

May 6, 2024

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 127 Flowline Release Incident Number nAPP2331056887 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 127 Flowline Release (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 from the soil sampling events, Maverick is submitting this *Closure Request*, describing remediation that has occurred and requesting closure for Incident Number nAPP2331056887.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit A, Section 25, Township 17 South, Range 35 East, in Lea County, New Mexico (32.5495° N, -103.1991° W) and is associated with oil and gas exploration and production operations on Private Land.

On November 6, 2023, corrosion of a flowline resulted in the release of approximately 4 barrels (bbls) of crude oil and 35 bbls of produced water into the surrounding pasture. A vacuum was immediately dispatched to the site and recovered 20 bbls of free-standing fluid. Maverick reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on November 6, 2023. The release was assigned Incident Number nAPP2331056887.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess 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 are summarized below and detailed in the NMOCD permitting portal Form C-141 Site Characterization section. Potential Site receptors are identified on Figure 1.

Depth to groundwater at the Site is greater than 55 feet below ground surface (bgs) based on the nearest groundwater well/soil boring data. The closest soil boring with depth to groundwater data is soil boring DTW-01 located approximately 0.40 miles southwest of the Site. The soil boring was drilled during March 2024 to a depth of 55 feet bgs. A field geologist logged and described soils continuously. The borehole

Ensolum, LLC | Environmental, Engineering & Hydrogeologic Consultants 3122 National Parks Highway | Carlsbad, NM 88220 | ensolum.com

Page 2

lithologic log is included in Appendix A. No groundwater was encountered in the borehole to a depth of 55 feet bgs. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater is greater than 55 feet bgs. The borehole was properly abandoned using hydrated bentonite chips. All wells used for depth to groundwater determination are presented on Figure 1.

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

Based on the results of the Site Characterization, the following NMOCD Table 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 was applied to the top 4 feet of the pasture area that was impacted by the release, per 19.15.29.13.D (1) NMAC for the top 4 feet of areas that will be reclaimed following remediation.

SITE ASSESSMENT ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On March 11, 2024, site assessment activities were conducted at the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Five assessment soil samples (SS01 through SS05) were collected around the visible release extent from a depth of 0.5 feet bgs to confirm the lateral extent of the surface release. Four boreholes (BH01 through BH04) were advanced via hand auger within the release extent, to assess the extent of impacted soil within the release. The boreholes were advanced to a depth of 4 feet bgs. Soil samples were collected from the boreholes at depths ranging from 1-foot to 4 feet bgs. 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 assessment soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody procedures to Cardinal Laboratories for analysis of the following constituents of concern (COC): 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 4500.

Laboratory analytical results for assessment soil samples SS01 through SS05, collected around the release extent, indicated that all COC concentrations were compliant with the most stringent Table I Closure Criteria and confirmed the lateral extent of the surface release. Laboratory analytical results for



Page 3

the soil samples collected from boreholes BH01 through BH04, advanced within the release extent, indicated that TPH concentrations exceeded the Site Closure Criteria and/or reclamation requirements. Laboratory analytical results are summarized on Table 1 and the complete laboratory analytical reports are included in Appendix C. Based on visible staining in the release area and laboratory analytical results for the borehole soil samples, excavation activities were scheduled.

EXCAVATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

Between March 18, 2024 and April 15, 2024, Ensolum personnel were at the Site to oversee excavation of impacted soil. The flowline was abandoned and removed from the Site. To direct excavation activities, soil was field screened for volatile aromatic hydrocarbons (VOCs) utilizing a calibrated photoionization detector (PID) and chloride Hach® chloride QuanTab® test strips. Excavation activities were performed using a track-mounted backhoe and transport vehicles. The excavation was completed to a depth ranging from 4 feet to 15 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 FS29 were collected from the floor of the excavation from depths ranging from 4 feet to 15 feet bgs. Composite soil samples SW01 through SW06 were collected from the sidewalls of the excavation at depths ranging from the ground surface to to 15 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.

Laboratory analytical results for the excavation floor and sidewall samples, collected from the final excavation extent, indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirements, where applicable. Laboratory analytical results are summarized on Table 1 and the complete laboratory analytical reports are included as Appendix C.

The excavation measured approximately 5,700 square feet in areal extent. A total of approximately 3,200 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Disposal Facility located in Hobbs, New Mexico. After completion of confirmation sampling, the excavation was secured with fencing.

RECLAMATION ACTIVITIES

Upon completion of excavation activities and receipt of final laboratory analytical results, the excavation was backfilled with locally procured topsoil. One representative 5-point composite sample (BF01) was collected from the backfill material. The backfill soil sample was handled and analyzed following the same procedures as described above. Laboratory analytical results for the backfill soil sample confirmed compliance with the NMOCD requirement for the reclaimed area to contain non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg and TPH concentrations less than 100 mg/kg. The laboratory analytical results are summarized on the attached Table 1 and the complete laboratory analytical report is included as Appendix C.

Following backfill activities, the disturbed area was contoured to match the surrounding topography and the surface was prepared for seeding. The disturbed pasture area was seeded with the BLM sandy sites seed mix #2 at the rate specified in pounds of pure live seed (PLS) per acre.



Page 4

Species/Cultivar	PLS/Acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

The seed mix was distributed with a broadcast seed spreader and harrowed in. Photographs of the reclaimed excavation area are provided in Appendix B.

The Site will be monitored for vegetation growth to ensure that reclamation activities were successful. Focus for this phase will be to prevent erosion and site degradation, and to monitor for and treat invasive and noxious weed species.

- Erosion control of the newly reclaimed areas includes prompt revegetation and contouring of the surface to prevent concentrated surface water flow.
- Annual inspections will take place at the location to assess revegetation progress until vegetation is consistent with local natural vegetation density.
- If necessary, an additional application of the BLM seed mix will be applied.
- Noxious and invasive weeds will be identified and treated by licensed contracted herbicide applicator or mechanically removed.

A *Revegetation Report* will be submitted to the NMOCD once vegetation growth in the reclaimed pasture area has uniform vegetative cover that reflects a life-form ratio of plus or minus fifty percent of predisturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds, per NMAC 19.15.29.13 D.(3).

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the November 6, 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. Based on the laboratory analytical results, no further remediation is required.

Initial response efforts and excavation of impacted soil have mitigated impacts at this Site. Depth to groundwater was determined to be greater than 55 feet bgs within 0.5 miles of the Site 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 nAPP2331056887.

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



Page 5

Sincerely, **Ensolum**, **LLC**

A:---- O-l-

Aimee Cole Senior Managing Scientist

cc: Bryce Wagoner, Maverick Natural Resources

Appendices:

Figure 1 Site Receptor Map

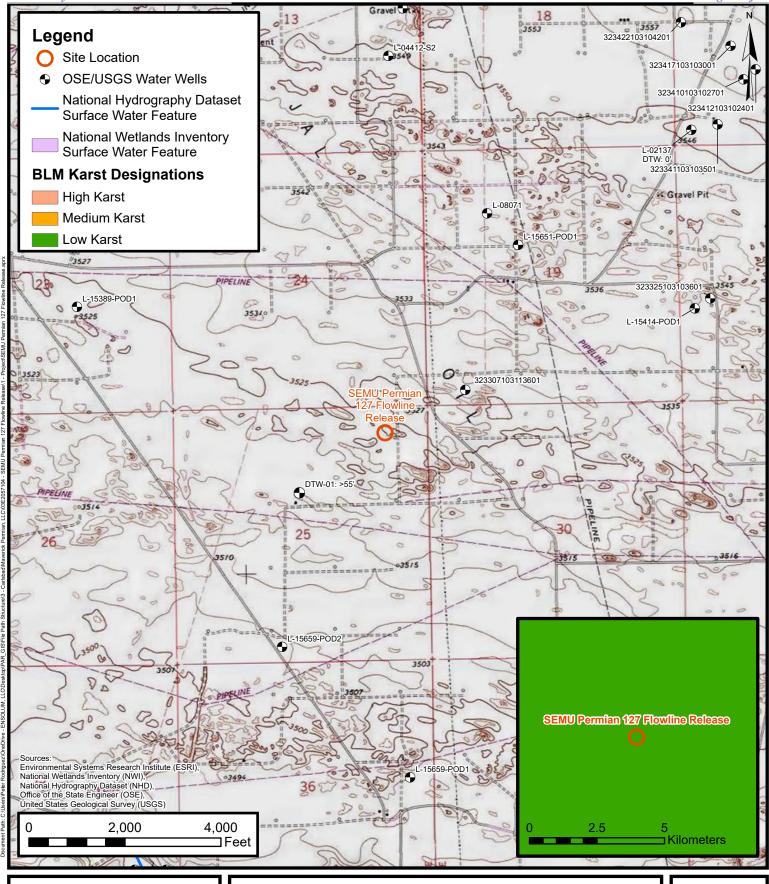
Figure 2 Assessment Soil Sample Locations
Figure 3 Excavation Soil Sample Locations
Table 1 Soil Sample Analytical Results
Appendix A Referenced Well Records

Appendix B Photographic Log

Appendix C Laboratory Analytical Reports & Chain of Custody Documentation



FIGURES



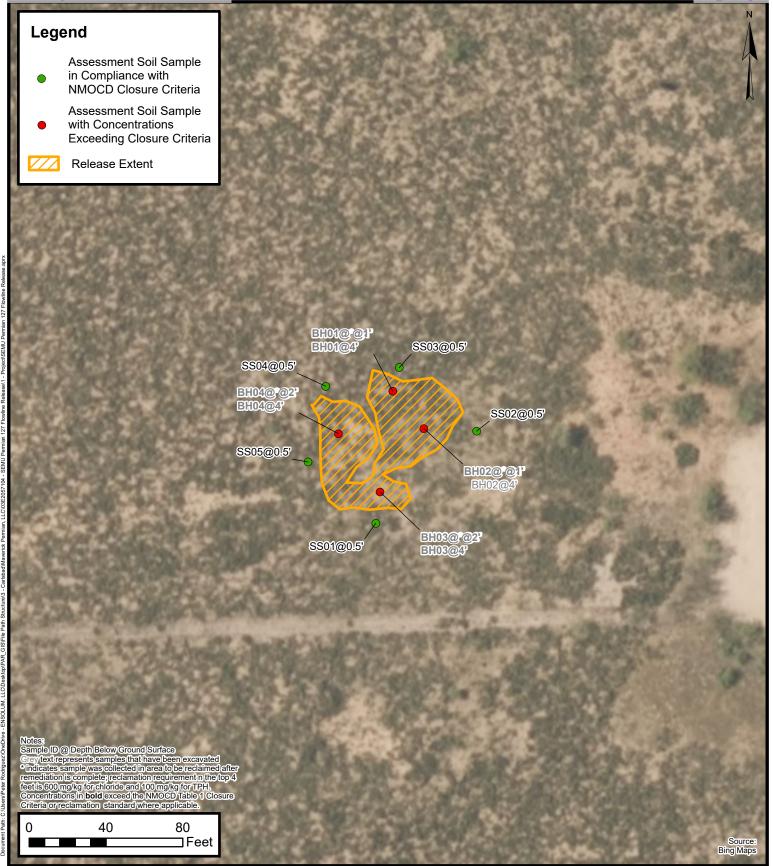


Site Receptor Map

Maverick Permian, LLC
SEMU Permian 127 Flowline Release
Incident ID: nAPP2331056887

Unit A, Sec 25, T20S, R37E Lea County, New Mexico FIGURE

1



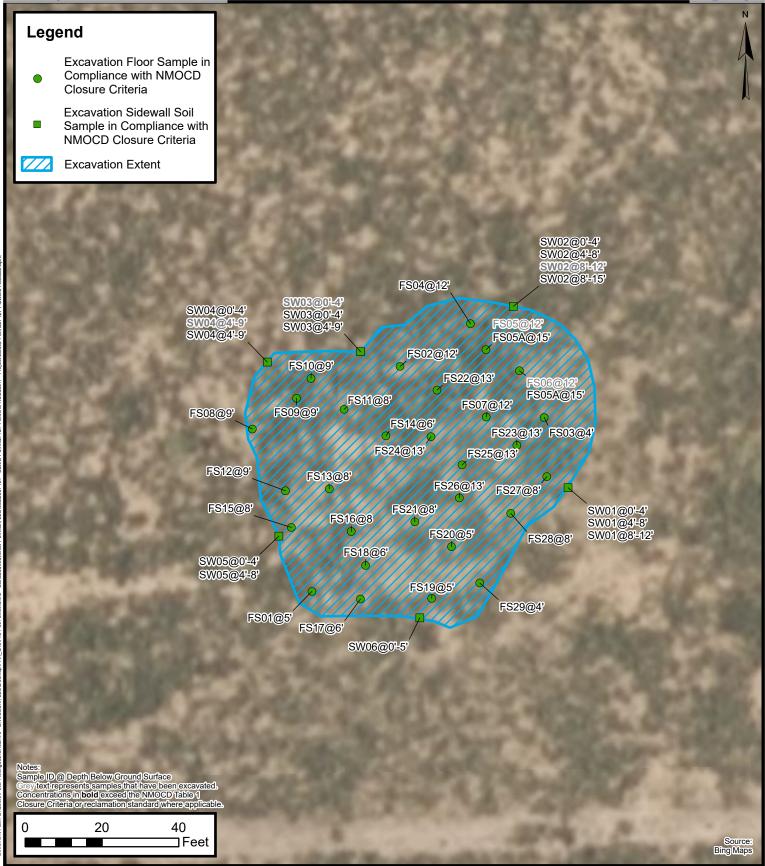


Assessment Soil Sample Locations

Maverick Permian, LLC SEMU Permian 127 Flowline Release Incident ID: nAPP2331056887

> Unit A, Sec 25, T20S, R37E Lea County, New Mexico

FIGURE 2





Excavation Soil Sample Locations

Maverick Permian, LLC SEMU Permian 127 Flowline Release Incident ID: nAPP2331056887

