04'				23:30			
ESD158 04'				23:35			
ESD159 04'				23:40			
ESD160 04'				23:45			
ESD161 04'				23:50			
ESD162 04'				23:55			
ESD163 04'				00:00			
ESD164 04'				00:05			
ESD165 04'				00:10			
ESD166 04'				00:15			
ESD167 04'				00:20			
ESD168 04'				00:25			
ESD169 04'				00:30			
ESD170 04'				00:35			
ESD171 04'				00:40			
ESD172 04'				00:45			
ESD173 04'				00:50			
ESD174 04'				00:55			
ESD175 04'				01:00			
ESD176 04'				01:05			
ESD177 04'				01:10			
ESD178 04'				01:15			
ESD179 04'				01:20			
ESD180 04'				01:25			
ESD181 04'				01:30			
ESD182 04'				01:35			
ESD183 04'				01:40			
ESD184 04'				01:45			
ESD185 04'				01:50			
ESD186 04'				01:55			
ESD187 04'				02:00			
ESD188 04'				02:05			
ESD189 04'				02:10			
ESD190 04'				02:15			
ESD191 04'				02:20			
ESD192 04'				02:25			
ESD193 04'				02:30			
ESD194 04'				02:35			
ESD195 04'				02:40			
ESD196 04'				02:45			
ESD197 04'				02:50			
ESD198 04'				02:55			
ESD199 04'				03:00			
ESD200 04'				03:05			
ESD201 04'				03:10			
ESD202 04'				03:15			
ESD203 04'				03:20			
ESD204 04'				03:25			
ESD205 04'				03:30			
ESD206 04'				03:35			
ESD207 04'				03:40			
ESD208 04'				03:45			
ESD209 04'							



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

November 02, 2023

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: SEMU PERMIAN 37

Enclosed are the results of analyses for samples received by the laboratory on 11/01/23 14:10.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Mike Snyder". The signature is fluid and cursive, with the first name "Mike" and last name "Snyder" clearly distinguishable.

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 AIMEE COLE
 3122 NATIONAL PARKS HWY
 CARLSBAD NM, 88220
 Fax To:

Received: 11/01/2023
 Reported: 11/02/2023
 Project Name: SEMU PERMIAN 37
 Project Number: 03D2057074
 Project Location: MAVERICK 32.55793,-103.19143

Sampling Date: 11/01/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: PH 01 B @ 10' (H235990-01)

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/01/2023	ND	2.01	101	2.00	2.73		
Toluene*	<0.050	0.050	11/01/2023	ND	2.06	103	2.00	5.24		
Ethylbenzene*	<0.050	0.050	11/01/2023	ND	2.22	111	2.00	6.71		
Total Xylenes*	<0.150	0.150	11/01/2023	ND	6.69	112	6.00	7.74		
Total BTX	<0.300	0.300	11/01/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.1 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	11/02/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/02/2023	ND	198	99.0	200	7.07	
DRO >C10-C28*	<10.0	10.0	11/02/2023	ND	207	103	200	3.45	
EXT DRO >C28-C36	<10.0	10.0	11/02/2023	ND					

Surrogate: 1-Chlorooctane 88.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

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*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Mike Snyder".

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Josh Adams

Ensolum

601 N. Marienfeld St.

Suite 400

Midland, Texas 79701

Generated 2/24/2023 2:03:25 PM

JOB DESCRIPTION

SEMU Permian 37

SDG NUMBER 03D2057074

JOB NUMBER

890-4122-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Eurofins Carlsbad

Job Notes

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

Authorization



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

Client: Ensolum
Project/Site: SEMU Permian 37

Laboratory Job ID: 890-4122-1
SDG: 03D2057074

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Definitions/Glossary

Client: Ensolum
Project/Site: SEMU Permian 37

Job ID: 890-4122-1
SDG: 03D2057074

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
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: SEMU Permian 37

Job ID: 890-4122-1
SDG: 03D2057074

Job ID: 890-4122-1

Laboratory: Eurofins Carlsbad

Narrative	
Job Narrative 890-4122-1	

Receipt

The samples were received on 2/17/2023 8:18 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 2.2°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-4122-1), SS02 (890-4122-2) and SS03 (890-4122-3).

GC VOA

Method 8021B: The following sample was diluted due to the nature of the sample matrix: SS02 (890-4122-2). Elevated reporting limits (RLs) are provided.

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: Surrogate recovery for the following samples were outside control limits: SS01 (890-4122-1), SS02 (890-4122-2) and SS03 (890-4122-3). Evidence of matrix interferences is not obvious.

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.

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Client Sample Results

Client: Ensolum
Project/Site: SEMU Permian 37

Job ID: 890-4122-1
SDG: 03D2057074

Client Sample ID: SS01

Lab Sample ID: 890-4122-1

Date Collected: 02/16/23 14:00

Matrix: Solid

Date Received: 02/17/23 08:18

Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.262		0.201	mg/Kg		02/23/23 09:25	02/24/23 02:10	100
Toluene	2.40		0.201	mg/Kg		02/23/23 09:25	02/24/23 02:10	100
Ethylbenzene	4.54		0.201	mg/Kg		02/23/23 09:25	02/24/23 02:10	100
m-Xylene & p-Xylene	15.9		0.402	mg/Kg		02/23/23 09:25	02/24/23 02:10	100
o-Xylene	9.96		0.201	mg/Kg		02/23/23 09:25	02/24/23 02:10	100
Xylenes, Total	25.9		0.402	mg/Kg		02/23/23 09:25	02/24/23 02:10	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	179	S1+	70 - 130	02/23/23 09:25	02/24/23 02:10	100
1,4-Difluorobenzene (Surr)	98		70 - 130	02/23/23 09:25	02/24/23 02:10	100

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	33.1		0.402	mg/Kg			02/24/23 14:46	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	20000		997	mg/Kg			02/23/23 11:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	2480		997	mg/Kg		02/22/23 16:36	02/23/23 05:15	20
Diesel Range Organics (Over C10-C28)	17500		997	mg/Kg		02/22/23 16:36	02/23/23 05:15	20
Oil Range Organics (Over C28-C36)	<997	U	997	mg/Kg		02/22/23 16:36	02/23/23 05:15	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	396	S1+	70 - 130	02/22/23 16:36	02/23/23 05:15	20
o-Terphenyl	542	S1+	70 - 130	02/22/23 16:36	02/23/23 05:15	20

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	571		4.96	mg/Kg			02/21/23 18:03	1

Client Sample ID: SS02

Lab Sample ID: 890-4122-2

Date Collected: 02/16/23 14:05

Matrix: Solid

Date Received: 02/17/23 08:18

Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.198	U	0.198	mg/Kg		02/23/23 09:25	02/24/23 02:31	100
Toluene	4.86		0.198	mg/Kg		02/23/23 09:25	02/24/23 02:31	100
Ethylbenzene	5.59		0.198	mg/Kg		02/23/23 09:25	02/24/23 02:31	100
m-Xylene & p-Xylene	24.8		0.396	mg/Kg		02/23/23 09:25	02/24/23 02:31	100
o-Xylene	11.7		0.198	mg/Kg		02/23/23 09:25	02/24/23 02:31	100
Xylenes, Total	36.5		0.396	mg/Kg		02/23/23 09:25	02/24/23 02:31	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	200	S1+	70 - 130	02/23/23 09:25	02/24/23 02:31	100

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Client Sample Results

Client: Ensolum
Project/Site: SEMU Permian 37

Job ID: 890-4122-1
SDG: 03D2057074

Client Sample ID: SS02

Lab Sample ID: 890-4122-2

Date Collected: 02/16/23 14:05

Matrix: Solid

Date Received: 02/17/23 08:18

Sample Depth: 0.5

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	99		70 - 130	02/23/23 09:25	02/24/23 02:31	100

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	47.0		0.396	mg/Kg			02/24/23 14:46	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	14800		999	mg/Kg			02/23/23 11:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	2600		999	mg/Kg		02/22/23 16:36	02/23/23 05:36	20
Diesel Range Organics (Over C10-C28)	12200		999	mg/Kg		02/22/23 16:36	02/23/23 05:36	20
Oil Range Organics (Over C28-C36)	<999	U	999	mg/Kg		02/22/23 16:36	02/23/23 05:36	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	282	S1+	70 - 130	02/22/23 16:36	02/23/23 05:36	20
o-Terphenyl	395	S1+	70 - 130	02/22/23 16:36	02/23/23 05:36	20

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	688		4.98	mg/Kg			02/21/23 18:09	1

Client Sample ID: SS03

Lab Sample ID: 890-4122-3

Date Collected: 02/16/23 14:10

Matrix: Solid

Date Received: 02/17/23 08:18

Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.524		0.200	mg/Kg		02/23/23 09:25	02/24/23 02:51	100
Toluene	19.7		0.200	mg/Kg		02/23/23 09:25	02/24/23 02:51	100
Ethylbenzene	22.1		0.200	mg/Kg		02/23/23 09:25	02/24/23 02:51	100
m-Xylene & p-Xylene	43.8		0.399	mg/Kg		02/23/23 09:25	02/24/23 02:51	100
o-Xylene	23.8		0.200	mg/Kg		02/23/23 09:25	02/24/23 02:51	100
Xylenes, Total	67.6		0.399	mg/Kg		02/23/23 09:25	02/24/23 02:51	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	267	S1+	70 - 130	02/23/23 09:25	02/24/23 02:51	100
1,4-Difluorobenzene (Surr)	102		70 - 130	02/23/23 09:25	02/24/23 02:51	100

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	110		0.399	mg/Kg			02/24/23 14:46	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	15700		998	mg/Kg			02/23/23 11:59	1

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Client Sample Results

Client: Ensolum
Project/Site: SEMU Permian 37

Job ID: 890-4122-1
SDG: 03D2057074

Client Sample ID: SS03
Date Collected: 02/16/23 14:10
Date Received: 02/17/23 08:18
Sample Depth: 0.5

Lab Sample ID: 890-4122-3
Matrix: Solid

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	3800		998	mg/Kg		02/22/23 16:36	02/23/23 05:58	20	
Diesel Range Organics (Over C10-C28)	11900		998	mg/Kg		02/22/23 16:36	02/23/23 05:58	20	
Oll Range Organics (Over C28-C36)	<998	U	998	mg/Kg		02/22/23 16:36	02/23/23 05:58	20	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	309	S1+	70 - 130			02/22/23 16:36	02/23/23 05:58	20	
o-Terphenyl	398	S1+	70 - 130			02/22/23 16:36	02/23/23 05:58	20	

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	702		4.99	mg/Kg			02/21/23 18:15	1	

Surrogate Summary

Client: Ensolum
Project/Site: SEMU Permian 37

Job ID: 890-4122-1
SDG: 03D2057074

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)
880-24920-A-1-D MS	Matrix Spike	118	105
880-24920-A-1-E MSD	Matrix Spike Duplicate	115	96
890-4122-1	SS01	179 S1+	98
890-4122-2	SS02	200 S1+	99
890-4122-3	SS03	267 S1+	102
LCS 880-47007/1-A	Lab Control Sample	122	100
LCSD 880-47007/2-A	Lab Control Sample Dup	110	104
MB 880-47001/5-A	Method Blank	76	87
MB 880-47007/5-A	Method Blank	78	94
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)
890-4122-1	SS01	396 S1+	542 S1+
890-4122-2	SS02	282 S1+	395 S1+
890-4122-3	SS03	309 S1+	398 S1+
890-4153-A-1-G MS	Matrix Spike	117	104
890-4153-A-1-H MSD	Matrix Spike Duplicate	98	89
LCS 880-46977/2-A	Lab Control Sample	98	88
LCSD 880-46977/3-A	Lab Control Sample Dup	100	91
MB 880-46977/1-A	Method Blank	126	127
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Ensolum
Project/Site: SEMU Permian 37