> Unit A, Sec 25, T20S, R37E Lea County, New Mexico

FIGURE 3



TABLES



TABLE 1 **SOIL SAMPLE ANALYTICAL RESULTS** SEMU Permian 127 Flowline Release Maverick Permian, LLC Lea County, New Mexico **Total BTEX TPH GRO TPH DRO TPH ORO GRO+DRO Total TPH** Sample Depth Benzene Chloride **Sample Date** Designation (feet bgs) (mg/kg) (mg/kg) (mg/kg) (mg/kg) (mg/kg) (mg/kg) (mg/kg) (mg/kg) **NMOCD Table I Closure Criteria (NMAC** 10 50 NE NE NE 1.000 2.500 10.000 19.15.29) NMOCD Reclamation Requirement for the top NE NE NE NE NE NE 100 600 four feet **Assessment Soil Samples** SS01 03/11/2024 0.5 < 0.050 < 0.300 <10.0 <10.0 <10.0 <10.0 <10.0 48.0 SS02 03/11/2024 0.5 < 0.050 < 0.300 <10.0 <10.0 <10.0 <10.0 <10.0 16.0 <10.0 SS03 03/11/2024 0.5 < 0.050 < 0.300 <10.0 <10.0 <10.0 <10.0 32.0 SS04 03/11/2024 0.5 < 0.050 < 0.300 <10.0 <10.0 <10.0 <10.0 <10.0 32.0 SS05 0.5 < 0.050 < 0.300 <10.0 <10.0 <10.0 <10.0 <10.0 03/11/2024 16.0 BH01* 0.802 79.9 2.480 42.780 512 03/11/2024 1 40.300 10.100 52.880 2,740 **BH01** 03/11/2024 4 1.58 101 30,200 7,120 32,940 40,060 688 BH02* 03/11/2024 1 < 0.050 < 0.300 12.1 1.410 331 1,422 1,753 331 BH02 03/11/2024 4 < 0.050 < 0.300 <10.0 849 213 849 1,062 1,600 BH03* 03/11/2024 2 < 0.050 6.89 788 37,700 8,290 38,488 46,778 208 BH03 03/11/2024 4 < 0.050 < 0.300 <50.0 4,170 951 4,170 5,121 704 2 BH04* 03/11/2024 2.61 133 2.730 25.500 4.380 28,230 32,610 528 **BH04** 03/11/2024 4 0.657 83.8 1.960 14.100 2.120 16.060 18.180 2.280 **Excavation Floor Soil Samples** FS01 < 0.300 04/01/2024 5 < 0.050 <10.0 <10.0 <10.0 <10.0 <10.0 896 12 < 0.300 <10.0 688 FS02 04/02/2024 < 0.050 18.7 <10.0 18.7 18.7 380 FS03 03/22/2024 4 < 0.050 < 0.300 <10.0 316 64.1 316 896 225 FS04 04/02/2024 12 < 0.050 < 0.300 12.0 198 14.9 210 1,390 FS05 12 0.934 54.5 1,280 5,100 705 6,380 04/02/2024 7,085 2,000 FS05A 04/09/2024 15 < 0.050 < 0.300 <10.0 <10.0 <10.0 <10.0 <10.0 3.520 FS06 04/02/2024 12 < 0.050 3.90 183 971 157 1,154 1,311 1,390 FS06A 04/09/2024 15 < 0.050 38 531 110 569 679 2,640 1.05 12 FS07 04/02/2024 < 0.050 < 0.300 <10.0 <10.0 <10.0 <10.0 <10.0 928 FS08 04/03/2024 9 < 0.050 < 0.300 <10.0 <10.0 <10.0 <10.0 <10.0 1.600 9 <10.0 FS09 04/03/2024 < 0.050 < 0.300 <10.0 <10.0 <10.0 <10.0 1,660 9 < 0.300 <10.0 <10.0 <10.0 <10.0 <10.0 FS10 04/03/2024 < 0.050 1,880



TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS SEMU Permian 127 Flowline Release Maverick Permian, LLC Lea County, New Mexico

					verick Permian, l County, New Me					
Sample Designation	Sample 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 Tab	ole I Closure Crite 19.15.29)	ria (NMAC	10	50	NE	NE	NE	1,000	2,500	10,000
NMOCD Reclan	nation Requireme	ent for the top	NE	NE	NE	NE	NE	NE	100	600
FS11	04/03/2024	8	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,280
FS12	04/03/2024	9	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,070
FS13	04/03/2024	8	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,120
FS14	04/03/2024	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	960
FS15	04/04/2024	8	<0.050	<0.300	<10.0	312	62.5	312	375	560
FS16	04/04/2024	8	<0.050	<0.300	<10.0	176	32.9	176	209	832
FS17	04/04/2024	6	<0.050	<0.300	<10.0	37.8	<10.0	37.8	37.8	592
FS18	04/04/2024	6	<0.050	<0.300	<10.0	113	20.0	113	133	320
FS19	04/04/2024	5	<0.050	<0.300	<10.0	28.1	<10.0	28.1	28.1	224
FS20	04/04/2024	5	<0.050	<0.300	<10.0	38.4	<10.0	38.4	38.4	240
FS21	04/04/2024	8	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,680
FS22	04/09/2024	13	<0.050	<0.300	<10.0	28.2	<10.0	28.2	28.2	3,320
FS23	04/09/2024	13	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,520
FS24	04/09/2024	13	<0.050	<0.300	<10.0	42.2	<10.0	42.2	42.2	1,960
FS25	04/09/2024	13	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,720
FS26	04/09/2024	13	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,640
FS27	04/09/2024	8	<0.050	<0.300	<10.0	46.7	<10.0	46.7	46.7	992
FS28	04/09/2024	8	<0.050	<0.300	<10.0	169	37.8	169	207	816
FS29	04/10/2024	4	<0.050	<0.300	<10.0	105	12.4	105	117	896
				Excavat	ion Sidewall Soil	Samples				
SW01*	3/27/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW01	4/8/2024	4-8	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	560
SW01	4/8/2024	8-12	<0.050	<0.300	<10.0	85.2	<10.0	85.2	85.2	1,260
SW02*	3/27/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
SW02	4/8/2024	4-8	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW02	4/8/2024	8-12	<0.050	4.90	208	2,860	433	3,068	3,501	160
SW02	4/15/2024	8-15	<0.050	<0.300	<10.0	88.6	<10.0	88.6	88.6	560



TABLE 1

SOIL SAMPLE ANALYTICAL RESULTS

SEMU Permian 127 Flowline Release Maverick Permian, LLC

	Lea County, New Mexico													
Sample Designation	Sample 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 Tab	NMOCD Table I Closure Criteria (NMAC 19.15.29)		10	50	NE	NE	NE	1,000	2,500	10,000				
NMOCD Reclan	NMOCD Reclamation Requirement for the top four feet		NE	NE	NE	NE	NE	NE	100	600				
SW03*	3/27/2024	0-4	<0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	912				
SW03*	4/8/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0				
SW03	4/8/2024	4-9	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	832				
SW04*	3/27/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160				
SW04	4/8/2024	4-9	0.102	27.0	1,070	4,490	760	5,560	6,320	576				
SW04	4/15/2024	4-9	<0.050	<0.300	<10.0	14.0	<10.0	14.0	14.0	816				
SW05*	3/27/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	480				
SW05	4/8/2024	4-8	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,140				
SW06*	4/10/2024	0-5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	272				
				В	ackfill Soil Samp	ole								
BF01	4/8/2024	-	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0				

Notes:

bgs: below ground surface mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division NMAC: New Mexico Administrative Code

NA: Not Analyzed

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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 requirement in the top 4 feet is 600 mg/kg for chloride and 100 mg/kg for TPH.

Concentrations in **bold** exceed the NMOCD Table 1 Closure Criteria or reclamation

standard where applicable.



APPENDIX A

Referenced Well Records

								Commis Names DTW 04	Data: 02/05/2024					
								Sample Name: DTW-01	Date: 03/06/2024					
		E	N	S	OI	_ U	M	Site Name: Grayburg Eumont Stra						
							• - •	Incident Number: nAPP230203681	1.8					
			00:	. / 0				Job Number: 03E2057063						
					SAMPLING	LOG		Logged By: Chad Hamilton Method: Air Rotary						
		2.546323						Hole Diameter: 6"	Total Depth: 55'					
Comm	ents: No	field scre	eening	or sampli	ng was cond	ucted at this	s site.							
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions						
D					0 <u>I</u> -	0	SW	0-10' Sand: yellow to tan, fine to very non-cohesive, mas	- ' '					
D					10	10								
D					20	20	SW	10-20' Sand: yellow to tan, fine to very non-cohesive, mas						
SW 20-30' Sand: yellow to tan, fine to very fine grain size, dry, non-plasting non-cohesive, massive uniform														
					-	- 30	SW SC	30-35' Sand: yellow to tan, fine to very non-cohesive, mas 35-40' Sand: interbedded white and bi	sive uniform					
D					40 <u> </u>	40	SC	fine grain size, dry, non-plastic, nor 40-45' Sand: Red to light brown, med cohesive, massive, unif	to fine, moist, non-plastic, non- orm, gradational					
М					50	50	SC	45-53' Clayey sand: White, fine to ver cohesive, massive, u						
					I		CCHE	53' Caliche: White to yellow,	·					
М					55 _	_ 55	SC	54-55' Sand: Light brown, med to fine non-cohesive, massive, uniform ,at	•					
						Total D	epth @ !		orapt, No water encountered					



APPENDIX B

Photographic Log

ENSOLUM

Photographic Log

Maverick Permian, LLC SEMU Permian 127 Flowline Release Incident Number nAPP2331056887





Date: 11/08/2023 Photograph 1

Description: Release area

View: Southwest

Photograph 2

Date: 04/04/2024

Description: Excavation Activities

View: Northwest





Photograph 3

Date: 04/10/2024

Photograph 4

Date: 04/15/2024

Description: Excavation activities

Description: Final excavation extent View: West

View: Northeast

Page 1 of 2



Photographic Log

Maverick Permian, LLC SEMU Permian 127 Flowline Release Incident Number nAPP2331056887





Photograph 5

Description: Backfilling activities

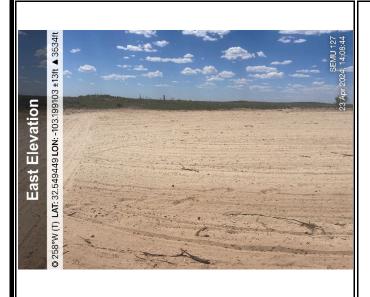
View: West

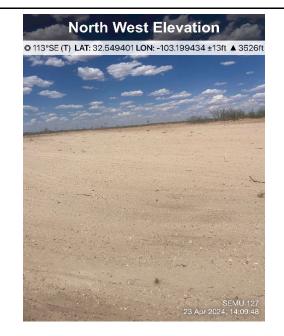
Photograph 6

Date: 04/22/2024

Description: Backfilled excavation

View: Southwest





Photograph 7

Date: 04/23/2024

Date: 04/18/2024

Photograph 8

Date: 04/23/2024

Description: Backfilled and seeded

Description: Backfilled and seeded View: Northwest

View: East

Page 2 of 2



APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation



March 14, 2024

AIMEE COLE

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: SEMU PERMIAN 127 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 03/11/24 15:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. 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 accreditated 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.

Celey D. Keene

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



Analytical Results For:

ENSOLUM, LLC AIMEE COLE 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 03/11/2024 Sampling Date: 03/11/2024

Reported: 03/14/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Tamara Oldaker

A I J D. ... 711

Project Location: MAVERICK

Sample ID: BH 01 1' (H241225-01)

TEX 8021B	mg/kg		Analyzed By: JH						S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.802	0.500	03/13/2024	ND	2.31	116	2.00	2.82	
Toluene*	8.52	0.500	03/13/2024	ND	2.17	109	2.00	2.69	
Ethylbenzene*	20.8	0.500	03/13/2024	ND	2.19	110	2.00	3.24	
Total Xylenes*	49.8	1.50	03/13/2024	ND	6.55	109	6.00	3.85	
Total BTEX	79.9	3.00	03/13/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	154 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	03/13/2024	ND	432	108	400	3.64	
TPH 8015M	mg/	kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	2480	100	03/12/2024	ND	217	108	200	7.34	
DRO >C10-C28*	40300	100	03/12/2024	ND	199	99.7	200	3.24	
EXT DRO >C28-C36	10100	100	03/12/2024	ND					
Surrogate: 1-Chlorooctane	194 9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	783 9	% 49.1-14	8						

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Celey & Keine



03/11/2024

Soil

Analytical Results For:

ENSOLUM, LLC AIMEE COLE 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 03/11/2024 Sampling Date: Reported: 03/14/2024 Sampling Type:

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact Sample Received By: Project Number: 03E2057104 Tamara Oldaker

Project Location: **MAVERICK**

Sample ID: BH 01 4' (H241225-02)

BTEX 8021B	mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	1.58	1.00	03/13/2024	ND	2.31	116	2.00	2.82	
Toluene*	7.50	1.00	03/13/2024	ND	2.17	109	2.00	2.69	
Ethylbenzene*	27.4	1.00	03/13/2024	ND	2.19	110	2.00	3.24	
Total Xylenes*	64.2	3.00	03/13/2024	ND	6.55	109	6.00	3.85	
Total BTEX	101	6.00	03/13/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	124	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	688	16.0	03/13/2024	ND	432	108	400	3.64	
TPH 8015M	mg,	/kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	2740	100	03/12/2024	ND	217	108	200	7.34	
DRO >C10-C28*	30200	100	03/12/2024	ND	199	99.7	200	3.24	
EXT DRO >C28-C36	7120	100	03/12/2024	ND					
Surrogate: 1-Chlorooctane	201	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	544	% 49.1-14	8						

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Analytical Results For:

ENSOLUM, LLC AIMEE COLE 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 03/11/2024 Sampling Date: 03/11/2024

Reported: 03/14/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Tamara Oldaker

Applyzod By: 14

Project Location: MAVERICK

ma/ka

Sample ID: BH 02 1' (H241225-03)

RTFY 8021R

B1EX 8021B	тд/кд		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/13/2024	ND	2.31	116	2.00	2.82	
Toluene*	<0.050	0.050	03/13/2024	ND	2.17	109	2.00	2.69	
Ethylbenzene*	<0.050	0.050	03/13/2024	ND	2.19	110	2.00	3.24	
Total Xylenes*	<0.150	0.150	03/13/2024	ND	6.55	109	6.00	3.85	
Total BTEX	<0.300	0.300	03/13/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	116	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/kg		Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	03/13/2024	ND	432	108	400	3.64	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	12.1	10.0	03/13/2024	ND	217	108	200	7.34	
DRO >C10-C28*	1410	10.0	03/13/2024	ND	199	99.7	200	3.24	
EXT DRO >C28-C36	331	10.0	03/13/2024	ND					
Surrogate: 1-Chlorooctane	108	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	121	% 49.1-14	8						

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Celey D. Keene



Analytical Results For:

ENSOLUM, LLC AIMEE COLE 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 03/11/2024 Sampling Date: 03/11/2024

Reported: 03/14/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Tamara Oldaker

Applyzod By: 14

Project Location: MAVERICK

ma/ka

Sample ID: BH 02 4' (H241225-04)

RTFY 8021R

B1EX 8021B	тд/кд		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/13/2024	ND	2.31	116	2.00	2.82	
Toluene*	<0.050	0.050	03/13/2024	ND	2.17	109	2.00	2.69	
Ethylbenzene*	<0.050	0.050	03/13/2024	ND	2.19	110	2.00	3.24	
Total Xylenes*	<0.150	0.150	03/13/2024	ND	6.55	109	6.00	3.85	
Total BTEX	<0.300	0.300	03/13/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	115	% 71.5-13	4						
nloride, SM4500Cl-B mg/kg			Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1600	16.0	03/13/2024	ND	432	108	400	3.64	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/13/2024	ND	217	108	200	7.34	
DRO >C10-C28*	849	10.0	03/13/2024	ND	199	99.7	200	3.24	
EXT DRO >C28-C36	213	10.0	03/13/2024	ND					
Surrogate: 1-Chlorooctane	102	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	141	% 49.1-14	8						

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Celey D. Keene

C-04



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

Analytical Results For:

ENSOLUM, LLC AIMEE COLE 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 03/11/2024 Sampling Date: 03/11/2024

Reported: 03/14/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Tamara Oldaker

Applyzod By: 14

Project Location: MAVERICK

ma/ka

Sample ID: BH 03 2' (H241225-05)

RTFY 8021R

B1EX 8021B	тд/кд		Analyzed By: JH						S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/13/2024	ND	2.31	116	2.00	2.82		
Toluene*	0.247	0.050	03/13/2024	ND	2.17	109	2.00	2.69		
Ethylbenzene*	0.490	0.050	03/13/2024	ND	2.19	110	2.00	3.24		
Total Xylenes*	6.15	0.150	03/13/2024	ND	6.55	109	6.00	3.85		
Total BTEX	6.89	0.300	03/13/2024	ND						
Surrogate: 4-Bromofluorobenzene (PID	177	% 71.5-13	4							
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	03/13/2024	ND	432	108	400	3.64		
TPH 8015M	mg,	/kg	Analyze	ed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	788	100	03/12/2024	ND	217	108	200	7.34		
DRO >C10-C28*	37700	100	03/12/2024	ND	199	99.7	200	3.24		
EXT DRO >C28-C36	8290	100	03/12/2024	ND						
Surrogate: 1-Chlorooctane	300	% 48.2-13	4							
Surrogate: 1-Chlorooctadecane	625	% 49.1-14	8							

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Analytical Results For:

ENSOLUM, LLC AIMEE COLE 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 03/11/2024 Sampling Date: 03/11/2024

Reported: 03/14/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact Sample Received By: Project Number: 03E2057104 Tamara Oldaker

Project Location: **MAVERICK**

Sample ID: BH 03 4' (H241225-06)

BTEX 8021B	mg/kg		Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/13/2024	ND	2.31	116	2.00	2.82	
Toluene*	<0.050	0.050	03/13/2024	ND	2.17	109	2.00	2.69	
Ethylbenzene*	<0.050	0.050	03/13/2024	ND	2.19	110	2.00	3.24	
Total Xylenes*	0.190	0.150	03/13/2024	ND	6.55	109	6.00	3.85	
Total BTEX	<0.300	0.300	03/13/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	130 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/kg		Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	704	16.0	03/13/2024	ND	432	108	400	3.64	
TPH 8015M	mg/	'kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<50.0	50.0	03/12/2024	ND	217	108	200	7.34	
DRO >C10-C28*	4170	50.0	03/12/2024	ND	199	99.7	200	3.24	
EXT DRO >C28-C36	951	50.0	03/12/2024	ND					
Surrogate: 1-Chlorooctane	149 9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	198 9	% 49.1-14	8						

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Analytical Results For:

ENSOLUM, LLC AIMEE COLE 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 03/11/2024 Sampling Date: 03/11/2024

Reported: 03/14/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Tamara Oldaker

Analyzed By: JH

Project Location: MAVERICK

mg/kg

Sample ID: BH 04 2' (H241225-07)

BTEX 8021B

	9/9		7,=0 = 7						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	2.61	1.00	03/13/2024	ND	2.31	116	2.00	2.82	
Toluene*	27.5	1.00	03/13/2024	ND	2.17	109	2.00	2.69	
Ethylbenzene*	29.2	1.00	03/13/2024	ND	2.19	110	2.00	3.24	
Total Xylenes*	73.6	3.00	03/13/2024	ND	6.55	109	6.00	3.85	
Total BTEX	133	6.00	03/13/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	130	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	528	16.0	03/13/2024	ND	432	108	400	3.64	
TPH 8015M	mg,	/kg	Analyze	Analyzed By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	2730	100	03/12/2024	ND	203	101	200	1.75	
DRO >C10-C28*	25500	100	03/12/2024	ND	190	94.8	200	0.820	
EXT DRO >C28-C36	4380	100	03/12/2024	ND					
Surrogate: 1-Chlorooctane	229	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	555	% 49.1-14	8						

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Celey D. Keene



Analytical Results For:

ENSOLUM, LLC AIMEE COLE 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 03/11/2024 Sampling Date: 03/11/2024

Reported: 03/14/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Tamara Oldaker

Analyzed By: JH

Project Location: MAVERICK

mg/kg

Sample ID: BH 04 4' (H241225-08)

BTEX 8021B

	9/9		,						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.657	0.500	03/13/2024	ND	2.31	116	2.00	2.82	
Toluene*	9.01	0.500	03/13/2024	ND	2.17	109	2.00	2.69	
Ethylbenzene*	21.1	0.500	03/13/2024	ND	2.19	110	2.00	3.24	
Total Xylenes*	53.0	1.50	03/13/2024	ND	6.55	109	6.00	3.85	
Total BTEX	83.8	3.00	03/13/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	118	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2280	16.0	03/13/2024	ND	432	108	400	3.64	
TPH 8015M	mg,	/kg	Analyze	Analyzed By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	1960	100	03/12/2024	ND	210	105	200	5.21	
DRO >C10-C28*	14100	100	03/12/2024	ND	198	98.9	200	4.25	
EXT DRO >C28-C36	2120	100	03/12/2024	ND					
Surrogate: 1-Chlorooctane	542	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	678	% 49.1-14	8						

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Celey D. Keene



Analytical Results For:

ENSOLUM, LLC AIMEE COLE 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 03/11/2024 Sampling Date: 03/11/2024

Reported: 03/14/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Tamara Oldaker

Applyzod By: 14

Project Location: MAVERICK

ma/ka

Sample ID: SS 01 0.5' (H241225-09)

RTFY 8021R

BIEX 8021B	mg	/ kg	Anaiyze	а ву: ЈН					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2024	ND	2.31	116	2.00	2.82	
Toluene*	<0.050	0.050	03/12/2024	ND	2.17	109	2.00	2.69	
Ethylbenzene*	<0.050	0.050	03/12/2024	ND	2.19	110	2.00	3.24	
Total Xylenes*	<0.150	0.150	03/12/2024	ND	6.55	109	6.00	3.85	
Total BTEX	<0.300	0.300	03/12/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	109	% 71.5-13	4						
Chloride, SM4500Cl-B	mg	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/13/2024	ND	432	108	400	3.64	
TPH 8015M	mg	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/12/2024	ND	210	105	200	5.21	
DRO >C10-C28*	<10.0	10.0	03/12/2024	ND	198	98.9	200	4.25	
EXT DRO >C28-C36	<10.0	10.0	03/12/2024	ND					
Surrogate: 1-Chlorooctane	133	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	122	% 49.1-14	8						

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Celey & Keene



Analytical Results For:

ENSOLUM, LLC AIMEE COLE 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 03/11/2024 Sampling Date: 03/11/2024

Reported: 03/14/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact Sample Received By: Project Number: 03E2057104 Tamara Oldaker

Project Location: MAVERICK

Sample ID: SS 02 0.8' (H241225-10)

BTEX 8021B	mg/	kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2024	ND	2.31	116	2.00	2.82	
Toluene*	<0.050	0.050	03/12/2024	ND	2.17	109	2.00	2.69	
Ethylbenzene*	< 0.050	0.050	03/12/2024	ND	2.19	110	2.00	3.24	
Total Xylenes*	<0.150	0.150	03/12/2024	ND	6.55	109	6.00	3.85	
Total BTEX	<0.300	0.300	03/12/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	113 9	6 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	03/13/2024	ND	432	108	400	3.64	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/12/2024	ND	210	105	200	5.21	
DRO >C10-C28*	<10.0	10.0	03/12/2024	ND	198	98.9	200	4.25	
EXT DRO >C28-C36	<10.0	10.0	03/12/2024	ND					
Surrogate: 1-Chlorooctane	118 9	6 48.2-13	4						
Surrogate: 1-Chlorooctadecane	109 9	% 49.1-14	8						

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Celey D. Keene



Analytical Results For:

ENSOLUM, LLC AIMEE COLE 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 03/11/2024 Sampling Date: 03/11/2024

Reported: 03/14/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact Sample Received By: Project Number: 03E2057104 Tamara Oldaker

Project Location: MAVERICK

Sample ID: SS 03 0.5' (H241225-11)

BTEX 8021B	mg/	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2024	ND	2.31	116	2.00	2.82	
Toluene*	<0.050	0.050	03/12/2024	ND	2.17	109	2.00	2.69	
Ethylbenzene*	<0.050	0.050	03/12/2024	ND	2.19	110	2.00	3.24	
Total Xylenes*	<0.150	0.150	03/12/2024	ND	6.55	109	6.00	3.85	
Total BTEX	<0.300	0.300	03/12/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	109 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/13/2024	ND	432	108	400	3.64	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/12/2024	ND	210	105	200	5.21	
DRO >C10-C28*	<10.0	10.0	03/12/2024	ND	198	98.9	200	4.25	
EXT DRO >C28-C36	<10.0	10.0	03/12/2024	ND					
Surrogate: 1-Chlorooctane	117 9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	110 9	% 49.1-14	8						

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Analytical Results For:

ENSOLUM, LLC AIMEE COLE 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 03/11/2024 Sampling Date: 03/11/2024

Reported: 03/14/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Tamara Oldaker

Applyzod By: 14

Project Location: MAVERICK

ma/ka

Sample ID: SS 04 0.5' (H241225-12)

RTFY 8021R

BIEX 8021B	mg	/ kg	Anaiyze	а ву: ЈН					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2024	ND	2.31	116	2.00	2.82	
Toluene*	<0.050	0.050	03/12/2024	ND	2.17	109	2.00	2.69	
Ethylbenzene*	<0.050	0.050	03/12/2024	ND	2.19	110	2.00	3.24	
Total Xylenes*	<0.150	0.150	03/12/2024	ND	6.55	109	6.00	3.85	
Total BTEX	<0.300	0.300	03/12/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	113	% 71.5-13	4						
Chloride, SM4500CI-B	mg	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/13/2024	ND	432	108	400	3.64	
TPH 8015M	mg	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/12/2024	ND	210	105	200	5.21	
DRO >C10-C28*	<10.0	10.0	03/12/2024	ND	198	98.9	200	4.25	
EXT DRO >C28-C36	<10.0	10.0	03/12/2024	ND					
Surrogate: 1-Chlorooctane	126	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	119	% 49.1-14	8						

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Analytical Results For:

ENSOLUM, LLC AIMEE COLE 705 W WADLEY AVE. MIDLAND TX, 79705 Fax To:

Received: 03/11/2024 Sampling Date: 03/11/2024

Reported: 03/14/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact Sample Received By: Project Number: 03E2057104 Tamara Oldaker

Project Location: MAVERICK

Sample ID: SS 05 0.5' (H241225-13)

BTEX 8021B	mg/	kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2024	ND	2.31	116	2.00	2.82	
Toluene*	<0.050	0.050	03/12/2024	ND	2.17	109	2.00	2.69	
Ethylbenzene*	<0.050	0.050	03/12/2024	ND	2.19	110	2.00	3.24	
Total Xylenes*	<0.150	0.150	03/12/2024	ND	6.55	109	6.00	3.85	
Total BTEX	<0.300	0.300	03/12/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	110 9	71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	03/13/2024	ND	432	108	400	3.64	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/12/2024	ND	210	105	200	5.21	
DRO >C10-C28*	<10.0	10.0	03/12/2024	ND	198	98.9	200	4.25	
EXT DRO >C28-C36	<10.0	10.0	03/12/2024	ND					
Surrogate: 1-Chlorooctane	125 9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	117 9	49.1-14	8						

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Notes and Definitions

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S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celeg D. Freene

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



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

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PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in confract or that shall be limited to the amount and is with a final for the	y and client's exclusive remedy for a	ny claim arising whether based in contract or	X 3/11/24	CASO XX	X	
analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 years after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without imitation, business interruptions, loss of use, or loss of profits incrured by client, its subsidiaries, "Rights or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whethe, such claim is based inno and of the above stated consequents."	ny other cause whatsoever shall be or consequental damages, including or consequental damages, including ormance of services hereunder by C	rause whatsoever shall be deemed waived unless made in writing and requested unless of whether under the Cardinal, regardless of whether under the Cardinal is considered to the constant of the cons	in contract or tort, small be limited to the amount paid in writing and received by Cardinal within 30 days after purpolishes, loss of use, or loss of profits incurred by the such daim is based upon any of the above stated and the contract of the stated and the stated	by the client for the completion of the applicable lient, its subsidiaries,		
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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

□ No □ No Corrected Temp. °C	Cardinal cannot accept verbal changes. Please email changes to celev keene@cardinallahsnm.com	oal changes. Please email char	rdinal cannot accept verb	† Ca	
Cool Intact	Rush Thermometer ID #140 Correction Factor 0°C	A CONTRACTOR OF THE PARTY OF TH		mpler - UPS - Bus - Other: Corrected Temp. °C	npler - UPS
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	by the client for the	n contract or tort, shall be limited to the amount paid	emedy for any claim arising whether based in	ASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the year.	SE NOTE: Liabi ses. All claims in
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ANALYSIS REQUEST		BILL 70	F		roioct Ma
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April 03, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: SEMU PERMIAN 127 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 03/27/24 14:14.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. 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 accreditated 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.