Job ID: 890-4122-1
SDG: 03D2057074

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-47001/5-A

Matrix: Solid

Analysis Batch: 47000

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 47001

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/23/23 08:38	02/23/23 11:47	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/23/23 08:38	02/23/23 11:47	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/23/23 08:38	02/23/23 11:47	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/23/23 08:38	02/23/23 11:47	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/23/23 08:38	02/23/23 11:47	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/23/23 08:38	02/23/23 11:47	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	76		70 - 130	02/23/23 08:38	02/23/23 11:47	1
1,4-Difluorobenzene (Surr)	87		70 - 130	02/23/23 08:38	02/23/23 11:47	1

Lab Sample ID: MB 880-47007/5-A

Matrix: Solid

Analysis Batch: 47000

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 47007

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/23/23 09:25	02/23/23 23:25	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/23/23 09:25	02/23/23 23:25	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/23/23 09:25	02/23/23 23:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/23/23 09:25	02/23/23 23:25	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/23/23 09:25	02/23/23 23:25	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/23/23 09:25	02/23/23 23:25	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	78		70 - 130	02/23/23 09:25	02/23/23 23:25	1
1,4-Difluorobenzene (Surr)	94		70 - 130	02/23/23 09:25	02/23/23 23:25	1

Lab Sample ID: LCS 880-47007/1-A

Matrix: Solid

Analysis Batch: 47000

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 47007

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09393		mg/Kg		94	70 - 130
Toluene	0.100	0.09350		mg/Kg		93	70 - 130
Ethylbenzene	0.100	0.1024		mg/Kg		102	70 - 130
m-Xylene & p-Xylene	0.200	0.2149		mg/Kg		107	70 - 130
o-Xylene	0.100	0.1176		mg/Kg		118	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	122		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: LCSD 880-47007/2-A

Matrix: Solid

Analysis Batch: 47000

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 47007

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08161		mg/Kg		82	70 - 130	14	35

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QC Sample Results

Client: Ensolum
Project/Site: SEMU Permian 37

Job ID: 890-4122-1
SDG: 03D2057074

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

Lab Sample ID: LCSD 880-47007/2-A

Matrix: Solid

Analysis Batch: 47000

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 47007

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene	0.100	0.08564		mg/Kg		86	70 - 130	9	35
Ethylbenzene	0.100	0.09059		mg/Kg		91	70 - 130	12	35
m-Xylene & p-Xylene	0.200	0.1900		mg/Kg		95	70 - 130	12	35
o-Xylene	0.100	0.09988		mg/Kg		100	70 - 130	16	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: 880-24920-A-1-D MS

Matrix: Solid

Analysis Batch: 47000

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 47007

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.100	0.09590		mg/Kg		96	70 - 130
Toluene	<0.00200	U	0.100	0.09571		mg/Kg		94	70 - 130
Ethylbenzene	<0.00200	U	0.100	0.1007		mg/Kg		99	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.201	0.2081		mg/Kg		102	70 - 130
o-Xylene	<0.00200	U	0.100	0.1062		mg/Kg		105	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	118		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: 880-24920-A-1-E MSD

Matrix: Solid

Analysis Batch: 47000

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 47007

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0990	0.08695		mg/Kg		88	70 - 130	10	35
Toluene	<0.00200	U	0.0990	0.08891		mg/Kg		89	70 - 130	7	35
Ethylbenzene	<0.00200	U	0.0990	0.09431		mg/Kg		94	70 - 130	7	35
m-Xylene & p-Xylene	<0.00399	U	0.198	0.1968		mg/Kg		98	70 - 130	6	35
o-Xylene	<0.00200	U	0.0990	0.09940		mg/Kg		99	70 - 130	7	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	115		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

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

Lab Sample ID: MB 880-46977/1-A

Matrix: Solid

Analysis Batch: 46917

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 46977

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		02/22/23 16:36	02/22/23 21:03	1

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QC Sample Results

Client: Ensolum
Project/Site: SEMU Permian 37

Job ID: 890-4122-1
SDG: 03D2057074

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

Lab Sample ID: MB 880-46977/1-A

Matrix: Solid

Analysis Batch: 46917

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 46977

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/22/23 16:36	02/22/23 21:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/22/23 16:36	02/22/23 21:03	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	126		70 - 130			02/22/23 16:36	02/22/23 21:03	1
o-Terphenyl	127		70 - 130			02/22/23 16:36	02/22/23 21:03	1

Lab Sample ID: LCS 880-46977/2-A

Matrix: Solid

Analysis Batch: 46917

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 46977

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	832.8		mg/Kg		83	70 - 130
Diesel Range Organics (Over C10-C28)	1000	815.4		mg/Kg		82	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	98		70 - 130				
o-Terphenyl	88		70 - 130				

Lab Sample ID: LCSD 880-46977/3-A

Matrix: Solid

Analysis Batch: 46917

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 46977

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	878.3		mg/Kg		88	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	1000	830.0		mg/Kg		83	70 - 130	2	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	100		70 - 130						
o-Terphenyl	91		70 - 130						

Lab Sample ID: 890-4153-A-1-G MS

Matrix: Solid

Analysis Batch: 46917

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 46977

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	860.3		mg/Kg		84	70 - 130
Diesel Range Organics (Over C10-C28)	59.4		998	1043		mg/Kg		99	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane	117		70 - 130						
o-Terphenyl	104		70 - 130						

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QC Sample Results

Client: Ensolum
Project/Site: SEMU Permian 37

Job ID: 890-4122-1
SDG: 03D2057074

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

Lab Sample ID: 890-4153-A-1-H MSD

Matrix: Solid

Analysis Batch: 46917

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 46977

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	<50.0	U	997	988.5		mg/Kg		97	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	59.4		997	883.4		mg/Kg		83	70 - 130	17	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	98		70 - 130								
o-Terphenyl	89		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-46828/1-A

Matrix: Solid

Analysis Batch: 46871

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			02/21/23 15:17	1

Lab Sample ID: LCS 880-46828/2-A

Matrix: Solid

Analysis Batch: 46871

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	236.5		mg/Kg		95	90 - 110

Lab Sample ID: LCSD 880-46828/3-A

Matrix: Solid

Analysis Batch: 46871

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	243.9		mg/Kg		98	90 - 110	3	20

Lab Sample ID: 890-4120-A-1-B MS

Matrix: Solid

Analysis Batch: 46871

Client Sample ID: Matrix Spike

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	<4.97	U	249	240.7		mg/Kg		95	90 - 110

Lab Sample ID: 890-4120-A-1-C MSD

Matrix: Solid

Analysis Batch: 46871

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	<4.97	U	249	240.4		mg/Kg		95	90 - 110	0	20

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QC Association Summary

Client: Ensolum
Project/Site: SEMU Permian 37

Job ID: 890-4122-1
SDG: 03D2057074

GC VOA

Analysis Batch: 47000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4122-1	SS01	Total/NA	Solid	8021B	47007
890-4122-2	SS02	Total/NA	Solid	8021B	47007
890-4122-3	SS03	Total/NA	Solid	8021B	47007
MB 880-47001/5-A	Method Blank	Total/NA	Solid	8021B	47001
MB 880-47007/5-A	Method Blank	Total/NA	Solid	8021B	47007
LCS 880-47007/1-A	Lab Control Sample	Total/NA	Solid	8021B	47007
LCSD 880-47007/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	47007
880-24920-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	47007
880-24920-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	47007

Prep Batch: 47001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-47001/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 47007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4122-1	SS01	Total/NA	Solid	5035	
890-4122-2	SS02	Total/NA	Solid	5035	
890-4122-3	SS03	Total/NA	Solid	5035	
MB 880-47007/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-47007/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-47007/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-24920-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-24920-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 47193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4122-1	SS01	Total/NA	Solid	Total BTEX	
890-4122-2	SS02	Total/NA	Solid	Total BTEX	
890-4122-3	SS03	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 46917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4122-1	SS01	Total/NA	Solid	8015B NM	46977
890-4122-2	SS02	Total/NA	Solid	8015B NM	46977
890-4122-3	SS03	Total/NA	Solid	8015B NM	46977
MB 880-46977/1-A	Method Blank	Total/NA	Solid	8015B NM	46977
LCS 880-46977/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	46977
LCSD 880-46977/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	46977
890-4153-A-1-G MS	Matrix Spike	Total/NA	Solid	8015B NM	46977
890-4153-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	46977

Prep Batch: 46977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4122-1	SS01	Total/NA	Solid	8015NM Prep	
890-4122-2	SS02	Total/NA	Solid	8015NM Prep	
890-4122-3	SS03	Total/NA	Solid	8015NM Prep	
MB 880-46977/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-46977/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Ensolum
Project/Site: SEMU Permian 37

Job ID: 890-4122-1
SDG: 03D2057074

GC Semi VOA (Continued)

Prep Batch: 46977 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-46977/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4153-A-1-G MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4153-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 47032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4122-1	SS01	Total/NA	Solid	8015 NM	
890-4122-2	SS02	Total/NA	Solid	8015 NM	
890-4122-3	SS03	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 46828

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4122-1	SS01	Soluble	Solid	DI Leach	
890-4122-2	SS02	Soluble	Solid	DI Leach	
890-4122-3	SS03	Soluble	Solid	DI Leach	
MB 880-46828/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-46828/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-46828/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4120-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4120-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 46871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4122-1	SS01	Soluble	Solid	300.0	46828
890-4122-2	SS02	Soluble	Solid	300.0	46828
890-4122-3	SS03	Soluble	Solid	300.0	46828
MB 880-46828/1-A	Method Blank	Soluble	Solid	300.0	46828
LCS 880-46828/2-A	Lab Control Sample	Soluble	Solid	300.0	46828
LCSD 880-46828/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	46828
890-4120-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	46828
890-4120-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	46828

Lab Chronicle

Client: Ensolum
Project/Site: SEMU Permian 37

Job ID: 890-4122-1
SDG: 03D2057074

Client Sample ID: SS01
Date Collected: 02/16/23 14:00
Date Received: 02/17/23 08:18

Lab Sample ID: 890-4122-1
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			4.98 g	5 mL	47007	02/23/23 09:25	MNR	EET MID
Total/NA	Analysis	8021B		100	5 mL	5 mL	47000	02/24/23 02:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47193	02/24/23 14:46	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47032	02/23/23 11:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	46977	02/22/23 16:36	AJ	EET MID
Total/NA	Analysis	8015B NM		20	1 uL	1 uL	46917	02/23/23 05:15	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	46828	02/21/23 09:25	KS	EET MID
Soluble	Analysis	300.0		1			46871	02/21/23 18:03	CH	EET MID

Client Sample ID: SS02
Date Collected: 02/16/23 14:05
Date Received: 02/17/23 08:18