Celey D. Keine

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



Analytical Results For:

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

Received: 03/27/2024 Sampling Date: 03/27/2024

Reported: 04/03/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Shalyn Rodriguez

Analyzed By: JH

Project Location: MAVERICK 32.5495, -103.1991

mg/kg

Sample ID: SW 01 0-4 (H241601-01)

BTEX 8021B

BIEX GOEED	9/	119	Anaryzo	a 2 y : 3 : 1					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/29/2024	ND	2.07	104	2.00	5.54	
Toluene*	<0.050	0.050	03/29/2024	ND	2.08	104	2.00	8.46	
Ethylbenzene*	<0.050	0.050	03/29/2024	ND	2.14	107	2.00	9.40	
Total Xylenes*	<0.150	0.150	03/29/2024	ND	6.34	106	6.00	9.31	
Total BTEX	<0.300	0.300	03/29/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	112	% 71.5-13	4						
Chloride, SM4500CI-B	mg	/kg	Analyze	ed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	04/01/2024	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/28/2024	ND	206	103	200	1.19	
DRO >C10-C28*	<10.0	10.0	03/28/2024	ND	195	97.5	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	03/28/2024	ND					
Surrogate: 1-Chlorooctane	78.4	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	71.7	% 49.1-14	8						

Cardinal Laboratories *=Accredited Analyte

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Analytical Results For:

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

Received: 03/27/2024 Sampling Date: 03/27/2024

Reported: 04/03/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact Sample Received By: Project Number: 03E2057104 Shalyn Rodriguez

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: SW 03 0-4 (H241601-02)

BTEX 8021B	mg/	'kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/29/2024	ND	2.07	104	2.00	5.54	
Toluene*	<0.050	0.050	03/29/2024	ND	2.08	104	2.00	8.46	
Ethylbenzene*	<0.050	0.050	03/29/2024	ND	2.14	107	2.00	9.40	
Total Xylenes*	<0.150	0.150	03/29/2024	ND	6.34	106	6.00	9.31	
Total BTEX	<0.300	0.300	03/29/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	119 9	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	912	16.0	04/01/2024	ND	432	108	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/28/2024	ND	206	103	200	1.19	
DRO >C10-C28*	<10.0	10.0	03/28/2024	ND	195	97.5	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	03/28/2024	ND					
Surrogate: 1-Chlorooctane	91.9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	82.5	% 49.1-14	8						

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene



Analytical Results For:

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

Received: 03/27/2024

Sampling Date: 03/27/2024

Reported: 04/03/2024 Sampling Type:
Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition

Гуре: Soil

Project Name: SEMU PERMI Project Number: 03E2057104 Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Project Location: MAVERICK 32.5495, -103.1991

mg/kg

Sample ID: SW 05 0-4 (H241601-03)

BTEX 8021B

	9,	9	7	7: 5::					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/29/2024	ND	2.07	104	2.00	5.54	
Toluene*	<0.050	0.050	03/29/2024	ND	2.08	104	2.00	8.46	
Ethylbenzene*	<0.050	0.050	03/29/2024	ND	2.14	107	2.00	9.40	
Total Xylenes*	<0.150	0.150	03/29/2024	ND	6.34	106	6.00	9.31	
Total BTEX	<0.300	0.300	03/29/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	106	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	04/01/2024	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/28/2024	ND	206	103	200	1.19	
DRO >C10-C28*	<10.0	10.0	03/28/2024	ND	195	97.5	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	03/28/2024	ND					
Surrogate: 1-Chlorooctane	95.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	85.3	% 49.1-14	8						

Analyzed By: JH

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keine



Analytical Results For:

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

Received: 03/27/2024 Sampling Date: 03/27/2024

Reported: 04/03/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Shalyn Rodriguez

Analyzed By: 14

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: SW 02 0-4 (H241601-04)

RTFY 8021R

BIEX 8021B	mg,	^и кд	Anaiyze	a By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/29/2024	ND	2.07	104	2.00	5.54	
Toluene*	<0.050	0.050	03/29/2024	ND	2.08	104	2.00	8.46	
Ethylbenzene*	<0.050	0.050	03/29/2024	ND	2.14	107	2.00	9.40	
Total Xylenes*	<0.150	0.150	03/29/2024	ND	6.34	106	6.00	9.31	
Total BTEX	<0.300	0.300	03/29/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	108	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	04/01/2024	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/28/2024	ND	206	103	200	1.19	
DRO >C10-C28*	<10.0	10.0	03/28/2024	ND	195	97.5	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	03/28/2024	ND					
Surrogate: 1-Chlorooctane	87.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	79.4	% 49.1-14	8						

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results related only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene



Analytical Results For:

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

Received: 03/27/2024 Sampling Date: 03/27/2024

Reported: 04/03/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact Sample Received By: Shalyn Rodriguez Project Number: 03E2057104

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: SW 04 0-4 (H241601-05)

BTEX 8021B	mg/	kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/29/2024	ND	2.07	104	2.00	5.54	
Toluene*	<0.050	0.050	03/29/2024	ND	2.08	104	2.00	8.46	
Ethylbenzene*	<0.050	0.050	03/29/2024	ND	2.14	107	2.00	9.40	
Total Xylenes*	< 0.150	0.150	03/29/2024	ND	6.34	106	6.00	9.31	
Total BTEX	<0.300	0.300	03/29/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	115 %	71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	04/01/2024	ND	432	108	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/28/2024	ND	206	103	200	1.19	
DRO >C10-C28*	<10.0	10.0	03/28/2024	ND	195	97.5	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	03/28/2024	ND					
Surrogate: 1-Chlorooctane	158 9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	142 9	% 49.1-14	8						

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene



Notes and Definitions

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



	(575) 393-2326 F	(575) 393-2326 FAX (575) 393-2476				
Company Name: Ensolum, LLC	Ensolum, LLC			BILL TO	AN	ANALYSIS REQUEST
Project Manager: Aimee Cole	: Aimee Cole			P.O. #:		
ddress: 3122 N	Address: 3122 National Parks Hwy			Company: EnsoluM, LLC	77	
City: Carlsbad		State: NM Zip	Zip: 88220	Attn: acole@ensd um. com	1. COM	
Phone #: (720) 384-7365	84-7365	Fax #:		Address: SIRR National Parks Hu	Parks How	
roject #: 03	Project #: 03F2057/04	Project Owner: Maveril K	laverick	city: Las 1560	3	
roject Name:	Project Name: SEMU POMITAN 127 Flowline Release	127 Flowline	Release	State: //// Zip: 88320	0.66	
Project Location:	11 32.5495, -	-103,1991		Phone #: 720 - 384-7365	3%6	
Sampler Name:	Mario Sar	U		1		
FOR LAB USE ONLY			MATRIX	PRESERV. SAMPLING	LING	
Lab I.D.	Sample I.D.	(feet) (G)RAB OR (C)OMP	# CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER: ACID/BASE: ICE / COOL OTHER: DATE	BTEX	
	5003 1005	0-4 0		he/Le/s /	109:53	
	SWOS	0-4 6	-	85:10 hollok	85:60	
	BOWC	0-4 6		1/27/24	12:52	
	homs	0-4	_	WELLIK V	<	
PLEASE NOTE: Liability a analyses. All claims includ service. In no event shall C	nd Damages. Cardinal's liability and ing those for negligence and any ot ardinal be liable for incidental or co	d client's exclusive remedy for any clar her cause whatsoever shall be deen insequental damages, including with	aim arising whether based in contract ned waived unless made in writing an out limitation, business interruptions,	PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or fort, shall be limited to the amount plad by the circuit or analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incrured by client, its subsidiaries, and the profits of the above advanced profits incrured by client, its subsidiaries.	Dy the cirent to the completion of the applicable lient, its subsidiaries, seems or althouses.	
artiliates or successors arising Relinquished By	ors arising out of or related to the performance ed. By:	Time: \ \ \ / \ / \ \ \ \ \ \ \ \ \ \ \ \ \	Received. By:	ceived.By:	It: □ Yes □ No ire emailed. Please pi PenSo}uM, CoM /	Add' Phone #: rovide Email address: MSaLM,5@LNSO UM,COM
Relinquished By:	Y:	Date: F	Received By:	C	NEMANNO.	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sircle One) Bus - Other:	Observed Temp. °C	Sample Condition Cool Intact Pes A Yes	ion CHECKED BY:	Turnaround Time: Standard Rush Thermometer ID #113 (1)	Bacteria (only) sample Condition: Cool Intact Observed Temp. °C Yes Yes Corrected Temp. °C
Sampler - UPS -	Bus - Other:	Corrected lemp.		> > \	Correction Factor -0.50 1710	



April 05, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: SEMU PERMIAN 127 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 04/01/24 14:37.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. 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 accreditated 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.

Celey D. Keine

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



Analytical Results For:

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

Received: 04/01/2024 Sampling Date: 04/01/2024

Reported: 04/05/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Tamara Oldaker

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: FS01 5' (H241670-01)

BTEX 8021B	mg/	'kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/03/2024	ND	2.02	101	2.00	8.02	
Toluene*	<0.050	0.050	04/03/2024	ND	2.12	106	2.00	6.89	
Ethylbenzene*	<0.050	0.050	04/03/2024	ND	2.17	109	2.00	9.23	
Total Xylenes*	<0.150	0.150	04/03/2024	ND	6.80	113	6.00	12.3	
Total BTEX	<0.300	0.300	04/03/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	113 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	896	16.0	04/03/2024	ND	432	108	400	0.00	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/03/2024	ND	195	97.7	200	2.11	
DRO >C10-C28*	<10.0	10.0	04/03/2024	ND	191	95.7	200	3.80	
EXT DRO >C28-C36	<10.0	10.0	04/03/2024	ND					
Surrogate: 1-Chlorooctane	94.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	92.4	% 49.1-14	8						

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene



Notes and Definitions

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

recovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Freene

Relinquished By:

Date:

Received By:

Time: /4~37

Time:

Date: 4/1/24

Received By

services hereunder by Cardinal,

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Observed Temp. °C

400

Sample Condition
Cool_Intact
Yes I Yes
No No

CHECKED BY:

Turnaround Time:

Standard Rush Relinquished By:

service. In no event shall Cardinal be liable for incidental or cons

quental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



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

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company Name: Ensolum, LLC	Ensolum, LLC													8		BILL TO						≥	A	7	ANALYSIS	F	2	REQUEST	T					
roject Manager: Aimee Cole	: Aimee Cole									_	P.O.	#	.,									\neg											\neg	
ddress: 3122 N	Address: 3122 National Parks Hwy									_	or	np	any		111	Company: IEN SOLUM, LLC	11/M)																	
ity: Carlsbad		State: NM	Zip	Zip: 88220	322	0				_	tt.	3:1	2	0	0	Attn: OLOJE @ en sol um, con	(mm, co)																	
hone #: (720) 384-7365	34-7365	Fax #:								_	dc	dre	SS	W	2	Address: 3/22 National Parks Hur	al Parks	42																
roject #: 0352057104	2057104	Project Owner:	ה							_	City (7:	2	-	35	city: Cas 15 bad		_																(11)
roject Name: S	roject Name: SIE MU POPMION 127 FLOWLING Release	127 Flow	1.0	6	\sim	13	20	56	10		Stat	:e:	3	2	Ν	State: N/∕/ Zip: 882,20	06																	
roject Location	Project Location: 32.5495, -103, 1991	3.1991	7								hc	one	#	V	2	Phone #: 720-384-7365	-7365																	
ampler Name:	Mario Sarkis	5									Fax #	#																						
FOR LAB USE ONLY					\Box	1	3	MATRIX	×	- 1	_	〗	SE	PRESERV.		SAMPLING	LING																	
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL		SLUDGE	OTHER:	ACID/BASE:	ICE / COOL <	OTHER:		DATE	TIME	BTEX	TRH	· C1-														
	ESO)	S	0					1	-		Name and Address of the Owner, where		7		-	4/1/24 11:32	11:32	<	<	<		\dashv				\perp		_	- 1	\dashv	4		\Box	
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EASE NOTE: Liability and	Damages Cardinal's liability and clie	nte avelucive remady for a	- Clair	200		-	- has	5		-		-					the client for							Г		_		-		\vdash	-			
EASE NOTE: Liability and	EASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the	nt's exclusive remedy for a	ıny clair	n arisi	ng wh	nethe	base	d in o	ontra	ct or	tort, s	shall	be lin	nited	to the	e amount paid t	by the client for	the																1

Thermometer ID #113

Cool Intact

Yes Yes

No No

Corrected Temp. °C

Bacteria (only) Sample Condition Cool Intact Observed Temp. °C REMARKS:

All Results are emailed. Please provide Email address:

Verbal Result:

□ Yes

□ No

Add'l Phone #:



April 08, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: SEMU PERMIAN 127 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 04/02/24 13:26.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. 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 accreditated 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.

Celey D. Keine

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



Analytical Results For:

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

Received: 04/02/2024 Sampling Date: 04/02/2024

Reported: 04/08/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Shalyn Rodriguez

Applyand By 14

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: FS 02 12' (H241699-01)

DTEV 0021D

BTEX 8021B	mg	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2024	ND	2.10	105	2.00	9.62	
Toluene*	<0.050	0.050	04/04/2024	ND	2.06	103	2.00	8.90	
Ethylbenzene*	<0.050	0.050	04/04/2024	ND	2.13	107	2.00	8.00	
Total Xylenes*	<0.150	0.150	04/04/2024	ND	6.36	106	6.00	7.46	
Total BTEX	<0.300	0.300	04/04/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	117	% 71.5-13	4						
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	688	16.0	04/05/2024	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/05/2024	ND	224	112	200	0.679	
DRO >C10-C28*	18.7	10.0	04/05/2024	ND	220	110	200	0.145	
EXT DRO >C28-C36	<10.0	10.0	04/05/2024	ND					
Surrogate: 1-Chlorooctane	92.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	88.5	% 49.1-14	8						

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Celey D. Kreene



Analytical Results For:

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

Received: 04/02/2024

Sampling Date: 04/02/2024

Reported: 04/08/2024

Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE
Project Number: 03E2057104

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Project Location: MAVERICK 32.5495, -103.1991

ma/ka

Sample ID: FS 04 12' (H241699-02)

RTFY 8021R

B1EX 8021B	mg	^и кд	Anaiyze	a By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2024	ND	2.10	105	2.00	9.62	
Toluene*	< 0.050	0.050	04/04/2024	ND	2.06	103	2.00	8.90	
Ethylbenzene*	< 0.050	0.050	04/04/2024	ND	2.13	107	2.00	8.00	
Total Xylenes*	0.172	0.150	04/04/2024	ND	6.36	106	6.00	7.46	
Total BTEX	<0.300	0.300	04/04/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	120	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1390	16.0	04/05/2024	ND	416	104	400	3.77	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	12.0	10.0	04/05/2024	ND	224	112	200	0.679	
DRO >C10-C28*	198	10.0	04/05/2024	ND	220	110	200	0.145	
EXT DRO >C28-C36	14.9	10.0	04/05/2024	ND					
Surrogate: 1-Chlorooctane	95.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	95.0	% 49.1-14	8						

Analyzed By: 14

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Celeg D. Keene



Analytical Results For:

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

Received: 04/02/2024 Sampling Date: 04/02/2024

Reported: 04/08/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Shalyn Rodriguez

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: FS 05 12' (H241699-03)

BTEX 8021B	mg	/kg	Analyze	ed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.934	0.100	04/05/2024	ND	2.10	105	2.00	9.62	
Toluene*	2.99	0.100	04/05/2024	ND	2.06	103	2.00	8.90	GC-NC1
Ethylbenzene*	15.1	0.100	04/05/2024	ND	2.13	107	2.00	8.00	
Total Xylenes*	35.4	0.300	04/05/2024	ND	6.36	106	6.00	7.46	
Total BTEX	54.5	0.600	04/05/2024	ND					GC-NC1
Surrogate: 4-Bromofluorobenzene (PID	114	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2000	16.0	04/05/2024	ND	416	104	400	3.77	
TPH 8015M	mg	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	1280	100	04/04/2024	ND	224	112	200	0.679	
DRO >C10-C28*	5100	100	04/04/2024	ND	220	110	200	0.145	
EXT DRO >C28-C36	705	100	04/04/2024	ND					
Surrogate: 1-Chlorooctane	130	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	131	% 49.1-14	18						

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Celey D. Keene

C-04



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: 04/02/2024 Sampling Date: 04/02/2024

Reported: 04/08/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Shalyn Rodriguez

Analyzed By: 14

Project Location: MAVERICK 32.5495, -103.1991

ma/ka

Sample ID: FS 06 12' (H241699-04)

RTFY 8021R

B1EX 8021B	mg	/ kg	Anaiyze	а ву: ЈН					5-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2024	ND	2.10	105	2.00	9.62	
Toluene*	0.118	0.050	04/04/2024	ND	2.06	103	2.00	8.90	GC-NC1
Ethylbenzene*	1.00	0.050	04/04/2024	ND	2.13	107	2.00	8.00	
Total Xylenes*	2.78	0.150	04/04/2024	ND	6.36	106	6.00	7.46	
Total BTEX	3.90	0.300	04/04/2024	ND					GC-NC1
Surrogate: 4-Bromofluorobenzene (PID	150	% 71.5-13	4						
Chloride, SM4500Cl-B	mg	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1390	16.0	04/05/2024	ND	416	104	400	3.77	
TPH 8015M	mg	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	183	10.0	04/05/2024	ND	224	112	200	0.679	
DRO >C10-C28*	971	10.0	04/05/2024	ND	220	110	200	0.145	
EXT DRO >C28-C36	157	10.0	04/05/2024	ND					
Surrogate: 1-Chlorooctane	104	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	97.2	% 49.1-14	8						

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Celeg & Freene



Analytical Results For:

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

Received: 04/02/2024 Sampling Date: 04/02/2024

Reported: 04/08/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Shalyn Rodriguez

Analyzed By: JH

Project Location: MAVERICK 32.5495, -103.1991

mg/kg

Sample ID: FS 07 12' (H241699-05)

BTEX 8021B

DILX OUZID	iiig/	, kg	Andryzo	u by. 511					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/04/2024	ND	2.10	105	2.00	9.62	
Toluene*	<0.050	0.050	04/04/2024	ND	2.06	103	2.00	8.90	
Ethylbenzene*	<0.050	0.050	04/04/2024	ND	2.13	107	2.00	8.00	
Total Xylenes*	<0.150	0.150	04/04/2024	ND	6.36	106	6.00	7.46	
Total BTEX	<0.300	0.300	04/04/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	110 9	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	928	16.0	04/05/2024	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/04/2024	ND	224	112	200	0.679	
DRO >C10-C28*	<10.0	10.0	04/04/2024	ND	220	110	200	0.145	
EXT DRO >C28-C36	<10.0	10.0	04/04/2024	ND					
Surrogate: 1-Chlorooctane	95.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	105	% 49.1-14	8						

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Notes and Definitions

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

ecovery.

GC-NC1 8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with

interfering compounds.

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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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

company Name: Ensolum, LLC		7111 70	
Project Manager: Aimee Cole		P.O. #:	ANALYSIS REQUEST
Address: 3122 National Parks Hwy	V	Company: FA Solium 111	
City: Carlsbad	State: NM Zip: 88220	_	
Phone #: (720) 384-7365	Fax #:		
Project #: 0 5 \ 2057104	4 Project Owner: Mayerick	City:	
Project Name: SEMU PERMIAN		State: Zip:	
3	1-103,10	#	
Sampler Name: //df, O Say	Sarlhis	Fax #:	
FOR LAB USE ONLY	MATRIX	PRESERV. SAMPLING	5
Lab I.D. Sample I.D.	(G)RAB OR (C)OME # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER: ACID/BASE: ICE / COOL OTHER: DATE	BTEX TPH Chloride
d F507		he/e/h /	
S053		80:11 1181/11	
	0,00	51:11 here/n	
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Relinquished By:	Time: 13.36 Received By:	All Results are ema	Verbal Result: □ Yes □ No Add'! Phone #: All Results are emailed. Please provide Email address: 以てっしゃ ひゃいろしいか、くっか / MSafkis Comsolum, com
Delivered By: (Circle One)	Observed Temp. C Sample Condition	CHECKED	
Sampler - UPS - Bus - Other:	Corrected Temp. °C Cool Intact	(Initials) Thermometer ID #173	Standard N
FURM-006 R 3.2 10/07/21	+ Cardinal cannot account to the last	Correction Factor	No I No Corrected Temp. °C

Corrected Temp. °C



April 09, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: SEMU PERMIAN 127 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 04/03/24 14:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. 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 accreditated 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.

Celey D. Keine

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



Analytical Results For:

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

Received: 04/03/2024 Sampling Date: 04/03/2024

Reported: 04/09/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact Project Number: 03E2057104 Sample Received By: Tamara Oldaker

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: FS 08 9' (H241731-01)

BTEX 8021B	mg,	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/05/2024	ND	2.12	106	2.00	5.16	
Toluene*	<0.050	0.050	04/05/2024	ND	2.15	107	2.00	6.07	
Ethylbenzene*	<0.050	0.050	04/05/2024	ND	2.09	104	2.00	6.24	
Total Xylenes*	<0.150	0.150	04/05/2024	ND	6.31	105	6.00	5.35	
Total BTEX	<0.300	0.300	04/05/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	103	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1600	16.0	04/08/2024	ND	400	100	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/04/2024	ND	200	100	200	3.52	
DRO >C10-C28*	<10.0	10.0	04/04/2024	ND	195	97.7	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	04/04/2024	ND					
Surrogate: 1-Chlorooctane	99.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	95.2	% 49.1-14	8						

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Celey D. Keene



Analytical Results For:

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

Received: 04/03/2024 Reported:

04/09/2024 SEMU PERMIAN 127 FLOWLINE RELEASE

Project Name: Project Number: 03E2057104

Project Location: MAVERICK 32.5495, -103.1991 Sampling Date: 04/03/2024

Sampling Type: Soil Sampling Condition: Cool & Intact

Sample Received By: Tamara Oldaker

Sample ID: FS 09 9' (H241731-02)

BTEX 8021B	mg,	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/05/2024	ND	2.12	106	2.00	5.16	
Toluene*	<0.050	0.050	04/05/2024	ND	2.15	107	2.00	6.07	
Ethylbenzene*	<0.050	0.050	04/05/2024	ND	2.09	104	2.00	6.24	
Total Xylenes*	<0.150	0.150	04/05/2024	ND	6.31	105	6.00	5.35	
Total BTEX	<0.300	0.300	04/05/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1660	16.0	04/08/2024	ND	400	100	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/04/2024	ND	200	100	200	3.52	
DRO >C10-C28*	<10.0	10.0	04/04/2024	ND	195	97.7	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	04/04/2024	ND					
Surrogate: 1-Chlorooctane	90.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	87.5	% 49.1-14	8						

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Celey D. Keene



Analytical Results For:

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

Received: 04/03/2024 Reported: 04/09/2024

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE

Project Number: 03E2057104

Project Location: MAVERICK 32.5495, -103.1991 Sampling Date: 04/03/2024

Sampling Type: Soil

Sampling Condition: Cool & Intact Tamara Oldaker Sample Received By:

Sample ID: FS 10 9' (H241731-03)

BTEX 8021B	mg/	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/05/2024	ND	2.12	106	2.00	5.16	
Toluene*	<0.050	0.050	04/05/2024	ND	2.15	107	2.00	6.07	
Ethylbenzene*	<0.050	0.050	04/05/2024	ND	2.09	104	2.00	6.24	
Total Xylenes*	<0.150	0.150	04/05/2024	ND	6.31	105	6.00	5.35	
Total BTEX	<0.300	0.300	04/05/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 9	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	'kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1880	16.0	04/08/2024	ND	400	100	400	3.92	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/04/2024	ND	200	100	200	3.52	
DRO >C10-C28*	<10.0	10.0	04/04/2024	ND	195	97.7	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	04/04/2024	ND					
Surrogate: 1-Chlorooctane	101 9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	97.0	% 49.1-14	8						

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Celey D. Keene



Analytical Results For:

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

Received: 04/03/2024 Sampling Date: 04/03/2024

Reported: 04/09/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Tamara Oldaker

Analyzed By: JH

Project Location: MAVERICK 32.5495, -103.1991

mg/kg

Sample ID: FS 11 8' (H241731-04)

BTEX 8021B

DIEX GOZID	ıııg,	K9	Allulyzo	.u by. 511					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/05/2024	ND	2.12	106	2.00	5.16	
Toluene*	<0.050	0.050	04/05/2024	ND	2.15	107	2.00	6.07	
Ethylbenzene*	<0.050	0.050	04/05/2024	ND	2.09	104	2.00	6.24	
Total Xylenes*	<0.150	0.150	04/05/2024	ND	6.31	105	6.00	5.35	
Total BTEX	<0.300	0.300	04/05/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	104 9	% 71.5-13-	4						
Chloride, SM4500CI-B	mg/	'kg	Analyze	ed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1280	16.0	04/08/2024	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/04/2024	ND	200	100	200	3.52	
DRO >C10-C28*	<10.0	10.0	04/04/2024	ND	195	97.7	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	04/04/2024	ND					
Surrogate: 1-Chlorooctane	89.8	% 48.2-13-	4						
Surrogate: 1-Chlorooctadecane	85.2	% 49.1-14	8						

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Analytical Results For:

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

Received: 04/03/2024 Sampling Date: 04/03/2024

Reported: 04/09/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Tamara Oldaker

Analyzed By: JH

Project Location: MAVERICK 32.5495, -103.1991

mg/kg

Sample ID: FS 13 8' (H241731-05)

BTEX 8021B

DILX GOZID	iiig/	- Kg	Allulyzo	.u by. 511					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/05/2024	ND	2.12	106	2.00	5.16	
Toluene*	<0.050	0.050	04/05/2024	ND	2.15	107	2.00	6.07	
Ethylbenzene*	<0.050	0.050	04/05/2024	ND	2.09	104	2.00	6.24	
Total Xylenes*	<0.150	0.150	04/05/2024	ND	6.31	105	6.00	5.35	
Total BTEX	<0.300	0.300	04/05/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	104	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1120	16.0	04/08/2024	ND	400	100	400	3.92	
TPH 8015M	mg,	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/04/2024	ND	204	102	200	0.693	
DRO >C10-C28*	<10.0	10.0	04/04/2024	ND	217	109	200	1.08	
EXT DRO >C28-C36	<10.0	10.0	04/04/2024	ND					
Surrogate: 1-Chlorooctane	101	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	105	% 49.1-14	8						

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Analytical Results For:

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

Received: 04/03/2024 Sampling Date: 04/03/2024

Reported: 04/09/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Tamara Oldaker

Analyzed By: JH

Project Location: MAVERICK 32.5495, -103.1991

mg/kg

Sample ID: FS 12 9' (H241731-06)

BTEX 8021B

DILX GOZID	ıııg,	, kg	Allulyzo	.u Dy. 311					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/05/2024	ND	2.12	106	2.00	5.16	
Toluene*	<0.050	0.050	04/05/2024	ND	2.15	107	2.00	6.07	
Ethylbenzene*	<0.050	0.050	04/05/2024	ND	2.09	104	2.00	6.24	
Total Xylenes*	<0.150	0.150	04/05/2024	ND	6.31	105	6.00	5.35	
Total BTEX	<0.300	0.300	04/05/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	103	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1070	16.0	04/08/2024	ND	400	100	400	3.92	
TPH 8015M	mg,	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/04/2024	ND	204	102	200	0.693	
DRO >C10-C28*	<10.0	10.0	04/04/2024	ND	217	109	200	1.08	
EXT DRO >C28-C36	<10.0	10.0	04/04/2024	ND					
Surrogate: 1-Chlorooctane	79.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	84.9	% 49.1-14	8						

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Analytical Results For:

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

Received: 04/03/2024 Sampling Date: 04/03/2024

Reported: 04/09/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact Sample Received By: Project Number: 03E2057104 Tamara Oldaker

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: FS 14 6' (H241731-07)

BTEX 8021B	mg,	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/05/2024	ND	2.12	106	2.00	5.16	
Toluene*	<0.050	0.050	04/05/2024	ND	2.15	107	2.00	6.07	
Ethylbenzene*	<0.050	0.050	04/05/2024	ND	2.09	104	2.00	6.24	
Total Xylenes*	<0.150	0.150	04/05/2024	ND	6.31	105	6.00	5.35	
Total BTEX	<0.300	0.300	04/05/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	104	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	960	16.0	04/08/2024	ND	400	100	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/04/2024	ND	204	102	200	0.693	
DRO >C10-C28*	<10.0	10.0	04/04/2024	ND	217	109	200	1.08	
EXT DRO >C28-C36	<10.0	10.0	04/04/2024	ND					
Surrogate: 1-Chlorooctane	94.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	99.2	% 49.1-14	8						

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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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Celeg D. Freene

Sampler - UPS - Bus - Other: Delivered By: (Circle One)

Observed Temp. °C

Sample Condition
Cool Intact
Tes Tes
No No

CHECKED BY:

Turnaround Time:

Standard Rush #140

Bacteria (only) Sample Condition
Cool Intact Observed Temp.

| Yes | Yes |
| No | No Corrected Temp.