Lab Sample ID: 890-4122-2
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			5.05 g	5 mL	47007	02/23/23 09:25	MNR	EET MID
Total/NA	Analysis	8021B		100	5 mL	5 mL	47000	02/24/23 02:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47193	02/24/23 14:46	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47032	02/23/23 11:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	46977	02/22/23 16:36	AJ	EET MID
Total/NA	Analysis	8015B NM		20	1 uL	1 uL	46917	02/23/23 05:36	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	46828	02/21/23 09:25	KS	EET MID
Soluble	Analysis	300.0		1			46871	02/21/23 18:09	CH	EET MID

Client Sample ID: SS03
Date Collected: 02/16/23 14:10
Date Received: 02/17/23 08:18

Lab Sample ID: 890-4122-3
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	47007	02/23/23 09:25	MNR	EET MID
Total/NA	Analysis	8021B		100	5 mL	5 mL	47000	02/24/23 02:51	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			47193	02/24/23 14:46	AJ	EET MID
Total/NA	Analysis	8015 NM		1			47032	02/23/23 11:59	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	46977	02/22/23 16:36	AJ	EET MID
Total/NA	Analysis	8015B NM		20	1 uL	1 uL	46917	02/23/23 05:58	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	46828	02/21/23 09:25	KS	EET MID
Soluble	Analysis	300.0		1			46871	02/21/23 18:15	CH	EET MID

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: SEMU Permian 37

Job ID: 890-4122-1
SDG: 03D2057074

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

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

Method Summary

Client: Ensolum
Project/Site: SEMU Permian 37

Job ID: 890-4122-1
SDG: 03D2057074

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

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: SEMU Permian 37

Job ID: 890-4122-1
SDG: 03D2057074

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4122-1	SS01	Solid	02/16/23 14:00	02/17/23 08:18	0.5
890-4122-2	SS02	Solid	02/16/23 14:05	02/17/23 08:18	0.5
890-4122-3	SS03	Solid	02/16/23 14:10	02/17/23 08:18	0.5

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



Environment Testing

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

Chain of Custody


Work Order No:

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Page 1 of 1

Project Manager:	Josh Adams	Bill to: (if different)	Kalei Jennings
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	3122 Nat'l Parks Highway	Address:	3122 Nat'l Parks Highway
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-517-8437	Email:	jadams@ensolum.com, kjennings@ensolum.com





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

ANALYSIS REQUEST										Pres. Code	
Project Name:	SEMI PERMAN										
Project Number:	18SD2057074									<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Rush
Project Location:	32.55668416, -108.191602									Turn Around	
Sampler's Name:	Julianna Falcomata									TAT starts the day received by the lab, if received by 4:30pm	
PO #:											
SAMPLE RECEIPT			Temp Blank:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Wet Ice:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Samples Received Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Thermometer ID:	TUN007							
Cooler Custody Seals:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Correction Factor:	-0.0							
Sample Custody Seals:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Temperature Reading:	2.4							
Total Containers:			Corrected Temperature:	2.2							
Parameters											
RIDES											
ANALYSIS REQUEST											
											
890-4122 Chain of Custody											
Preservative Codes											
None: NO				DI Water: H ₂ O							
Cool: Cool				MeOH: Me							
HCL: HC				HNO ₃ : HN							
H ₂ SO ₄ : H ₂				NaOH: Na							
H ₃ PO ₄ : HP											
NaHSO ₄ : NABIS											
Na ₂ S ₂ O ₃ : NaSO ₃											
Zn Acetate+NaOH: Zn											
NaOH+Ascorbic Acid: SAPC											

[illegible]

Circle Method(s) and Metal(s) to be analyzed	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 mm mo Ni K Se Ag Sn/Z Na Sr Ti Sii U V Zn
TCPLP / SPLP 6010:	8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$65.00 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
		2/17/23 0756			2.17.23 818

Revised Date: 09/25/2020 Rev. 2020

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4122-1

SDG Number: 03D2057074

Login Number: 4122

List Number: 1

Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4122-1

SDG Number: 03D2057074

Login Number: 4122

List Number: 2

Creator: Teel, Brianna

List Source: Eurofins Midland

List Creation: 02/21/23 08:18 AM

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.	True	
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").	True	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Kalei Jennings
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701
Generated 4/3/2023 3:08:47 PM

JOB DESCRIPTION

SEMU Permian 37 (Maverick)
SDG NUMBER Lea County NM

JOB NUMBER

890-4371-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

Eurofins Carlsbad**Job Notes**

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

Authorization

Generated
4/3/2023 3:08:47 PM

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

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Laboratory Job ID: 890-4371-1
SDG: Lea County NM

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Definitions/Glossary

Client: Ensolum

Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1

SDG: Lea County NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
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: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

Job ID: 890-4371-1**Laboratory: Eurofins Carlsbad****Narrative****Job Narrative
890-4371-1****Receipt**

The samples were received on 3/21/2023 8:15 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 4.0°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: BH01 (890-4371-1), BH01A (890-4371-2), BH02 (890-4371-3), BH02A (890-4371-4), BH03 (890-4371-5), BH03A (890-4371-6), BH04 (890-4371-7), BH04A (890-4371-8), BH05 (890-4371-9) and BH05A (890-4371-10).

GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: BH02 (890-4371-3), BH02A (890-4371-4), BH05 (890-4371-9) and BH05A (890-4371-10). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The following samples were diluted due to the nature of the sample matrix: BH01A (890-4371-2), BH02A (890-4371-4), BH03 (890-4371-5), BH03A (890-4371-6), BH04 (890-4371-7), BH04A (890-4371-8) and BH05A (890-4371-10). Elevated reporting limits (RLs) are provided.

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: Surrogate recovery for the following sample was outside control limits: BH01 (890-4371-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: BH05 (890-4371-9). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-49652 and analytical batch 880-49691 was outside control limits. Sample non-homogeneity is suspected.

Method 8015MOD_NM: The method blank for preparation batch 880-49652 and analytical batch 880-49691 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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

HPLC/IC

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: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

Client Sample ID: BH01

Lab Sample ID: 890-4371-1

Date Collected: 03/20/23 13:20

Matrix: Solid

Date Received: 03/21/23 08:15

Sample Depth: 1'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		03/27/23 16:06	03/31/23 22:20	1
Toluene	<0.00201	U	0.00201	mg/Kg		03/27/23 16:06	03/31/23 22:20	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		03/27/23 16:06	03/31/23 22:20	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		03/27/23 16:06	03/31/23 22:20	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		03/27/23 16:06	03/31/23 22:20	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		03/27/23 16:06	03/31/23 22:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130	03/27/23 16:06	03/31/23 22:20	1
1,4-Difluorobenzene (Surr)	87		70 - 130	03/27/23 16:06	03/31/23 22:20	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			04/03/23 15:53	1

Method: SW846 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			03/29/23 12:10	1

Method: SW846 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 F2	49.9	mg/Kg		03/27/23 14:32	03/28/23 22:47	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		03/27/23 14:32	03/28/23 22:47	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/27/23 14:32	03/28/23 22:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	0.2	S1-	70 - 130	03/27/23 14:32	03/28/23 22:47	1
o-Terphenyl	0.07	S1-	70 - 130	03/27/23 14:32	03/28/23 22:47	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	73.2		5.05	mg/Kg			03/31/23 00:06	1

Client Sample ID: BH01A

Lab Sample ID: 890-4371-2

Date Collected: 03/20/23 13:40

Matrix: Solid

Date Received: 03/21/23 08:15

Sample Depth: 5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0398	U	0.0398	mg/Kg		03/27/23 16:06	03/31/23 22:40	20
Toluene	<0.0398	U	0.0398	mg/Kg		03/27/23 16:06	03/31/23 22:40	20
Ethylbenzene	<0.0398	U	0.0398	mg/Kg		03/27/23 16:06	03/31/23 22:40	20
m-Xylene & p-Xylene	<0.0797	U	0.0797	mg/Kg		03/27/23 16:06	03/31/23 22:40	20
o-Xylene	<0.0398	U	0.0398	mg/Kg		03/27/23 16:06	03/31/23 22:40	20
Xylenes, Total	<0.0797	U	0.0797	mg/Kg		03/27/23 16:06	03/31/23 22:40	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		70 - 130	03/27/23 16:06	03/31/23 22:40	20

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

Client Sample ID: BH01A

Lab Sample ID: 890-4371-2

Date Collected: 03/20/23 13:40

Matrix: Solid

Date Received: 03/21/23 08:15

Sample Depth: 5'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	100		70 - 130	03/27/23 16:06	03/31/23 22:40	20

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0797	U	0.0797	mg/Kg			04/03/23 15:53	1

Method: SW846 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			03/29/23 12:10	1

Method: SW846 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		03/27/23 14:32	03/28/23 23:52	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/27/23 14:32	03/28/23 23:52	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/27/23 14:32	03/28/23 23:52	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	81		70 - 130			03/27/23 14:32	03/28/23 23:52	1
o-Terphenyl	77		70 - 130			03/27/23 14:32	03/28/23 23:52	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	83.9		5.02	mg/Kg			03/31/23 00:11	1

Client Sample ID: BH02

Lab Sample ID: 890-4371-3

Date Collected: 03/20/23 14:00

Matrix: Solid

Date Received: 03/21/23 08:15

Sample Depth: 1'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.108		0.0994	mg/Kg		03/27/23 16:06	03/31/23 23:01	50
Toluene	0.490		0.0994	mg/Kg		03/27/23 16:06	03/31/23 23:01	50
Ethylbenzene	1.83		0.0994	mg/Kg		03/27/23 16:06	03/31/23 23:01	50
m-Xylene & p-Xylene	10.1		0.199	mg/Kg		03/27/23 16:06	03/31/23 23:01	50
o-Xylene	8.05		0.0994	mg/Kg		03/27/23 16:06	03/31/23 23:01	50
Xylenes, Total	18.2		0.199	mg/Kg		03/27/23 16:06	03/31/23 23:01	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	273	S1+	70 - 130	03/27/23 16:06	03/31/23 23:01	50
1,4-Difluorobenzene (Surr)	92		70 - 130	03/27/23 16:06	03/31/23 23:01	50

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	20.6		0.199	mg/Kg			04/03/23 15:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	3790		249	mg/Kg			03/29/23 12:10	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

Client Sample ID: BH02

Lab Sample ID: 890-4371-3

Date Collected: 03/20/23 14:00

Matrix: Solid

Date Received: 03/21/23 08:15

Sample Depth: 1'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	782		249	mg/Kg		03/27/23 14:32	03/29/23 04:54	5
Diesel Range Organics (Over C10-C28)	3010		249	mg/Kg		03/27/23 14:32	03/29/23 04:54	5
Oil Range Organics (Over C28-C36)	<249	U	249	mg/Kg		03/27/23 14:32	03/29/23 04:54	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130			03/27/23 14:32	03/29/23 04:54	5
o-Terphenyl	100		70 - 130			03/27/23 14:32	03/29/23 04:54	5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	948		4.98	mg/Kg			03/31/23 00:25	1

Client Sample ID: BH02A

Lab Sample ID: 890-4371-4

Date Collected: 03/20/23 14:20

Matrix: Solid

Date Received: 03/21/23 08:15

Sample Depth: 5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0402	U	0.0402	mg/Kg		03/27/23 16:06	03/31/23 23:21	20
Toluene	<0.0402	U	0.0402	mg/Kg		03/27/23 16:06	03/31/23 23:21	20
Ethylbenzene	<0.0402	U	0.0402	mg/Kg		03/27/23 16:06	03/31/23 23:21	20
m-Xylene & p-Xylene	<0.0805	U	0.0805	mg/Kg		03/27/23 16:06	03/31/23 23:21	20
o-Xylene	<0.0402	U	0.0402	mg/Kg		03/27/23 16:06	03/31/23 23:21	20
Xylenes, Total	<0.0805	U	0.0805	mg/Kg		03/27/23 16:06	03/31/23 23:21	20
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	144	S1+	70 - 130			03/27/23 16:06	03/31/23 23:21	20
1,4-Difluorobenzene (Surr)	95		70 - 130			03/27/23 16:06	03/31/23 23:21	20

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0805	U	0.0805	mg/Kg			04/03/23 15:53	1

Method: SW846 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			03/29/23 12:10	1

Method: SW846 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		03/27/23 14:32	03/29/23 06:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/27/23 14:32	03/29/23 06:44	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/27/23 14:32	03/29/23 06:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	85		70 - 130			03/27/23 14:32	03/29/23 06:44	1
o-Terphenyl	86		70 - 130			03/27/23 14:32	03/29/23 06:44	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

Client Sample ID: BH02A

Lab Sample ID: 890-4371-4

Date Collected: 03/20/23 14:20

Matrix: Solid

Date Received: 03/21/23 08:15

Sample Depth: 5'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1350		4.97	mg/Kg			03/31/23 00:30	1

Client Sample ID: BH03

Lab Sample ID: 890-4371-5

Date Collected: 03/20/23 14:40

Matrix: Solid

Date Received: 03/21/23 08:15

Sample Depth: 1'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0403	U	0.0403	mg/Kg		03/27/23 16:06	03/31/23 23:41	20
Toluene	<0.0403	U	0.0403	mg/Kg		03/27/23 16:06	03/31/23 23:41	20
Ethylbenzene	<0.0403	U	0.0403	mg/Kg		03/27/23 16:06	03/31/23 23:41	20
m-Xylene & p-Xylene	<0.0806	U	0.0806	mg/Kg		03/27/23 16:06	03/31/23 23:41	20
o-Xylene	<0.0403	U	0.0403	mg/Kg		03/27/23 16:06	03/31/23 23:41	20
Xylenes, Total	<0.0806	U	0.0806	mg/Kg		03/27/23 16:06	03/31/23 23:41	20
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130			03/27/23 16:06	03/31/23 23:41	20
1,4-Difluorobenzene (Surr)	89		70 - 130			03/27/23 16:06	03/31/23 23:41	20

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0806	U	0.0806	mg/Kg			04/03/23 15:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	54.3		50.0	mg/Kg			03/29/23 12:10	1

Method: SW846 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		03/27/23 14:32	03/29/23 06:21	1
Diesel Range Organics (Over C10-C28)	54.3		50.0	mg/Kg		03/27/23 14:32	03/29/23 06:21	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/27/23 14:32	03/29/23 06:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130			03/27/23 14:32	03/29/23 06:21	1
o-Terphenyl	86		70 - 130			03/27/23 14:32	03/29/23 06:21	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	180		4.99	mg/Kg			03/31/23 00:35	1

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Client Sample Results

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

Client Sample ID: BH03A

Lab Sample ID: 890-4371-6

Date Collected: 03/20/23 15:00

Matrix: Solid

Date Received: 03/21/23 08:15

Sample Depth: 5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0398	U	0.0398	mg/Kg		03/27/23 16:06	04/01/23 00:02	20
Toluene	<0.0398	U	0.0398	mg/Kg		03/27/23 16:06	04/01/23 00:02	20
Ethylbenzene	<0.0398	U	0.0398	mg/Kg		03/27/23 16:06	04/01/23 00:02	20
m-Xylene & p-Xylene	<0.0797	U	0.0797	mg/Kg		03/27/23 16:06	04/01/23 00:02	20
o-Xylene	<0.0398	U	0.0398	mg/Kg		03/27/23 16:06	04/01/23 00:02	20
Xylenes, Total	<0.0797	U	0.0797	mg/Kg		03/27/23 16:06	04/01/23 00:02	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	130		70 - 130	03/27/23 16:06	04/01/23 00:02	20
1,4-Difluorobenzene (Surr)	72		70 - 130	03/27/23 16:06	04/01/23 00:02	20

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0797	U	0.0797	mg/Kg			04/03/23 15:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	260		49.9	mg/Kg			03/29/23 12:10	1

Method: SW846 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		03/27/23 14:32	03/29/23 06:00	1
Diesel Range Organics (Over C10-C28)	260		49.9	mg/Kg		03/27/23 14:32	03/29/23 06:00	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/27/23 14:32	03/29/23 06:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130	03/27/23 14:32	03/29/23 06:00	1
o-Terphenyl	101		70 - 130	03/27/23 14:32	03/29/23 06:00	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	372		5.00	mg/Kg			03/31/23 00:40	1

Client Sample ID: BH04

Lab Sample ID: 890-4371-7

Date Collected: 03/20/23 15:20

Matrix: Solid

Date Received: 03/21/23 08:15

Sample Depth: 1'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0398	U	0.0398	mg/Kg		03/27/23 16:06	04/01/23 00:22	20
Toluene	<0.0398	U	0.0398	mg/Kg		03/27/23 16:06	04/01/23 00:22	20
Ethylbenzene	<0.0398	U	0.0398	mg/Kg		03/27/23 16:06	04/01/23 00:22	20
m-Xylene & p-Xylene	<0.0795	U	0.0795	mg/Kg		03/27/23 16:06	04/01/23 00:22	20
o-Xylene	<0.0398	U	0.0398	mg/Kg		03/27/23 16:06	04/01/23 00:22	20
Xylenes, Total	<0.0795	U	0.0795	mg/Kg		03/27/23 16:06	04/01/23 00:22	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	71		70 - 130	03/27/23 16:06	04/01/23 00:22	20

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Client Sample Results

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

Client Sample ID: BH04

Lab Sample ID: 890-4371-7

Date Collected: 03/20/23 15:20

Matrix: Solid

Date Received: 03/21/23 08:15

Sample Depth: 1'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	98		70 - 130	03/27/23 16:06	04/01/23 00:22	20

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0795	U	0.0795	mg/Kg			04/03/23 15:53	1

Method: SW846 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			03/29/23 12:10	1

Method: SW846 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		03/27/23 14:32	03/29/23 00:14	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		03/27/23 14:32	03/29/23 00:14	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/27/23 14:32	03/29/23 00:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130			03/27/23 14:32	03/29/23 00:14	1
o-Terphenyl	83		70 - 130			03/27/23 14:32	03/29/23 00:14	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	49.4		4.95	mg/Kg			03/31/23 00:44	1

Client Sample ID: BH04A

Lab Sample ID: 890-4371-8

Date Collected: 03/20/23 15:40

Matrix: Solid

Date Received: 03/21/23 08:15

Sample Depth: 5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0399	U	0.0399	mg/Kg		03/27/23 16:06	04/01/23 00:43	20
Toluene	<0.0399	U	0.0399	mg/Kg		03/27/23 16:06	04/01/23 00:43	20
Ethylbenzene	<0.0399	U	0.0399	mg/Kg		03/27/23 16:06	04/01/23 00:43	20
m-Xylene & p-Xylene	<0.0798	U	0.0798	mg/Kg		03/27/23 16:06	04/01/23 00:43	20
o-Xylene	<0.0399	U	0.0399	mg/Kg		03/27/23 16:06	04/01/23 00:43	20
Xylenes, Total	<0.0798	U	0.0798	mg/Kg		03/27/23 16:06	04/01/23 00:43	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	77		70 - 130	03/27/23 16:06	04/01/23 00:43	20
1,4-Difluorobenzene (Surr)	94		70 - 130	03/27/23 16:06	04/01/23 00:43	20

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0798	U	0.0798	mg/Kg			04/03/23 15:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			03/29/23 12:10	1

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Client Sample Results

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

Client Sample ID: BH04A

Lab Sample ID: 890-4371-8

Date Collected: 03/20/23 15:40

Matrix: Solid

Date Received: 03/21/23 08:15

Sample Depth: 5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		03/27/23 14:32	03/29/23 00:35	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		03/27/23 14:32	03/29/23 00:35	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		03/27/23 14:32	03/29/23 00:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130			03/27/23 14:32	03/29/23 00:35	1
o-Terphenyl	92		70 - 130			03/27/23 14:32	03/29/23 00:35	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	89.2		4.98	mg/Kg			03/31/23 20:05	1

Client Sample ID: BH05

Lab Sample ID: 890-4371-9

Date Collected: 03/20/23 16:00

Matrix: Solid

Date Received: 03/21/23 08:15

Sample Depth: 1'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.100	U	0.100	mg/Kg		03/27/23 16:06	04/01/23 01:03	50
Toluene	0.150		0.100	mg/Kg		03/27/23 16:06	04/01/23 01:03	50
Ethylbenzene	1.76		0.100	mg/Kg		03/27/23 16:06	04/01/23 01:03	50
m-Xylene & p-Xylene	3.18		0.200	mg/Kg		03/27/23 16:06	04/01/23 01:03	50
o-Xylene	10.1		0.100	mg/Kg		03/27/23 16:06	04/01/23 01:03	50
Xylenes, Total	13.3		0.200	mg/Kg		03/27/23 16:06	04/01/23 01:03	50
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	280	S1+	70 - 130			03/27/23 16:06	04/01/23 01:03	50
1,4-Difluorobenzene (Surr)	97		70 - 130			03/27/23 16:06	04/01/23 01:03	50

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	15.2		0.200	mg/Kg			04/03/23 15:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	8710		498	mg/Kg			03/29/23 12:10	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	1030		498	mg/Kg		03/27/23 14:32	03/29/23 05:16	10
Diesel Range Organics (Over C10-C28)	7680		498	mg/Kg		03/27/23 14:32	03/29/23 05:16	10
Oil Range Organics (Over C28-C36)	<498	U	498	mg/Kg		03/27/23 14:32	03/29/23 05:16	10
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	162	S1+	70 - 130			03/27/23 14:32	03/29/23 05:16	10
o-Terphenyl	241	S1+	70 - 130			03/27/23 14:32	03/29/23 05:16	10

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Client Sample Results

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

Client Sample ID: BH05

Lab Sample ID: 890-4371-9

Date Collected: 03/20/23 16:00

Matrix: Solid

Date Received: 03/21/23 08:15

Sample Depth: 1'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	626		5.03	mg/Kg			03/31/23 20:19	1

Client Sample ID: BH05A

Lab Sample ID: 890-4371-10

Date Collected: 03/20/23 16:20

Matrix: Solid

Date Received: 03/21/23 08:15

Sample Depth: 5'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0398	U	0.0398	mg/Kg		03/27/23 16:06	04/01/23 01:24	20
Toluene	0.117		0.0398	mg/Kg		03/27/23 16:06	04/01/23 01:24	20
Ethylbenzene	<0.0398	U	0.0398	mg/Kg		03/27/23 16:06	04/01/23 01:24	20
m-Xylene & p-Xylene	<0.0797	U	0.0797	mg/Kg		03/27/23 16:06	04/01/23 01:24	20
o-Xylene	<0.0398	U	0.0398	mg/Kg		03/27/23 16:06	04/01/23 01:24	20
Xylenes, Total	<0.0797	U	0.0797	mg/Kg		03/27/23 16:06	04/01/23 01:24	20
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		70 - 130			03/27/23 16:06	04/01/23 01:24	20
1,4-Difluorobenzene (Surr)	108		70 - 130			03/27/23 16:06	04/01/23 01:24	20