Observed Temp. °C Corrected Temp. °C

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



101 East Marland, Hobbs, NM 88240

		CAC 000 047	5					
(575) 393-23	(5/5) 393-2326 FAX (5/5) 353-24/6	X (0/0) 393-441		BILL TO	0		ANALYSIS REQUEST	
Project Manager: Aimee Cole	Aimee Cole			P.O. #:				
Address: 3122 National Parks Hwy	tional Parks Hwy			Company: FASOIUM,	MM, LLC			
City: Carlsbad		State: NM	Zip: 88220	Attn: ATMER COLE	SIE	_		
Phone #: (720) 384-7365	4-7365	Fax #:		Address: 3123 National Palks the	ional bajus they			
Project #: 03F2057/04	2057104	Project Owner:		city: Cas Istand				
Project Name: 5	5	127 FIDELINE	Flowline Release	State://// Zip:	Zip: 88220			
Project Location:	Project Location: 32.5495, -103.144	1991		Phone #: 7d0-384-7565	54-1565			
Sampler Name: /	Mario Sarkis			1				
Э,	1		MATRIX	PRESERV. S	SAMPLING			
Lab I.D.	Sample I.D.	Depth (feet))RAB OR (C)OMP. CONTAINERS ROUNDWATER ASTEWATER DIL	LUDGE THER: CID/BASE: EE / COOL THER:	BTEX	TPH CI		
Cubou	F508	9,		he/E/h /				
ئو	£509	9,	7	12/2/h	-	1		
,	FS10	9,	7	1/824	_	, , ,		
2	CS11	8)	C -	1 4/82M	-	1		
N	ES13	8,	0 1 2	he/2/4		/ / /		
6	15 B	g,	0 1 2	166/h	1)00			
7	PS19	6'	V 1 7	hP/5/h	dy 15 50 V	<		
PLEASE NOTE: Liability an analyses. All claims includin service. In no event shall Ca	PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the subscitaints, subscitaints, service. In no event shall Cardinal to liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subscitaints, service. In no event shall Cardinal to liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subscitaints.	ent's exclusive remedy for an cause whatsoever shall be de equental damages, including and services hereunder by Co	y claim arising whether based in controlled the writing water without limitation, business interruption ardinal, regardless of whether such class.	ract or tort, shall be limited to the amo and received by Cardinal within 30 d ns, loss of use, or loss of profits incur aim is based upon any of the above s	ount paid by the client for the ays after completion of the appread by client, its subsidiaries, tated reasons or otherwise.		No Add'i Dhone #:	
Relinquished By:	12. 2	Date: 14:50	Received By:	Market	All Results are	A Cole@CIJSO W.Com /	prov	OPO
Kelinquisned by.	*	Time:						
		I IMO						



April 09, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: SEMU PERMIAN 127 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 04/04/24 15:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. 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 accreditated 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.

Celey D. Keine

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



Analytical Results For:

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

Received: 04/04/2024 Sampling Date: 04/04/2024

Reported: 04/09/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact Project Number: 03E2057104 Sample Received By: Shalyn Rodriguez

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: FS 15 8' (H241769-01)

BTEX 8021B	mg,	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.5	2.00	1.34	
Toluene*	<0.050	0.050	04/09/2024	ND	2.10	105	2.00	3.51	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.20	110	2.00	5.72	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.62	110	6.00	5.85	
Total BTEX	<0.300	0.300	04/09/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	111 9	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	560	16.0	04/09/2024	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/08/2024	ND	185	92.5	200	3.10	
DRO >C10-C28*	312	10.0	04/08/2024	ND	182	90.8	200	1.13	
EXT DRO >C28-C36	62.5	10.0	04/08/2024	ND					
Surrogate: 1-Chlorooctane	82.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	97.4	% 49.1-14	8						

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Analytical Results For:

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

Received: 04/04/2024 Sampling Date: 04/04/2024

Reported: 04/09/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact Sample Received By: Project Number: 03E2057104 Shalyn Rodriguez

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: FS 16 8' (H241769-02)

BTEX 8021B	mg/	kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/08/2024	ND	1.99	99.5	2.00	1.34	
Toluene*	<0.050	0.050	04/08/2024	ND	2.10	105	2.00	3.51	
Ethylbenzene*	<0.050	0.050	04/08/2024	ND	2.20	110	2.00	5.72	
Total Xylenes*	<0.150	0.150	04/08/2024	ND	6.62	110	6.00	5.85	
Total BTEX	<0.300	0.300	04/08/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	113 9	71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	832	16.0	04/09/2024	ND	432	108	400	3.77	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/08/2024	ND	185	92.5	200	3.10	
DRO >C10-C28*	176	10.0	04/08/2024	ND	182	90.8	200	1.13	
EXT DRO >C28-C36	32.9	10.0	04/08/2024	ND					
Surrogate: 1-Chlorooctane	82.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	92.7	% 49.1-14	8						

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Analytical Results For:

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

Received: 04/04/2024 Sampling Date: 04/04/2024

Reported: 04/09/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Shalyn Rodriguez

Analyzed By: 14

Project Location: MAVERICK 32.5495, -103.1991

ma/ka

Sample ID: FS 17 6' (H241769-03)

RTFY 8021R

BIEX 8021B	тд/кд		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/08/2024	ND	1.99	99.5	2.00	1.34	
Toluene*	<0.050	0.050	04/08/2024	ND	2.10	105	2.00	3.51	
Ethylbenzene*	<0.050	0.050	04/08/2024	ND	2.20	110	2.00	5.72	
Total Xylenes*	<0.150	0.150	04/08/2024	ND	6.62	110	6.00	5.85	
Total BTEX	<0.300	0.300	04/08/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	112	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	592	16.0	04/09/2024	ND	432	108	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	04/08/2024	ND	185	92.5	200	3.10	
DRO >C10-C28*	37.8	10.0	04/08/2024	ND	182	90.8	200	1.13	
EXT DRO >C28-C36	<10.0	10.0	04/08/2024	ND					
Surrogate: 1-Chlorooctane	85.4	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	97.7	% 49.1-14	8						

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Celey D. Keene



Analytical Results For:

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

Received: 04/04/2024 Sampling Date: 04/04/2024

Reported: 04/09/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Shalyn Rodriguez

Analyzed By: JH

Project Location: MAVERICK 32.5495, -103.1991

mg/kg

Sample ID: FS 19 5' (H241769-04)

BTEX 8021B

	9,	9	7	7: :					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/08/2024	ND	1.99	99.5	2.00	1.34	
Toluene*	<0.050	0.050	04/08/2024	ND	2.10	105	2.00	3.51	
Ethylbenzene*	<0.050	0.050	04/08/2024	ND	2.20	110	2.00	5.72	
Total Xylenes*	<0.150	0.150	04/08/2024	ND	6.62	110	6.00	5.85	
Total BTEX	<0.300	0.300	04/08/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	115 % 71.5-1.		4						
Chloride, SM4500CI-B	mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	04/09/2024	ND	432	108	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	04/08/2024	ND	185	92.5	200	3.10	
DRO >C10-C28*	28.1	10.0	04/08/2024	ND	182	90.8	200	1.13	
EXT DRO >C28-C36	<10.0	10.0	04/08/2024	ND					
Surrogate: 1-Chlorooctane	87.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	98.3	% 49.1-14	8						

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Analytical Results For:

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

Received: 04/04/2024 Sampling Date: 04/04/2024

Reported: 04/09/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Shalyn Rodriguez

Analyzed By: JH

Project Location: MAVERICK 32.5495, -103.1991

mg/kg

Sample ID: FS 20 5' (H241769-05)

BTEX 8021B

	9/	9	7	,					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/08/2024	ND	1.99	99.5	2.00	1.34	
Toluene*	<0.050	0.050	04/08/2024	ND	2.10	105	2.00	3.51	
Ethylbenzene*	<0.050	0.050	04/08/2024	ND	2.20	110	2.00	5.72	
Total Xylenes*	<0.150	0.150	04/08/2024	ND	6.62	110	6.00	5.85	
Total BTEX	<0.300	0.300	04/08/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	114 % 71.5-1.		4						
Chloride, SM4500CI-B	mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	04/09/2024	ND	432	108	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	04/08/2024	ND	185	92.5	200	3.10	
DRO >C10-C28*	38.4	10.0	04/08/2024	ND	182	90.8	200	1.13	
EXT DRO >C28-C36	<10.0	10.0	04/08/2024	ND					
Surrogate: 1-Chlorooctane	79.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	90.3	% 49.1-14	8						

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Analytical Results For:

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

Received: 04/04/2024 Sampling Date: 04/04/2024

Reported: 04/09/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact Sample Received By: Project Number: 03E2057104 Shalyn Rodriguez

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: FS 21 8' (H241769-06)

BTEX 8021B	mg/	'kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/08/2024	ND	1.99	99.5	2.00	1.34	
Toluene*	<0.050	0.050	04/08/2024	ND	2.10	105	2.00	3.51	
Ethylbenzene*	<0.050	0.050	04/08/2024	ND	2.20	110	2.00	5.72	
Total Xylenes*	<0.150	0.150	04/08/2024	ND	6.62	110	6.00	5.85	
Total BTEX	<0.300	0.300	04/08/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	113 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1680	16.0	04/09/2024	ND	432	108	400	3.77	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/08/2024	ND	185	92.5	200	3.10	
DRO >C10-C28*	<10.0	10.0	04/08/2024	ND	182	90.8	200	1.13	
EXT DRO >C28-C36	<10.0	10.0	04/08/2024	ND					
Surrogate: 1-Chlorooctane	81.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	93.6	% 49.1-14	8						

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Analytical Results For:

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

Received: 04/04/2024 Sampling Date: 04/04/2024

Reported: 04/09/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Shalyn Rodriguez

Analyzed By: 14

Project Location: MAVERICK 32.5495, -103.1991

ma/ka

Sample ID: FS 18 6' (H241769-07)

RTFY 8021R

B1EX 8021B	mg	/ kg	Anaiyze	a By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/08/2024	ND	1.99	99.5	2.00	1.34	
Toluene*	<0.050	0.050	04/08/2024	ND	2.10	105	2.00	3.51	
Ethylbenzene*	<0.050	0.050	04/08/2024	ND	2.20	110	2.00	5.72	
Total Xylenes*	<0.150	0.150	04/08/2024	ND	6.62	110	6.00	5.85	
Total BTEX	<0.300	0.300	04/08/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	115	% 71.5-13	4						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	04/09/2024	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/08/2024	ND	185	92.5	200	3.10	
DRO >C10-C28*	113	10.0	04/08/2024	ND	182	90.8	200	1.13	
EXT DRO >C28-C36	20.0	10.0	04/08/2024	ND					
Surrogate: 1-Chlorooctane	89.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	107	% 49.1-14	8						

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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.

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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Celeg D. Freene

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

CARDINAL Laboratories 101 East Marland, Hobbs, NM 88240

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

Company Name	Company Name: Ensolum, LLC			BILL TO			
Project Manager: Aimee Cole	r: Aimee Cole			P.O. #:		אוארוטוט אהעטהט	1
Address: 3122	Address: 3122 National Parks Hwy			Company: EncoluM./	N.// C		_
City: Carlsbad		State: NM	Zip: 88220	Attn: ATMER COLE	5		
Phone #: (720) 384-7365	384-7365	Fax #:		Address:			
Project #: 03	362057104	Project Owner:	ā	City:			_
Project Name: SEMV	EMU PERMIA	7 27	Flowline Release	State: Zip:			
Project Location:	1: 32,5495,-	103.1991		Phone #: 730-384-1	1-7365		
Sampler Name:	MARIO SOF	618		Fax #:			
FOR LAB USE ONLY			MATRIX	SERV.	SAMPLING		
Lab I.D.	Sample I.D.	Depth (feet)	AB OR (C)OMP NTAINERS UNDWATER TEWATER	BASE:	EX PH hloride:		
Hay los	2		# CC	-	TIME		
) -	15/5	00,	1	V 4/4/24	0934 ~ 01		1
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VZ	1-219	N. C. W.	0	_	Dahd N N		
5 (0807	0,	-	_	0955 / / /		
1-6	1281	0	0 -	_	1000 1		
	15/8	e j	C 3		0946		
PLEASE NOTE: Liability and analyses. All claims including service. In no event shall Can	Damages. Cardinal's liability and those for negligence and any other those for negligence and any other than the liable for incidental or co.	client's exclusive remedy for an er cause whatsoever shall be d	PLEASE NOTE: Liability and Damages. Cardinal's liability and client exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be determed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequently independent of the applicable.	or tort, shall be limited to the amount pake received by Cardinal within 30 days after	by the client for the rompletion of the applicable		
Relinquished By:	Relinquished By:	Date: 14/24	Received By:	s based upon any of the above stated re	ılt: ☐ Yes	□ No Add'l Phone #:	
Relinquished By:		Date:	Received By:	front		/msa(kis le en solum Lom	
Delivered By: (Circle One)		Observed Temp. °C	Sample Condition Cool Intact	ON CHECKED BY:	Turnaround Time: Standard	Bacteria (only) S	
Sampler - UPS - B	Bus - Other: (Corrected Temp. °C			Thermometer ID #113 Correction Factor -0.5°C # 140	UDSERVED TEMP. °C O	
		+ Cardinal as		10			L



April 11, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: SEMU PERMIAN 127 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 04/08/24 16:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. 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 accreditated 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.

Celey D. Keine

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



Analytical Results For:

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

Received: 04/08/2024 Sampling Date: 04/08/2024

Reported: 04/11/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Dionica Hinojos

Applyand By 14

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: BF 01 0-4' (H241816-01)

DTEV 0021D

BTEX 8021B	mg/	kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.4	2.00	1.39	
Toluene*	<0.050	0.050	04/09/2024	ND	2.29	114	2.00	6.66	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.42	121	2.00	8.48	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.29	122	6.00	9.03	
Total BTEX	<0.300	0.300	04/09/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	122 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/10/2024	ND	432	108	400	0.00	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	212	106	200	2.43	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	203	102	200	0.231	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					
Surrogate: 1-Chlorooctane	71.9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	66.2	% 49.1-14	8						

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Celey D. Keene



Analytical Results For:

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

Received: 04/08/2024 Sampling Date: 04/08/2024

Reported: 04/11/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Dionica Hinojos

Analyzed By: 14

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: SW 03 A 0-4' (H241816-02)

RTFY 8021R

B1EX 8021B	mg,	r Kg	Апануге	a By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.4	2.00	1.39	
Toluene*	<0.050	0.050	04/09/2024	ND	2.29	114	2.00	6.66	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.42	121	2.00	8.48	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.29	122	6.00	9.03	
Total BTEX	<0.300	0.300	04/09/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	121	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/10/2024	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	212	106	200	2.43	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	203	102	200	0.231	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					
Surrogate: 1-Chlorooctane	75.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	69.1	% 49.1-14	8						

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Celey D. Keene



Analytical Results For:

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

Received: 04/08/2024 Sampling Date: 04/08/2024

Reported: 04/11/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Dionica Hinojos

Analyzed By: JH

Project Location: MAVERICK 32.5495, -103.1991

mg/kg

Sample ID: SW 01 4-8' (H241816-03)

BTEX 8021B

DILX GOZID	11197	ng .	Alldiyzo	.u by. 511					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.4	2.00	1.39	
Toluene*	<0.050	0.050	04/09/2024	ND	2.29	114	2.00	6.66	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.42	121	2.00	8.48	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.29	122	6.00	9.03	
Total BTEX	<0.300	0.300	04/09/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	115	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	560	16.0	04/10/2024	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	212	106	200	2.43	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	203	102	200	0.231	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					
Surrogate: 1-Chlorooctane	67.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	60.1	% 49.1-14	8						

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Celey D. Keene



Analytical Results For:

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

Received: 04/08/2024 Sampling Date: 04/08/2024

Reported: 04/11/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Dionica Hinojos

Analyzed By: 14

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: SW 01 8-12' (H241816-04)

RTFY 8021R

B1EX 8021B	mg/	кд	Anaiyze	a By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.4	2.00	1.39	
Toluene*	<0.050	0.050	04/09/2024	ND	2.29	114	2.00	6.66	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.42	121	2.00	8.48	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.29	122	6.00	9.03	
Total BTEX	<0.300	0.300	04/09/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	113 %	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1260	16.0	04/10/2024	ND	432	108	400	0.00	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	212	106	200	2.43	
DRO >C10-C28*	85.2	10.0	04/09/2024	ND	203	102	200	0.231	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					
Surrogate: 1-Chlorooctane	72.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	64.5	% 49.1-14	8						

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Analytical Results For:

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

Received: 04/08/2024 Sampling Date: 04/08/2024

Reported: 04/11/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact Project Number: Sample Received By: 03E2057104 Dionica Hinojos

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: SW 02 4-8' (H241816-05)

BTEX 8021B	mg,	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.4	2.00	1.39	
Toluene*	<0.050	0.050	04/09/2024	ND	2.29	114	2.00	6.66	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.42	121	2.00	8.48	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.29	122	6.00	9.03	
Total BTEX	<0.300	0.300	04/09/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	116	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/10/2024	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	212	106	200	2.43	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	203	102	200	0.231	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					
Surrogate: 1-Chlorooctane	80.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	71.9	% 49.1-14	8						

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Celeg D. Keene



Analytical Results For:

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

Received: 04/08/2024 Sampling Date: 04/08/2024

Reported: 04/11/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Dionica Hinojos

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: SW 02 8-12' (H241816-06)

BTEX 8021B	mg	/kg	Analyze	d By: JH					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.4	2.00	1.39	
Toluene*	0.165	0.050	04/09/2024	ND	2.29	114	2.00	6.66	GC-NC1
Ethylbenzene*	1.08	0.050	04/09/2024	ND	2.42	121	2.00	8.48	
Total Xylenes*	3.65	0.150	04/09/2024	ND	7.29	122	6.00	9.03	
Total BTEX	4.90	0.300	04/09/2024	ND					GC-NC1
Surrogate: 4-Bromofluorobenzene (PID	170	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	04/10/2024	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	208	100	04/09/2024	ND	212	106	200	2.43	
DRO >C10-C28*	2860	100	04/09/2024	ND	203	102	200	0.231	
EXT DRO >C28-C36	433	100	04/09/2024	ND					
Surrogate: 1-Chlorooctane	118	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	100	% 49.1-14	18						

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Analytical Results For:

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

Received: 04/08/2024 Sampling Date: 04/08/2024

Reported: 04/11/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Dionica Hinojos

Analyzed By: 14

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: SW 03 4-9' (H241816-07)

RTFY 8021R

BIEX 8021B	mg	/кд	Anaiyze	a By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.4	2.00	1.39	
Toluene*	<0.050	0.050	04/09/2024	ND	2.29	114	2.00	6.66	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.42	121	2.00	8.48	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.29	122	6.00	9.03	
Total BTEX	<0.300	0.300	04/09/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	106	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	832	16.0	04/10/2024	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	217	108	200	2.50	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	211	105	200	0.562	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					
Surrogate: 1-Chlorooctane	76.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	86.5	% 49.1-14	8						

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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: 04/08/2024 Sampling Date: 04/08/2024

Reported: 04/11/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact Sample Received By: Project Number: 03E2057104 Dionica Hinojos

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: SW 04 4-9' (H241816-08)

BTEX 8021B	mg,	/kg	Analyze	d By: JH					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.102	0.050	04/10/2024	ND	1.99	99.4	2.00	1.39	GC-NC1
Toluene*	2.43	0.050	04/10/2024	ND	2.29	114	2.00	6.66	GC-NC1
Ethylbenzene*	4.00	0.050	04/10/2024	ND	2.42	121	2.00	8.48	
Total Xylenes*	20.4	0.150	04/10/2024	ND	7.29	122	6.00	9.03	
Total BTEX	27.0	0.300	04/10/2024	ND					GC-NC1
Surrogate: 4-Bromofluorobenzene (PID	391	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	'kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	04/10/2024	ND	432	108	400	0.00	
TPH 8015M	mg,	'kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	1070	100	04/09/2024	ND	217	108	200	2.50	
DRO >C10-C28*	4490	100	04/09/2024	ND	211	105	200	0.562	
EXT DRO >C28-C36	760	100	04/09/2024	ND					
Surrogate: 1-Chlorooctane	162	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	133	% 49.1-14	8						

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Analytical Results For:

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

Received: 04/08/2024 Sampling Date: 04/08/2024

Reported: 04/11/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Dionica Hinojos

Analyzed By: JH

Project Location: MAVERICK 32.5495, -103.1991

mg/kg

Sample ID: SW 05 4-8' (H241816-09)

BTEX 8021B

DILX GOZID	ıııg,	ng .	Allulyzo	u by. 511					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/10/2024	ND	2.16	108	2.00	1.55	
Toluene*	<0.050	0.050	04/10/2024	ND	2.08	104	2.00	1.72	
Ethylbenzene*	<0.050	0.050	04/10/2024	ND	2.01	101	2.00	1.12	
Total Xylenes*	<0.150	0.150	04/10/2024	ND	5.86	97.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/10/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	89.2	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1140	16.0	04/10/2024	ND	432	108	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	217	108	200	2.50	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	211	105	200	0.562	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					
Surrogate: 1-Chlorooctane	73.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	83.7	% 49.1-14	8						

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Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
GC-NC1	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
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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Celeg D. Freene

Sampler - UPS - Bus - Other: Delivered By: (Circle One)

Observed Temp. °C

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



(575) 393-2326 FAX (575) 393-2476

Company Name: Ensolum, LLC	Ensolum, LLC			BILL	L 70					ANALYSIS		REQUEST	
Project Manager: Aimee Cole	: Aimee Cole			P.O. #:			_		_				
Address: 3122 N	Address: 3122 National Parks Hwy			Company:	Ensolum LL	2			-				
City: Carlsbad		State: NM	Zip: 88220	Attn: Bimes	Cole								
Phone #: (720) 384-7365	84-7365	Fax #:		Address: 3/22	National Pa	iks Huy							
Project #: 63E	6362057104	Project Owner	Project Owner: Mayerick	City: Carlsbac	C								
Project Name: SE	EMU Permian	27 Flowline	Release	State: Nm 2	Zip: 88220	0			5				
Project Location:	32. 5	190		Phone #:(720) 384 - 7365	384-736	-\							
Sampler Name:	Charl Hamilton	7		Fax #:									
FOR LAB USE ONLY			MATRIX	PRESERV.	SAMPLING	NG							
l ab l D	Sample I.D.	Depth	WATER										
H34816			# CON GROUP WASTE SOIL OIL	OTHER ACID/B ICE/ C OTHER	DATE	TIME	BTE	TPI	CI				
	BFOI	0-4		(4/8/24	2:10	×	X	×				
Q.	5W03A	0-4			4/8/24 1	11:20	×	×	×				
W	Swal	8-4			1 42/8/4	_	×	×	×				
4	Swol	8-12			4/8/24	1342	×	×	×				
5	SWOZ	8-4			4/8/24	1332	×	×	×	,			
6	SWOZ	8-12			4/8/24	1334	×	×	×				
7	SW03	4-4		-	418/14	1324	×	×	×				
≪\.	Swot	4-4			1 42/8/4	1314	×	×	×				
9	5005	4-8			47/8/1	13/7	*	×	*				
PLEASE NOTE: Liability an analyses. All claims includin service. In no event shall Care.	Damages, Cardinal's liability and cli g those for negligence and any other rdinal be liable for incidental or conse	ent's exclusive remedy for an cause whatsoever shall be o quental damages, including	2 2 2	act or tort, shall be limited to the and received by Cardinal with the loss of use, or loss of profits to the control of the c	he amount paid by in 30 days after cor s incurred by client	the client for the appletion of the appl	pplicable		-		1		
Relinquished By:	ed By:	Date: Re	Received By:	all to belove about only of the	A	Verbal Result:	re ema	☐ Yes	□ No	Verbal Result: ☐ Yes ☐ No Add'l Phone #: All Results are emailed. Please provide Email address:	one #:		
		Time:	04:	>	9	acole@ensolu	160 m	M.CO	m, msa	n.com, mearkis censolum.com	olum.co	3	
Relinquished By:		Date:	Received By:		70	REMARKS:							
		1											

Cool Intact
Yes Yes
No No Sample Condition

Thermometer ID #13
Correction Factor 0.5°C Turnaround Time:

Standard Rush

Bacteria (only) Sample Condition
Cool Intact Observed Temp. °C

Yes Yes
No Corrected Temp. °C

CHECKED BY: (Initials)



April 10, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: SEMU PERMIAN 127 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 04/09/24 13:56.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. 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 accreditated 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.

Celey D. Keine

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



Analytical Results For:

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

Received: 04/09/2024 Sampling Date: 04/09/2024

Reported: 04/10/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Shalyn Rodriguez

Analyzed By: JH

Project Location: MAVERICK 32.5495, -103.1991

mg/kg

Sample ID: FS 05 15 (H241834-01)

BTEX 8021B

BIEX GOEED	9/	9	Anaryzo	u 5 y 1 51 1					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.08	104	2.00	0.651	
Toluene*	<0.050	0.050	04/09/2024	ND	2.19	110	2.00	1.92	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.22	111	2.00	3.24	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.62	110	6.00	3.49	
Total BTEX	<0.300	0.300	04/09/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	114	% 71.5-13	4						
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3520	16.0	04/10/2024	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	225	113	200	2.43	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	244	122	200	6.39	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					
Surrogate: 1-Chlorooctane	83.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	83.3	% 49.1-14	8						

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene



Analytical Results For:

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

Received: 04/09/2024 Reported: 04/10/2024

04/10/2024 SEMU PERMIAN 127 FLOWLINE RELEASE

Project Name: SEMU PERMIAN Project Number: 03E2057104

Project Location: MAVERICK 32.5495, -103.1991

Sampling Date: 04/09/2024

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: FS 06 15 (H241834-02)

BTEX 8021B	mg	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/10/2024	ND	2.08	104	2.00	0.651	
Toluene*	<0.050	0.050	04/10/2024	ND	2.19	110	2.00	1.92	
Ethylbenzene*	0.175	0.050	04/10/2024	ND	2.22	111	2.00	3.24	
Total Xylenes*	0.879	0.150	04/10/2024	ND	6.62	110	6.00	3.49	
Total BTEX	1.05	0.300	04/10/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	118	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2640	16.0	04/10/2024	ND	416	104	400	3.77	QM-07
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	37.5	10.0	04/09/2024	ND	225	113	200	2.43	
DRO >C10-C28*	531	10.0	04/09/2024	ND	244	122	200	6.39	
EXT DRO >C28-C36	110	10.0	04/09/2024	ND					
Surrogate: 1-Chlorooctane	96.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	91.9	% 49.1-14	8						

Cardinal Laboratories *=Accredited Analyte

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Celey D. Kreine



Analytical Results For:

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

Received: 04/09/2024 Sampling Date: 04/09/2024

Reported: 04/10/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact Project Number: Sample Received By: Shalyn Rodriguez 03E2057104

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: FS 28 8 (H241834-03)

BTEX 8021B	mg/	'kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.08	104	2.00	0.651	
Toluene*	<0.050	0.050	04/09/2024	ND	2.19	110	2.00	1.92	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.22	111	2.00	3.24	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.62	110	6.00	3.49	
Total BTEX	<0.300	0.300	04/09/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	117 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	816	16.0	04/10/2024	ND	416	104	400	3.77	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	225	113	200	2.43	
DRO >C10-C28*	169	10.0	04/09/2024	ND	244	122	200	6.39	
EXT DRO >C28-C36	37.8	10.0	04/09/2024	ND					
Surrogate: 1-Chlorooctane	87.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	84.6	% 49.1-14	8						

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene



Notes and Definitions

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

BS-3 Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.

Salin spine record, saled to an accommendation mine, saled in members and a record mine.