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.117		0.0797	mg/Kg			04/03/23 15:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	255		50.0	mg/Kg			03/29/23 12:10	1

Method: SW846 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		03/27/23 14:32	03/29/23 05:38	1
Diesel Range Organics (Over C10-C28)	255		50.0	mg/Kg		03/27/23 14:32	03/29/23 05:38	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/27/23 14:32	03/29/23 05:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130			03/27/23 14:32	03/29/23 05:38	1
o-Terphenyl	99		70 - 130			03/27/23 14:32	03/29/23 05:38	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1950		25.1	mg/Kg			03/31/23 20:24	5

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Surrogate Summary

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

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)
890-4371-1	BH01	106	87
890-4371-1 MS	BH01	125	109
890-4371-1 MSD	BH01	115	107
890-4371-2	BH01A	81	100
890-4371-3	BH02	273 S1+	92
890-4371-4	BH02A	144 S1+	95
890-4371-5	BH03	110	89
890-4371-6	BH03A	130	72
890-4371-7	BH04	71	98
890-4371-8	BH04A	77	94
890-4371-9	BH05	280 S1+	97
890-4371-10	BH05A	90	108
LCS 880-49657/1-A	Lab Control Sample	116	107
LCSD 880-49657/2-A	Lab Control Sample Dup	120	105
MB 880-49654/5-A	Method Blank	74	81
MB 880-49657/5-A	Method Blank	85	89
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)
890-4371-1	BH01	0.2 S1-	0.07 S1-
890-4371-1 MS	BH01	88	80
890-4371-1 MSD	BH01	103	91
890-4371-2	BH01A	81	77
890-4371-3	BH02	99	100
890-4371-4	BH02A	85	86
890-4371-5	BH03	84	86
890-4371-6	BH03A	101	101
890-4371-7	BH04	84	83
890-4371-8	BH04A	99	92
890-4371-9	BH05	162 S1+	241 S1+
890-4371-10	BH05A	99	99
LCS 880-49652/2-A	Lab Control Sample	103	103
LCSD 880-49652/3-A	Lab Control Sample Dup	102	106
MB 880-49652/1-A	Method Blank	124	124
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

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QC Sample Results

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-49654/5-A

Matrix: Solid

Analysis Batch: 49999

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 49654

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/27/23 15:25	03/31/23 11:23	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/27/23 15:25	03/31/23 11:23	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/27/23 15:25	03/31/23 11:23	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		03/27/23 15:25	03/31/23 11:23	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/27/23 15:25	03/31/23 11:23	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		03/27/23 15:25	03/31/23 11:23	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		70 - 130	03/27/23 15:25	03/31/23 11:23	1
1,4-Difluorobenzene (Surr)	81		70 - 130	03/27/23 15:25	03/31/23 11:23	1

Lab Sample ID: MB 880-49657/5-A

Matrix: Solid

Analysis Batch: 49999

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 49657

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/27/23 16:06	03/31/23 21:58	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/27/23 16:06	03/31/23 21:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/27/23 16:06	03/31/23 21:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		03/27/23 16:06	03/31/23 21:58	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/27/23 16:06	03/31/23 21:58	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		03/27/23 16:06	03/31/23 21:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		70 - 130	03/27/23 16:06	03/31/23 21:58	1
1,4-Difluorobenzene (Surr)	89		70 - 130	03/27/23 16:06	03/31/23 21:58	1

Lab Sample ID: LCS 880-49657/1-A

Matrix: Solid

Analysis Batch: 49999

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 49657

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09066		mg/Kg		91	70 - 130
Toluene	0.100	0.09152		mg/Kg		92	70 - 130
Ethylbenzene	0.100	0.09701		mg/Kg		97	70 - 130
m-Xylene & p-Xylene	0.200	0.2066		mg/Kg		103	70 - 130
o-Xylene	0.100	0.1130		mg/Kg		113	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	116		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

Lab Sample ID: LCSD 880-49657/2-A

Matrix: Solid

Analysis Batch: 49999

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 49657

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09100		mg/Kg		91	70 - 130	0	35

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QC Sample Results

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

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

Lab Sample ID: LCSD 880-49657/2-A

Matrix: Solid

Analysis Batch: 49999

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 49657

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits			
Toluene	0.100	0.09094		mg/Kg		91	70 - 130		1	35
Ethylbenzene	0.100	0.09972		mg/Kg		100	70 - 130		3	35
m-Xylene & p-Xylene	0.200	0.2134		mg/Kg		107	70 - 130		3	35
o-Xylene	0.100	0.1143		mg/Kg		114	70 - 130		1	35

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	120		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: 890-4371-1 MS

Matrix: Solid

Analysis Batch: 49999

Client Sample ID: BH01

Prep Type: Total/NA

Prep Batch: 49657

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec	
									Limits	
Benzene	<0.00201	U	0.0998	0.08943		mg/Kg		90	70 - 130	
Toluene	<0.00201	U	0.0998	0.09016		mg/Kg		90	70 - 130	
Ethylbenzene	<0.00201	U	0.0998	0.09631		mg/Kg		96	70 - 130	
m-Xylene & p-Xylene	<0.00402	U	0.200	0.2037		mg/Kg		102	70 - 130	
o-Xylene	<0.00201	U	0.0998	0.1082		mg/Kg		108	70 - 130	

Surrogate	MS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	125		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

Lab Sample ID: 890-4371-1 MSD

Matrix: Solid

Analysis Batch: 49999

Client Sample ID: BH01

Prep Type: Total/NA

Prep Batch: 49657

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
									Limits			
Benzene	<0.00201	U	0.0990	0.09214		mg/Kg		93	70 - 130		3	35
Toluene	<0.00201	U	0.0990	0.08867		mg/Kg		90	70 - 130		2	35
Ethylbenzene	<0.00201	U	0.0990	0.09360		mg/Kg		95	70 - 130		3	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1992		mg/Kg		101	70 - 130		2	35
o-Xylene	<0.00201	U	0.0990	0.1055		mg/Kg		107	70 - 130		3	35

Surrogate	MSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	115		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

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

Lab Sample ID: MB 880-49652/1-A

Matrix: Solid

Analysis Batch: 49691

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 49652

Analyte	MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/27/23 14:32	03/28/23 21:43	1

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QC Sample Results

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

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

Lab Sample ID: MB 880-49652/1-A

Matrix: Solid

Analysis Batch: 49691

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 49652

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/27/23 14:32	03/28/23 21:43	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/27/23 14:32	03/28/23 21:43	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	124		70 - 130			03/27/23 14:32	03/28/23 21:43	1
o-Terphenyl	124		70 - 130			03/27/23 14:32	03/28/23 21:43	1

Lab Sample ID: LCS 880-49652/2-A

Matrix: Solid

Analysis Batch: 49691

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 49652

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	869.0		mg/Kg		87	70 - 130
Diesel Range Organics (Over C10-C28)	1000	875.2		mg/Kg		88	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	103		70 - 130				
o-Terphenyl	103		70 - 130				

Lab Sample ID: LCSD 880-49652/3-A

Matrix: Solid

Analysis Batch: 49691

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 49652

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	972.5		mg/Kg		97	70 - 130	11	20
Diesel Range Organics (Over C10-C28)	1000	912.9		mg/Kg		91	70 - 130	4	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	102		70 - 130						
o-Terphenyl	106		70 - 130						

Lab Sample ID: 890-4371-1 MS

Matrix: Solid

Analysis Batch: 49691

Client Sample ID: BH01

Prep Type: Total/NA

Prep Batch: 49652

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 F2	997	862.1		mg/Kg		86	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	997	895.2		mg/Kg		90	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane	88		70 - 130						
o-Terphenyl	80		70 - 130						

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QC Sample Results

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

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

Lab Sample ID: 890-4371-1 MSD

Matrix: Solid

Analysis Batch: 49691

Client Sample ID: BH01

Prep Type: Total/NA

Prep Batch: 49652

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 F2	999	1185	F2	mg/Kg		119	70 - 130	32	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1014		mg/Kg		102	70 - 130	12	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	103		70 - 130								
o-Terphenyl	91		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-49884/1-A

Matrix: Solid

Analysis Batch: 50034

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			03/30/23 22:29	1

Lab Sample ID: LCS 880-49884/2-A

Matrix: Solid

Analysis Batch: 50034

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	261.5		mg/Kg		105	90 - 110

Lab Sample ID: LCSD 880-49884/3-A

Matrix: Solid

Analysis Batch: 50034

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	261.8		mg/Kg		105	90 - 110	0	20

Lab Sample ID: 890-4370-A-24-E MS

Matrix: Solid

Analysis Batch: 50034

Client Sample ID: Matrix Spike

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1520		2520	4138		mg/Kg		104	90 - 110

Lab Sample ID: 890-4370-A-24-F MSD

Matrix: Solid

Analysis Batch: 50034

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1520		2520	4134		mg/Kg		104	90 - 110	0	20

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QC Sample Results

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 880-49876/1-A

Matrix: Solid

Analysis Batch: 50035

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			03/31/23 19:50	1

Lab Sample ID: LCS 880-49876/2-A

Matrix: Solid

Analysis Batch: 50035

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	256.8		mg/Kg		103	90 - 110

Lab Sample ID: LCSD 880-49876/3-A

Matrix: Solid

Analysis Batch: 50035

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	257.2		mg/Kg		103	90 - 110	0	20

Lab Sample ID: 890-4371-8 MS

Matrix: Solid

Analysis Batch: 50035

Client Sample ID: BH04A

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	89.2		249	336.9		mg/Kg		99	90 - 110

Lab Sample ID: 890-4371-8 MSD

Matrix: Solid

Analysis Batch: 50035

Client Sample ID: BH04A

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	89.2		249	335.4		mg/Kg		99	90 - 110	0	20

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QC Association Summary

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

GC VOA

Prep Batch: 49654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-49654/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 49657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4371-1	BH01	Total/NA	Solid	5035	
890-4371-2	BH01A	Total/NA	Solid	5035	
890-4371-3	BH02	Total/NA	Solid	5035	
890-4371-4	BH02A	Total/NA	Solid	5035	
890-4371-5	BH03	Total/NA	Solid	5035	
890-4371-6	BH03A	Total/NA	Solid	5035	
890-4371-7	BH04	Total/NA	Solid	5035	
890-4371-8	BH04A	Total/NA	Solid	5035	
890-4371-9	BH05	Total/NA	Solid	5035	
890-4371-10	BH05A	Total/NA	Solid	5035	
MB 880-49657/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-49657/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-49657/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4371-1 MS	BH01	Total/NA	Solid	5035	
890-4371-1 MSD	BH01	Total/NA	Solid	5035	

Analysis Batch: 49999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4371-1	BH01	Total/NA	Solid	8021B	49657
890-4371-2	BH01A	Total/NA	Solid	8021B	49657
890-4371-3	BH02	Total/NA	Solid	8021B	49657
890-4371-4	BH02A	Total/NA	Solid	8021B	49657
890-4371-5	BH03	Total/NA	Solid	8021B	49657
890-4371-6	BH03A	Total/NA	Solid	8021B	49657
890-4371-7	BH04	Total/NA	Solid	8021B	49657
890-4371-8	BH04A	Total/NA	Solid	8021B	49657
890-4371-9	BH05	Total/NA	Solid	8021B	49657
890-4371-10	BH05A	Total/NA	Solid	8021B	49657
MB 880-49654/5-A	Method Blank	Total/NA	Solid	8021B	49654
MB 880-49657/5-A	Method Blank	Total/NA	Solid	8021B	49657
LCS 880-49657/1-A	Lab Control Sample	Total/NA	Solid	8021B	49657
LCSD 880-49657/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	49657
890-4371-1 MS	BH01	Total/NA	Solid	8021B	49657
890-4371-1 MSD	BH01	Total/NA	Solid	8021B	49657

Analysis Batch: 50240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4371-1	BH01	Total/NA	Solid	Total BTEX	
890-4371-2	BH01A	Total/NA	Solid	Total BTEX	
890-4371-3	BH02	Total/NA	Solid	Total BTEX	
890-4371-4	BH02A	Total/NA	Solid	Total BTEX	
890-4371-5	BH03	Total/NA	Solid	Total BTEX	
890-4371-6	BH03A	Total/NA	Solid	Total BTEX	
890-4371-7	BH04	Total/NA	Solid	Total BTEX	
890-4371-8	BH04A	Total/NA	Solid	Total BTEX	
890-4371-9	BH05	Total/NA	Solid	Total BTEX	
890-4371-10	BH05A	Total/NA	Solid	Total BTEX	

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QC Association Summary

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

GC Semi VOA

Prep Batch: 49652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4371-1	BH01	Total/NA	Solid	8015NM Prep	
890-4371-2	BH01A	Total/NA	Solid	8015NM Prep	
890-4371-3	BH02	Total/NA	Solid	8015NM Prep	
890-4371-4	BH02A	Total/NA	Solid	8015NM Prep	
890-4371-5	BH03	Total/NA	Solid	8015NM Prep	
890-4371-6	BH03A	Total/NA	Solid	8015NM Prep	
890-4371-7	BH04	Total/NA	Solid	8015NM Prep	
890-4371-8	BH04A	Total/NA	Solid	8015NM Prep	
890-4371-9	BH05	Total/NA	Solid	8015NM Prep	
890-4371-10	BH05A	Total/NA	Solid	8015NM Prep	
MB 880-49652/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-49652/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-49652/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4371-1 MS	BH01	Total/NA	Solid	8015NM Prep	
890-4371-1 MSD	BH01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 49691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4371-1	BH01	Total/NA	Solid	8015B NM	49652
890-4371-2	BH01A	Total/NA	Solid	8015B NM	49652
890-4371-3	BH02	Total/NA	Solid	8015B NM	49652
890-4371-4	BH02A	Total/NA	Solid	8015B NM	49652
890-4371-5	BH03	Total/NA	Solid	8015B NM	49652
890-4371-6	BH03A	Total/NA	Solid	8015B NM	49652
890-4371-7	BH04	Total/NA	Solid	8015B NM	49652
890-4371-8	BH04A	Total/NA	Solid	8015B NM	49652
890-4371-9	BH05	Total/NA	Solid	8015B NM	49652
890-4371-10	BH05A	Total/NA	Solid	8015B NM	49652
MB 880-49652/1-A	Method Blank	Total/NA	Solid	8015B NM	49652
LCS 880-49652/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	49652
LCSD 880-49652/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	49652
890-4371-1 MS	BH01	Total/NA	Solid	8015B NM	49652
890-4371-1 MSD	BH01	Total/NA	Solid	8015B NM	49652

Analysis Batch: 49831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4371-1	BH01	Total/NA	Solid	8015 NM	
890-4371-2	BH01A	Total/NA	Solid	8015 NM	
890-4371-3	BH02	Total/NA	Solid	8015 NM	
890-4371-4	BH02A	Total/NA	Solid	8015 NM	
890-4371-5	BH03	Total/NA	Solid	8015 NM	
890-4371-6	BH03A	Total/NA	Solid	8015 NM	
890-4371-7	BH04	Total/NA	Solid	8015 NM	
890-4371-8	BH04A	Total/NA	Solid	8015 NM	
890-4371-9	BH05	Total/NA	Solid	8015 NM	
890-4371-10	BH05A	Total/NA	Solid	8015 NM	

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QC Association Summary

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

HPLC/IC

Leach Batch: 49876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4371-8	BH04A	Soluble	Solid	DI Leach	
890-4371-9	BH05	Soluble	Solid	DI Leach	
890-4371-10	BH05A	Soluble	Solid	DI Leach	
MB 880-49876/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-49876/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-49876/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4371-8 MS	BH04A	Soluble	Solid	DI Leach	
890-4371-8 MSD	BH04A	Soluble	Solid	DI Leach	

Leach Batch: 49884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4371-1	BH01	Soluble	Solid	DI Leach	
890-4371-2	BH01A	Soluble	Solid	DI Leach	
890-4371-3	BH02	Soluble	Solid	DI Leach	
890-4371-4	BH02A	Soluble	Solid	DI Leach	
890-4371-5	BH03	Soluble	Solid	DI Leach	
890-4371-6	BH03A	Soluble	Solid	DI Leach	
890-4371-7	BH04	Soluble	Solid	DI Leach	
MB 880-49884/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-49884/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-49884/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4370-A-24-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4370-A-24-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 50034

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4371-1	BH01	Soluble	Solid	300.0	49884
890-4371-2	BH01A	Soluble	Solid	300.0	49884
890-4371-3	BH02	Soluble	Solid	300.0	49884
890-4371-4	BH02A	Soluble	Solid	300.0	49884
890-4371-5	BH03	Soluble	Solid	300.0	49884
890-4371-6	BH03A	Soluble	Solid	300.0	49884
890-4371-7	BH04	Soluble	Solid	300.0	49884
MB 880-49884/1-A	Method Blank	Soluble	Solid	300.0	49884
LCS 880-49884/2-A	Lab Control Sample	Soluble	Solid	300.0	49884
LCSD 880-49884/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	49884
890-4370-A-24-E MS	Matrix Spike	Soluble	Solid	300.0	49884
890-4370-A-24-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	49884

Analysis Batch: 50035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4371-8	BH04A	Soluble	Solid	300.0	49876
890-4371-9	BH05	Soluble	Solid	300.0	49876
890-4371-10	BH05A	Soluble	Solid	300.0	49876
MB 880-49876/1-A	Method Blank	Soluble	Solid	300.0	49876
LCS 880-49876/2-A	Lab Control Sample	Soluble	Solid	300.0	49876
LCSD 880-49876/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	49876
890-4371-8 MS	BH04A	Soluble	Solid	300.0	49876
890-4371-8 MSD	BH04A	Soluble	Solid	300.0	49876

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Lab Chronicle

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

Client Sample ID: BH01
Date Collected: 03/20/23 13:20
Date Received: 03/21/23 08:15

Lab Sample ID: 890-4371-1
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			4.98 g	5 mL	49657	03/27/23 16:06	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	49999	03/31/23 22:20	SM	EET MID
Total/NA	Analysis	Total BTEX		1			50240	04/03/23 15:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			49831	03/29/23 12:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	49652	03/27/23 14:32	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49691	03/28/23 22:47	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	49884	03/29/23 16:21	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	50034	03/31/23 00:06	SMC	EET MID

Client Sample ID: BH01A
Date Collected: 03/20/23 13:40
Date Received: 03/21/23 08:15

Lab Sample ID: 890-4371-2
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			5.02 g	5 mL	49657	03/27/23 16:06	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	49999	03/31/23 22:40	SM	EET MID
Total/NA	Analysis	Total BTEX		1			50240	04/03/23 15:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			49831	03/29/23 12:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	49652	03/27/23 14:32	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49691	03/28/23 23:52	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	49884	03/29/23 16:21	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	50034	03/31/23 00:11	SMC	EET MID

Client Sample ID: BH02
Date Collected: 03/20/23 14:00
Date Received: 03/21/23 08:15

Lab Sample ID: 890-4371-3
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			5.03 g	5 mL	49657	03/27/23 16:06	MNR	EET MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	49999	03/31/23 23:01	SM	EET MID
Total/NA	Analysis	Total BTEX		1			50240	04/03/23 15:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			49831	03/29/23 12:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	49652	03/27/23 14:32	AJ	EET MID
Total/NA	Analysis	8015B NM		5	1 uL	1 uL	49691	03/29/23 04:54	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	49884	03/29/23 16:21	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	50034	03/31/23 00:25	SMC	EET MID

Client Sample ID: BH02A
Date Collected: 03/20/23 14:20
Date Received: 03/21/23 08:15

Lab Sample ID: 890-4371-4
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			4.97 g	5 mL	49657	03/27/23 16:06	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	49999	03/31/23 23:21	SM	EET MID
Total/NA	Analysis	Total BTEX		1			50240	04/03/23 15:53	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

Client Sample ID: BH02A
Date Collected: 03/20/23 14:20
Date Received: 03/21/23 08:15

Lab Sample ID: 890-4371-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			49831	03/29/23 12:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	49652	03/27/23 14:32	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49691	03/29/23 06:44	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	49884	03/29/23 16:21	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	50034	03/31/23 00:30	SMC	EET MID

Client Sample ID: BH03
Date Collected: 03/20/23 14:40
Date Received: 03/21/23 08:15

Lab Sample ID: 890-4371-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	49657	03/27/23 16:06	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	49999	03/31/23 23:41	SM	EET MID
Total/NA	Analysis	Total BTEX		1			50240	04/03/23 15:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			49831	03/29/23 12:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	49652	03/27/23 14:32	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49691	03/29/23 06:21	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	49884	03/29/23 16:21	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	50034	03/31/23 00:35	SMC	EET MID

Client Sample ID: BH03A
Date Collected: 03/20/23 15:00
Date Received: 03/21/23 08:15

Lab Sample ID: 890-4371-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	49657	03/27/23 16:06	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	49999	04/01/23 00:02	SM	EET MID
Total/NA	Analysis	Total BTEX		1			50240	04/03/23 15:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			49831	03/29/23 12:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	49652	03/27/23 14:32	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49691	03/29/23 06:00	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	49884	03/29/23 16:21	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	50034	03/31/23 00:40	SMC	EET MID

Client Sample ID: BH04
Date Collected: 03/20/23 15:20
Date Received: 03/21/23 08:15

Lab Sample ID: 890-4371-7
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			5.03 g	5 mL	49657	03/27/23 16:06	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	49999	04/01/23 00:22	SM	EET MID
Total/NA	Analysis	Total BTEX		1			50240	04/03/23 15:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			49831	03/29/23 12:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	49652	03/27/23 14:32	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49691	03/29/23 00:14	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

Client Sample ID: BH04
Date Collected: 03/20/23 15:20
Date Received: 03/21/23 08:15

Lab Sample ID: 890-4371-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.05 g	50 mL	49884	03/29/23 16:21	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	50034	03/31/23 00:44	SMC	EET MID

Client Sample ID: BH04A
Date Collected: 03/20/23 15:40
Date Received: 03/21/23 08:15

Lab Sample ID: 890-4371-8
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	49657	03/27/23 16:06	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	49999	04/01/23 00:43	SM	EET MID
Total/NA	Analysis	Total BTEX		1			50240	04/03/23 15:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			49831	03/29/23 12:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	49652	03/27/23 14:32	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49691	03/29/23 00:35	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	49876	03/29/23 16:13	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	50035	03/31/23 20:05	SMC	EET MID

Client Sample ID: BH05
Date Collected: 03/20/23 16:00
Date Received: 03/21/23 08:15

Lab Sample ID: 890-4371-9
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	49657	03/27/23 16:06	MNR	EET MID
Total/NA	Analysis	8021B		50	5 mL	5 mL	49999	04/01/23 01:03	SM	EET MID
Total/NA	Analysis	Total BTEX		1			50240	04/03/23 15:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			49831	03/29/23 12:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	49652	03/27/23 14:32	AJ	EET MID
Total/NA	Analysis	8015B NM		10	1 uL	1 uL	49691	03/29/23 05:16	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	49876	03/29/23 16:13	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	50035	03/31/23 20:19	SMC	EET MID

Client Sample ID: BH05A
Date Collected: 03/20/23 16:20
Date Received: 03/21/23 08:15

Lab Sample ID: 890-4371-10
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			5.02 g	5 mL	49657	03/27/23 16:06	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	49999	04/01/23 01:24	SM	EET MID
Total/NA	Analysis	Total BTEX		1			50240	04/03/23 15:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			49831	03/29/23 12:10	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	49652	03/27/23 14:32	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	49691	03/29/23 05:38	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	49876	03/29/23 16:13	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	50035	03/31/23 20:24	SMC	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

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

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Accreditation/Certification Summary

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

- 1
- 2
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Method Summary

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

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

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: Ensolum
Project/Site: SEMU Permian 37 (Maverick)

Job ID: 890-4371-1
SDG: Lea County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4371-1	BH01	Solid	03/20/23 13:20	03/21/23 08:15	1'
890-4371-2	BH01A	Solid	03/20/23 13:40	03/21/23 08:15	5'
890-4371-3	BH02	Solid	03/20/23 14:00	03/21/23 08:15	1'
890-4371-4	BH02A	Solid	03/20/23 14:20	03/21/23 08:15	5'
890-4371-5	BH03	Solid	03/20/23 14:40	03/21/23 08:15	1'
890-4371-6	BH03A	Solid	03/20/23 15:00	03/21/23 08:15	5'
890-4371-7	BH04	Solid	03/20/23 15:20	03/21/23 08:15	1'
890-4371-8	BH04A	Solid	03/20/23 15:40	03/21/23 08:15	5'
890-4371-9	BH05	Solid	03/20/23 16:00	03/21/23 08:15	1'
890-4371-10	BH05A	Solid	03/20/23 16:20	03/21/23 08:15	5'

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Environment Testing

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) 392-7650, Carlsbad, NM (575) 988-3199


Chain of Custody

Work Order No:

Page 1 of 1
www.xenco.com

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

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

Project Name:		SEMUM Permian 37 (Maverick)		Turn Around		Pres. Code	
Project Number:		0302057074		<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush			
Project Location:		Lea County, NM		Due Date:			
Sampler's Name:		Dmitry Nikanorov		TAT starts the day received by the lab, if received by 4:30pm			
PO #:							
SAMPLE RECEIPT		Temp Blank:		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Wet Ice: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Samples Received In tact:		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Thermometer ID:		114557	
Cooler Custody Seals:		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		Correction Factor:		-0.3	
Sample Custody Seals:		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		Temperature Reading:		4.2	
Total Containers:				Corrected Temperature:		4.2	
Parameters							
RIDES (EPA: 300.0)							
015)							
8021							
ANALYSIS REQUEST							
<div> <div>890-4371 Chain of Custody</div>  </div>							
Preservative Codes							
None: NO		DI Water: H ₂ O		Cool: Cool		MeOH: Me	
HCL: HC		HNO ₃ : HN		H ₂ SO ₄ : H ₂		NaOH: Na	
H ₃ PO ₄ : HP		NaHSO ₄ : NABIS		Na ₂ S ₂ O ₃ : NaSO ₃		Zn Acetate+NaOH: Zn	
NaOH+Ascorbic Acid: SAPC							

[illegible]

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 H Sn U V Zn
TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U			Hg: 1631 / 245 / 17470 / 17471

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
DN	Arredondo	3/21/2020 08:15			

Revised Date: 08/25/2020 Rev 2020

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4371-1

SDG Number: Lea County NM

Login Number: 4371

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.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4371-1

SDG Number: Lea County NM

Login Number: 4371

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 03/22/23 11:06 AM

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



APPENDIX E

NMOCD Notifications

From: OCDOnline@state.nm.us
To: [Aimee Cole](#)
Subject: The Oil Conservation Division (OCD) has approved the application, Application ID: 250698
Date: Friday, November 17, 2023 7:55:45 AM

[**EXTERNAL EMAIL**]

To whom it may concern (c/o Aimee Cole for Maverick Permian LLC),

The OCD has approved the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nAPP2305453661, with the following conditions:

- **Remediation plan approved as written. Maverick Permian has 90-days (February 15, 2024) to submit it appropriate or final closure report.**

The signed C-141 can be found in the OCD Online: Imaging under the incident ID (n#).

If you have any questions regarding this application, please contact me.

Thank you,
Nelson Velez
Environmental Specialist - Advanced
505-469-6146
Nelson.Velez@emnrd.nm.gov

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

Julianna Falcomata

From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Sent: Wednesday, October 25, 2023 1:03 PM
To: Aimee Cole
Cc: Velez, Nelson, EMNRD; Bratcher, Michael, EMNRD
Subject: RE: [EXTERNAL] Maverick - Sampling Notification (Week of 10/30/2023)

[**EXTERNAL EMAIL**]

Good afternoon Aimee,

The OCD has received your notification. 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.

Thank you,

Shelly

Shelly Wells * Environmental Specialist-Advanced
Environmental Bureau
EMNRD-Oil Conservation Division
1220 S. St. Francis Drive | Santa Fe, NM 87505
(505)469-7520 | Shelly.Wells@emnrd.nm.gov
<http://www.emnrd.state.nm.us/OCD/>

From: Aimee Cole <acole@ensolum.com>
Sent: Wednesday, October 25, 2023 12:21 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Subject: [EXTERNAL] Maverick - Sampling Notification (Week of 10/30/2023)


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

Maverick Permian, LLC plans to complete sampling activities at the following site the week of October 30, 2023.

- SEMU Permian #37 / NAPP2305453661
 - o Sampling Dates: 11/1/2023 – 11/3/2023

Thank you,



Aimee Cole
Senior Managing Scientist
720-384-7365
Ensolum, LLC
in f  

Julianna Falcomata

From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Sent: Wednesday, November 1, 2023 3:29 PM
To: Aimee Cole
Cc: Bratcher, Michael, EMNRD; Velez, Nelson, EMNRD
Subject: RE: [EXTERNAL] Maverick Permian, LLC - Sampling Notification (Week of 11/6/2023)

[**EXTERNAL EMAIL**]

Good afternoon Aimee,

The OCD has received your notification. In the future, please also provide the anticipated time sampling will begin when you email OCD. 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.

Thank you,

Shelly

Shelly Wells * Environmental Specialist-Advanced
Environmental Bureau
EMNRD-Oil Conservation Division
1220 S. St. Francis Drive | Santa Fe, NM 87505
(505)469-7520 | Shelly.Wells@emnrd.nm.gov
<http://www.emnrd.state.nm.us/OCD/>

From: Aimee Cole <acole@ensolum.com>
Sent: Wednesday, November 1, 2023 3:07 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Subject: [EXTERNAL] Maverick Permian, LLC - Sampling Notification (Week of 11/6/2023)

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

Maverick Permian, LLC plans to complete sampling activities at the following site the week of November 6, 2023.

- SEMU Permian #37 / NAPP2305453661
 - o Sampling Dates: 11/6/2023 – 11/8/2023

Thank you,



Aimee Cole
Senior Managing Scientist
720-384-7365
Ensolum, LLC
in f

Julianna Falcomata

From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Sent: Wednesday, November 8, 2023 3:51 PM
To: Aimee Cole
Cc: Velez, Nelson, EMNRD; Bratcher, Michael, EMNRD
Subject: RE: [EXTERNAL] Maverick Permian, LLC - Sampling Notification (Week of 11/13/2023)

[**EXTERNAL EMAIL**]

Good afternoon Aimee,

The OCD has received your notification. Next time notification is sent to OCD, please include the time sampling is anticipated to start at each location. 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.

Thank you,

Shelly

Shelly Wells * Environmental Specialist-Advanced
Environmental Bureau
EMNRD-Oil Conservation Division
1220 S. St. Francis Drive | Santa Fe, NM 87505
(505)469-7520 | Shelly.Wells@emnrd.nm.gov
<http://www.emnrd.state.nm.us/OCD/>

From: Aimee Cole <acole@ensolum.com>
Sent: Wednesday, November 8, 2023 3:41 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Subject: [EXTERNAL] Maverick Permian, LLC - Sampling Notification (Week of 11/13/2023)

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

Maverick Permian, LLC plans to complete sampling activities at the following site the week of November 13, 2023.

- SEMU Permian #37 / NAPP2305453661
 - o Sampling Dates: 11/13/2023 – 11/14/2023
- EVGSAU Sat 6 Mobile Tester / NAPP2304744550
 - o Sampling Dates: 11/15/2023 – 11/17/2023

Thank you,



Aimee Cole

Senior Managing Scientist

720-384-7365

Ensolum, LLC

in f 

Julianna Falcomata

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Thursday, March 16, 2023 9:17 AM
To: Kalei Jennings
Cc: Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD
Subject: RE: [EXTERNAL] Maverick Permian - Sampling Notification (Week of 3/20/2023)

[**EXTERNAL EMAIL**]

Kalei,

Kalei,

Thank you for the notification. The notification requirement is two full business days which for sampling on Monday would be at the latest at the end of the workday on Wednesday. If you can please provide specific times and dates of sampling in all future communications also, 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.

Thank you for your cooperation.

JH

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



From: Kalei Jennings <kjennings@ensolum.com>
Sent: Thursday, March 16, 2023 7:29 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Subject: [EXTERNAL] Maverick Permian - Sampling Notification (Week of 3/20/2023)

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

All,

Maverick Permian, LLC (Maverick) plans to complete sampling activities at the following sites the week of March 20, 2023.

- SEMU Permian 37 / NAPP2305453661
- EVGSAU 2963-001/ NAPP2235371799

- Grayburg Eumont Straw Battery/ NAPP2302036818
- MCA 351/ NAPP2302034681
- MCA 254/ NAPP2302035947
- MCA 400/NAPP2305455050

Thank you,



Kalei Jennings

Senior Scientist

817-683-2503

Ensolum, LLC

in f 

Julianna Falcomata

From: Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>
Sent: Monday, May 8, 2023 3:44 PM
To: Kalei Jennings
Cc: Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD; Harimon, Jocelyn, EMNRD
Subject: FW: [EXTERNAL] Maverick Permian- Extension Request- SEMU Permian #37 (Incident Number NAPP2305453661)

[**EXTERNAL EMAIL**]

Hello Kalei

OCD approves your 90-day extension request to August 7, 2023 to submit a remediation plan or closure report. 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: Kalei Jennings <kjennings@ensolum.com>
Sent: Monday, May 8, 2023 11:49 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Subject: [EXTERNAL] Maverick Permian- Extension Request- SEMU Permian #37 (Incident Number NAPP2305453661)

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


To Whom It May Concern,

SEMU Permian #37 (Incident Number NAPP2305453661)

Maverick Permian, LLC (Maverick) is requesting an extension for the current deadline of May 8, 2023, for submitting a report required in 19.15.29.12.B.(1) NMAC detailing remedial actions at the SEMU Permian #37 (Incident Number NAPP2305453661). On February 7, 2023, a flowline ruptured which caused a produced water and crude oil release onto the surrounding pasture at the Site. Initial site assessment and delineation activities have been completed. Based on laboratory analytical results, additional remediation efforts are warranted. To complete additional remediation activities and submit a remediation work plan or closure report, Maverick requests a 90-day extension of this deadline until August 7, 2023.

Thank you,



Kalei Jennings
Senior Scientist
817-683-2503
Ensolum, LLC
in f 

From: [Enviro, OCD, EMNRD](#)
To: [Kalei Jennings](#)
Cc: [Bratcher, Michael, EMNRD](#); [Nobui, Jennifer, EMNRD](#)
Subject: RE: [EXTERNAL] Maverick Permian - Sampling Notification (Week of 3/20/2023)
Date: Thursday, March 16, 2023 8:16:44 AM
Attachments: [image005.jpg](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)

[**EXTERNAL EMAIL**]

Kalei,

Kalei,

Thank you for the notification. The notification requirement is two full business days which for sampling on Monday would be at the latest at the end of the workday on Wednesday. If you can please provide specific times and dates of sampling in all future communications also, 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.

Thank you for your cooperation.

JH

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



From: Kalei Jennings <kjennings@ensolum.com>
Sent: Thursday, March 16, 2023 7:29 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Subject: [EXTERNAL] Maverick Permian - Sampling Notification (Week of 3/20/2023)

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

All,

Maverick Permian, LLC (Maverick) plans to complete sampling activities at the following sites the week of March 20, 2023.

- SEMU Permian 37 / NAPP2305453661
- EVGSAU 2963-001/ NAPP2235371799
- Grayburg Eumont Straw Battery/ NAPP2302036818
- MCA 351/ NAPP2302034681
- MCA 254/ NAPP2302035947
- MCA 400/NAPP2305455050

Thank you,



Kalei Jennings

Senior Scientist

817-683-2503

Ensolum, LLC





APPENDIX F

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	NAPP2305453661
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: Maverick Permian, LLC	OGRID: 331199
Contact Name: Bryce Wagoner	Contact Telephone: 928-241-1862
Contact email: Bryce.Wagoner@mavresources.com	Incident # (assigned by OCD) NAPP230545366
Contact mailing address: 1410 NW County Road Hobbs, NM 88240	

Location of Release Source

Latitude 32.5566346 _____ Longitude -103.1960617 _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name SEMU Permian #37	Site Type Flowline
Date Release Discovered February 7, 2023	API# (if applicable) 30-025-06252

Unit Letter	Section	Township	Range	County
LL	19	20S	38E	Lea

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

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 3 bbls	Volume Recovered (bbls) 0 bbls
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 15 bbls	Volume Recovered (bbls) 0 bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)


Cause of Release
The release was caused by a flowline rupture. The release occurred in the pasture. The source of the release has been stopped and the impacted area has been secured. A remediation crew scrapped visually impacted surface soils and staged them for disposal.

Incident ID	NAPP2305453661
District RP	
Facility ID	
Application ID	

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

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped.	
<input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.	
<input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
<input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Bryce Wagoner</u>	Title: <u>Permian HSE Specialist II</u>
Signature: 	Date: <u>2/17/2023</u>
email: <u>Bryce.Wagoner@mavresources.com</u>	Telephone: <u>928-241-1862</u>
<u>OCD Only</u>	
Received by: _____	Date: _____

NAPP2305453661

Pooled Fluids on the Surface										
	Length (ft.)	Width (ft.)	Depth (in)	# of Boundaries <i>*edges of pool where depth is 0 . don't count shared boundaries</i>	Oil-Water Ratio (%)	Pooled Area (ft²)	Estimated Average Depth (ft.)	Pooled Volume (bbl.)	Volume of Oil in Subsurface (bbl.)	Volume of Water in Subsurface (bbl.)
Rectangle A	20.0	25.0	2.0	4.0	0.20	500.0	0.0	3.7	0.74	2.97
Rectangle B	15.0	25.0	2.0	3.0	0.20	375.0	0.1	3.7	0.74	2.97
Rectangle C	10.0	15.0	2.00	3.00	0.20	150.000	0.056	1.483	0.08	1.19
Rectangle D						0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle E						0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Total Volume (bbls):								8.90	1.57	7.12

Subsurface Fluids										
	Length (ft.)	Width (ft.)	Depth (in.)	Saturation (%) <i>*10% in consolidated sediments after rain to 50% in sand with no precipitation</i>	Oil-Water Ratio (%)	Area (ft²)	Volume (bbl.)	Estimated Volume in Subsurface (bbl.)	Volume of Oil in Subsurface (bbl.)	Volume of Water in Subsurface (bbl.)
Rectangle A	20.0	25.0	6.0	0.1	0.20	500.0	44.5	4.5	0.89	3.6
Rectangle B	15.0	25.0	6.0	0.1	0.20	375.0	33.4	3.3	0.67	2.7
Rectangle C	10.0	15.0	6.0	0.1	0.20	150.0	13.4	1.3	0.27	1.1
Rectangle D						0.0	0.0	0.0	0.00	0.0
Rectangle E						0.0	0.0	0.0	0.00	0.0
Rectangle F						0.0	0.0	0.0	0.00	0.0
Rectangle G						0.0	0.0	0.0	0.00	0.0
Rectangle H						0.0	0.0	0.0	0.00	0.0
Rectangle I						0.0	0.0	0.0	0.00	0.0
Rectangle J						0.0	0.0	0.0	0.00	0.0
Total Volume (bbls):								9.12	1.82	7.30

TOTAL RELEASE VOLUME (bbls):	18.0
------------------------------	------

Incident ID	NAPP2305453661
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>51-100</u> (feet bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

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

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

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

State of New Mexico
Oil Conservation Division

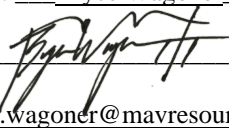
Page 4

Incident ID	NAPP2305453661
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: Bryce Wagoner

Title: Permian HSE Specialist II

Signature: 

12/1/2023

email: bryce.wagoner@mavresources.com

Telephone: 928-241-1862

OCD Only

Received by: _____

Date: _____

Incident ID	NAPP2305453661
District RP	
Facility ID	
Application ID	

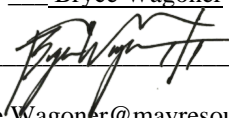
Closure

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: Bryce Wagoner Title: Permian HSE Specialist II
Signature:  Date: 12/1/2023
email: Bryce.Wagoner@mavresources.com Telephone: 928-241-1862

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

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

QUESTIONS

Action 291971

QUESTIONS

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID:	331199
	Action Number:	291971
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2305453661
Incident Name	NAPP2305453661 SEMU PERMIAN #37 @ 30-025-06252
Incident Type	Other
Incident Status	Remediation Closure Report Received
Incident Well	[30-025-06252] SEMU PERMIAN #037

Location of Release Source	
Please answer all the questions in this group.	
Site Name	SEMU PERMIAN #37
Date Release Discovered	02/07/2023
Surface Owner	Federal

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

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Corrosion Flow Line - Production Crude Oil Released: 3 BBL Recovered: 0 BBL Lost: 3 BBL.
Produced Water Released (bbls) Details	Cause: Corrosion Flow Line - Production Produced Water Released: 15 BBL Recovered: 0 BBL Lost: 15 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	No additional details

District I

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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

QUESTIONS, Page 2

Action 291971

QUESTIONS (continued)

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID:
	331199
	Action Number:
	291971
Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	No
Reasons why this would be considered a submission for a notification of a major release	Unavailable.
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response

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

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

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

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

I hereby agree and sign off to the above statement	Name: Aimee Cole Email: acole@ensolum.com Date: 12/15/2023
--	---

District I

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

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District III

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QUESTIONS, Page 3

Action 291971

QUESTIONS (continued)

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID:	331199
	Action Number:	291971
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS**Site Characterization**

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 75 and 100 (ft.)
What method was used to determine the depth to ground water	U.S. Geological Survey
Did this release impact groundwater or surface water	Yes
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between ½ and 1 (mi.)
Any other fresh water well or spring	Between ½ and 1 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Between 1 and 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

Remediation Plan

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride (EPA 300.0 or SM4500 Cl B)	2560
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	20000
GRO+DRO (EPA SW-846 Method 8015M)	19980
BTEX (EPA SW-846 Method 8021B or 8260B)	110
Benzene (EPA SW-846 Method 8021B or 8260B)	0.5

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

On what estimated date will the remediation commence	11/01/2023
On what date will (or did) the final sampling or liner inspection occur	11/14/2023
On what date will (or was) the remediation complete(d)	11/14/2023
What is the estimated surface area (in square feet) that will be reclaimed	3925
What is the estimated volume (in cubic yards) that will be reclaimed	580
What is the estimated surface area (in square feet) that will be remediated	3925
What is the estimated volume (in cubic yards) that will be remediated	1600

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 4

Action 291971

QUESTIONS (continued)

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID:	331199
	Action Number:	291971
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS**Remediation Plan (continued)**

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:

(Select all answers below that apply.)

(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for off-site disposal	Sundance Services, Inc [fKJ1600527371]
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
OR is the off-site disposal site, to be used, out-of-state	No
OR is the off-site disposal site, to be used, an NMED facility	No
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

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

I hereby agree and sign off to the above statement	Name: Aimee Cole Email: acole@ensolum.com Date: 12/15/2023
--	--

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 5

Action 291971

QUESTIONS (continued)

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID:
	331199
	Action Number:
	291971
Action Type:	
[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

QUESTIONS

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

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QUESTIONS, Page 6

Action 291971

QUESTIONS (continued)

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID:	331199
	Action Number:	291971
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	292706
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	11/01/2023
What was the (estimated) number of samples that were to be gathered	25
What was the sampling surface area in square feet	3925

Remediation Closure Request

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

Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	3925
What was the total volume (cubic yards) remediated	1600
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	3925
What was the total volume (in cubic yards) reclaimed	580
Summarize any additional remediation activities not included by answers (above)	All remediation activities are provided in the Closure Request Report and were completed in accordance with an approved Remediation Work Plan.

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 (in .pdf format) 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.

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.

I hereby agree and sign off to the above statement	Name: Aimee Cole Email: acole@ensolum.com Date: 12/15/2023
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QUESTIONS, Page 7

Action 291971

QUESTIONS (continued)

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Action Type:	
[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Action 291971

CONDITIONS

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	Action Number:
	291971
Action Type:	
[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

CONDITIONS

Created By	Condition	Condition Date
scwells	Remediation Closure approved. All areas not reasonably needed for production or subsequent drilling operations will need to be reclaimed and revegetated as soon as practical. Areas reasonably needed for production or subsequent drilling operations will need to be reclaimed and revegetated as soon as they are no longer reasonably needed. A report for reclamation and revegetation will need to be submitted prior to this incident receiving the final status of "Restoration Complete."	3/1/2024