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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Celeg D. Freene

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

Corrected Temp. °C

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



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

	(010) 000-2020	1 AV (212) 223-7410	4/0				
Company Name	Company Name: Ensolum, LLC			BILL TO		ANALYSIS REQUEST	
Project Manager: Aimee Cole	er: Aimee Cole			P.O. #:		- 1	\exists
Address: 3122	Address: 3122 National Parks Hwy			Company: Ensolum	, (((
City: Carlsbad		State: NM	Zip: 88220				
Phone #: (720) 384-7365	384-7365	Fax #:		>	Purks Day		
Project #: 03(03/2057104	Project Owner:	": Marcolle	City: Carlsbak	3.00		
Project Name:	Project Name: SEMU Permian	127 Flowline 1	Release	State: NM Zip: 88220	220		
Project Location: 3	n: 32,5495, -103	1691		20	7365		
Sampler Name:	Chad Hamilton			Fax #:			
FOR LAB USE ONLY			MATRIX	PRESERV. SAN	SAMPLING		
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OM # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER: ACID/BASE: ICE / COOL OTHER:	BTEX CI-	TPH	
)—	F505	15			D864 X X	>	
2	F500	15		4/4/24	6902 X X	×	
W	F528	8		4/4/24	esth x X	×	
PLEASE NOTE: Liability an analyses. All claims includin service. In no event shall Ca	d Damages. Cardinal's liability and g those for negligence and any oth rdinal be liable for incidental or co	client's exclusive remedy for ar ner cause whatsoever shall be on nsequental damages, including	y claim arising whether based in contrac eerned waived unless made in writing an without limitation, business interruptions.	PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client its substitutions.	id by the client for the er completion of the applicable client its subsidiaries.		
Relinquished By:	d out or or related to the periormal	Date:	Received By:	Relinquished By: Date: Received By:	Verbal Result:	Verbal Result: ☐ Yes ☐ No Add'I Phone #: All Results are emailed. Please provide Email address:	
Relinquished By:		Date:	Received By:	qued	REMARKS:	ion markis censolum, com	
		Time:					
Delivered By: (Circle One) Sampler - UPS - Bus - Other		Observed Temp. OC. 9.	Sample Condition Cool Intact	ion CHECKED BY:	Turnaround Time:	Standard Bacteria (only) Sample Condition Rush Cool Intact Observed Temp. °C	
Odline - Cro - I		. 100		,)			



April 15, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: SEMU PERMIAN 127 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 04/09/24 13:56.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. 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 accreditated 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.

Celey D. Keine

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



Analytical Results For:

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

Received: 04/09/2024 Sampling Date: 04/09/2024

Reported: 04/15/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Shalyn Rodriguez

A I J D. ... 711

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: FS 22 13 (H241835-01)

BTEX 8021B	mg/	kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/10/2024	ND	2.16	108	2.00	1.55	
Toluene*	<0.050	0.050	04/10/2024	ND	2.08	104	2.00	1.72	
Ethylbenzene*	< 0.050	0.050	04/10/2024	ND	2.01	101	2.00	1.12	
Total Xylenes*	<0.150	0.150	04/10/2024	ND	5.86	97.7	6.00	1.06	GC-NC
Total BTEX	<0.300	0.300	04/10/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	92.8	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3320	16.0	04/10/2024	ND	416	104	400	3.77	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/10/2024	ND	225	113	200	2.43	
DRO >C10-C28*	28.2	10.0	04/10/2024	ND	244	122	200	6.39	
EXT DRO >C28-C36	<10.0	10.0	04/10/2024	ND					
Surrogate: 1-Chlorooctane	93.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	91.4	% 49.1-14	8						

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Celey D. Kreine



Analytical Results For:

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

Received: 04/09/2024

Reported: 04/15/2024

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE
Project Number: 03E2057104

ma/ka

Project Location: MAVERICK 32.5495, -103.1991

Sampling Date: 04/09/2024

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: FS 23 13 (H241835-02)

RTFY 8021R

BIEX 8021B	mg	/кд	Anaiyze	a By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/10/2024	ND	2.16	108	2.00	1.55	
Toluene*	<0.050	0.050	04/10/2024	ND	2.08	104	2.00	1.72	
Ethylbenzene*	<0.050	0.050	04/10/2024	ND	2.01	101	2.00	1.12	
Total Xylenes*	<0.150	0.150	04/10/2024	ND	5.86	97.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/10/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	90.4	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1520	16.0	04/10/2024	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/10/2024	ND	225	113	200	2.43	
DRO >C10-C28*	<10.0	10.0	04/10/2024	ND	244	122	200	6.39	
EXT DRO >C28-C36	<10.0	10.0	04/10/2024	ND					
Surrogate: 1-Chlorooctane	87.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	85.4	% 49.1-14	8						

Analyzed By: 14

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Celey D. Keene



Analytical Results For:

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

Received: 04/09/2024 Sampling Date: 04/09/2024

Reported: 04/15/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Shalyn Rodriguez

Analyzed By: JH

Project Location: MAVERICK 32.5495, -103.1991

mg/kg

Sample ID: FS 24 13 (H241835-03)

BTEX 8021B

	9/	9	7	7: :					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/10/2024	ND	2.16	108	2.00	1.55	
Toluene*	<0.050	0.050	04/10/2024	ND	2.08	104	2.00	1.72	
Ethylbenzene*	<0.050	0.050	04/10/2024	ND	2.01	101	2.00	1.12	
Total Xylenes*	<0.150	0.150	04/10/2024	ND	5.86	97.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/10/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	90.4	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1960	16.0	04/10/2024	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/10/2024	ND	215	108	200	1.22	
DRO >C10-C28*	42.2	10.0	04/10/2024	ND	220	110	200	3.13	
EXT DRO >C28-C36	<10.0	10.0	04/10/2024	ND					
Surrogate: 1-Chlorooctane	93.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	92.9	% 49.1-14	8						

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Celey D. Keine



04/09/2024

Analytical Results For:

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

Received: 04/09/2024 Sampling Date:

Reported: 04/15/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact Project Number: 03E2057104 Sample Received By: Shalyn Rodriguez

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: FS 25 13 (H241835-04)

BTEX 8021B	mg/	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/10/2024	ND	2.16	108	2.00	1.55	
Toluene*	<0.050	0.050	04/10/2024	ND	2.08	104	2.00	1.72	
Ethylbenzene*	<0.050	0.050	04/10/2024	ND	2.01	101	2.00	1.12	
Total Xylenes*	<0.150	0.150	04/10/2024	ND	5.86	97.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/10/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	90.0	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1720	16.0	04/10/2024	ND	416	104	400	3.77	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/10/2024	ND	215	108	200	1.22	
DRO >C10-C28*	<10.0	10.0	04/10/2024	ND	220	110	200	3.13	
EXT DRO >C28-C36	<10.0	10.0	04/10/2024	ND					
Surrogate: 1-Chlorooctane	95.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	93.3	% 49.1-14	8						

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene



Analytical Results For:

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

Received: 04/09/2024 Reported:

Sampling Date: 04/09/2024

Soil

Project Name:

RTFY 8021R

04/15/2024

Sampling Type: Sampling Condition:

Cool & Intact

Project Number:

SEMU PERMIAN 127 FLOWLINE RELEASE 03E2057104

ma/ka

Sample Received By:

Shalyn Rodriguez

Project Location:

MAVERICK 32.5495, -103.1991

Sample ID: FS 26 13 (H241835-05)

BIEX 8021B	mg	/кд	Anaiyze	a By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/10/2024	ND	2.16	108	2.00	1.55	
Toluene*	<0.050	0.050	04/10/2024	ND	2.08	104	2.00	1.72	
Ethylbenzene*	<0.050	0.050	04/10/2024	ND	2.01	101	2.00	1.12	
Total Xylenes*	<0.150	0.150	04/10/2024	ND	5.86	97.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/10/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	90.7	% 71.5-13	4						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1640	16.0	04/10/2024	ND	416	104	400	3.77	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/10/2024	ND	215	108	200	1.22	
DRO >C10-C28*	<10.0	10.0	04/10/2024	ND	220	110	200	3.13	
EXT DRO >C28-C36	<10.0	10.0	04/10/2024	ND					
Surrogate: 1-Chlorooctane	85.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	80.0	% 49.1-14	8						

Analyzed By: 14

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene



Analytical Results For:

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

Received: 04/09/2024 Sampling Date: 04/09/2024

Reported: 04/15/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Shalyn Rodriguez

Analyzed By: JH

Project Location: MAVERICK 32.5495, -103.1991

mg/kg

Sample ID: FS 27 8 (H241835-06)

BTEX 8021B

	9/	9	71.14.1, = 0	,					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/10/2024	ND	2.16	108	2.00	1.55	
Toluene*	< 0.050	0.050	04/10/2024	ND	2.08	104	2.00	1.72	
Ethylbenzene*	< 0.050	0.050	04/10/2024	ND	2.01	101	2.00	1.12	
Total Xylenes*	<0.150	0.150	04/10/2024	ND	5.86	97.7	6.00	1.06	
Total BTEX	<0.300	0.300	04/10/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	90.5	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	992	16.0	04/10/2024	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/10/2024	ND	215	108	200	1.22	
DRO >C10-C28*	46.7	10.0	04/10/2024	ND	220	110	200	3.13	
EXT DRO >C28-C36	<10.0	10.0	04/10/2024	ND					
Surrogate: 1-Chlorooctane	89.9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	86.9	% 49.1-14	8						

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene



Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
GC-NC	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

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Celeg D. Freene

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



01 East Mariand, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476 Ensolum, LLC

Company Name: Ensolum, LLC	solum, LLC										ř	BILL TO						ANALYSIS	YSI			REQUEST	7				
Project Manager: Aimee Cole	mee Cole							P.O.	#													-	_[\exists	
Address: 3122 National Parks Hwy	nal Parks Hwy							ဂ္ဂ	mpa	ny:	77	Company: Englus															
City: Carlsbad		State: NM	Zip: 88220	38220	0			Att	n:	Attn: Aimee	(Cole										_					
Phone #: (720) 384-7365	365	Fax #:						Adı	dres	Address: 3/22	122	Notional Parks Hum	Parks Ulusy													1,5	
Project #: 6362057604	57604	Project Owner:		Maveriele	ich			City	7:	City: Carlsb	Sha	13															
Project Name: SEMU	Permian	127 Flowline 1	Release	20				Sta	te:	State: NM		Zip: 88220	0														
Project Location:	32,5495,-103,	1651						Pho	one	#: (120	Phone #: (720) 284-73/-	À														
Sampler Name: Ohe	Hamill							Fax #:	#		0	7 387 130	60														
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5	FS 26	3				-			-	-	4	-	6430	×	×	×											
0	5527	&	_			-			_	+	14	45/24	0942	×	×	×		,				+					
LEASE NOTE: Lability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the nalyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable environments. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries,	ges. Cardinal's liability and cli for negligence and any other s liable for incidental or conse	ent's exclusive remedy for any cause whatsoever shall be de quental damages, including w	claim ark emed wai	sing whe ved unle	ther bases mad	sed in co	ontract of ing and stions, lo	or tort, s receive	se, or l	limite ardinal	to the within profits i	amount paid by 30 days after co incurred by clien	the client for the mpletion of the a	pplicable		-	-				ı	H	-				
shed B	\	Date: 4/9/14 Received By:	Received By:	ived	By:		,		4		and and	V	Verbal Result: ☐ Yes ☐ No Add'I Phone #:	ilt: [☐ Yes	□ No	lo /	Add'l Phone #:	hone :								
		Time: 356	2	stodiamer	9	1	7	3	7	p	2)	acole@ensolu	ensol	53	m.com	msi	msurkis@ensolum.com	een	solu.	2.5	3					
Relinquished By:			Received By:	ved	By:			-			0	70	REMARKS:														
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Observed Temp. °C	30°		Sample Condition Cool Intact Tres Yes	le Co	ndition of the second	<u>S</u>	2)0	CHECKED BY:	Initials)		Turnaround Time: Thermometer ID #113	Time:		Standard Rush		_06	Bacteria (only) Sample Condition Cool Intact Observed Temp.	acteria (only on lintact	ly) Sa	bser	Conc ved T	sample Condition Observed Temp. °C	C		

No No

Corrected Temp. °C



April 15, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: SEMU PERMIAN 127 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 04/10/24 11:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. 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 accreditated 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)

Celey D. Keine

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



Analytical Results For:

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

Received: 04/10/2024 Sampling Date: 04/10/2024

Reported: 04/15/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Dionica Hinojos

A I J D. ... 711

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: SW 06 0.5 (H241851-01)

BTEX 8021B	mg,	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2024	ND	2.13	107	2.00	0.427	
Toluene*	<0.050	0.050	04/11/2024	ND	2.27	114	2.00	0.197	
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.33	117	2.00	0.405	
Total Xylenes*	<0.150	0.150	04/11/2024	ND	7.00	117	6.00	0.382	
Total BTEX	<0.300	0.300	04/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	116	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	04/11/2024	ND	432	108	400	3.64	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/10/2024	ND	203	101	200	1.76	
DRO >C10-C28*	<10.0	10.0	04/10/2024	ND	215	107	200	0.868	
EXT DRO >C28-C36	<10.0	10.0	04/10/2024	ND					
Surrogate: 1-Chlorooctane	82.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	84.5	% 49.1-14	8						

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Celeg D. Freene



Analytical Results For:

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

Received: 04/10/2024 Sampling Date: 04/10/2024

Reported: 04/15/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Dionica Hinojos

Analyzed By: 14

Project Location: MAVERICK 32.5495, -103.1991

ma/ka

Sample ID: FS29 4 (H241851-02)

RTFY 8021R

BIEX 8021B	mg,	/кд	Anaiyze	a By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2024	ND	2.13	107	2.00	0.427	
Toluene*	< 0.050	0.050	04/11/2024	ND	2.27	114	2.00	0.197	
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.33	117	2.00	0.405	
Total Xylenes*	<0.150	0.150	04/11/2024	ND	7.00	117	6.00	0.382	
Total BTEX	<0.300	0.300	04/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	117 9	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	896	16.0	04/11/2024	ND	432	108	400	3.64	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/10/2024	ND	203	101	200	1.76	
DRO >C10-C28*	105	10.0	04/10/2024	ND	215	107	200	0.868	
EXT DRO >C28-C36	12.4	10.0	04/10/2024	ND					
Surrogate: 1-Chlorooctane	85.4	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	88.3	% 49.1-14	8						

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene



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

Cardinal Laboratories *=Accredited Analyte

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Celeg D. Freene

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



	(3/3) 333-2320 FA	FAA (3/3) 333-24/0	4/0																													
Company Name: Ensolum, LLC	Ensolum, LLC	×										BILL	100000000000000000000000000000000000000	70	Ĭ						ANALYSIS	킨	Sis		REQUEST	厕	۲ <u>۱</u>					
Project Manager: Aimee Cole	: Aimee Cole								P.O.	#:							Н	\neg	\neg			\dashv			\dashv	_		\dashv			\dashv	
Address: 3122 N	Address: 3122 National Parks Hwy								Col	npa	any:	5	Company: Engolum	23	111																	
City: Carlsbad		State: NM	Zip: 88220	882	0				Attn:	3.	Dimec	6	0	Cole																		
Phone #: (720) 384-7365	84-7365	Fax #:							Ado	dres	: S	3122	2004	NOA!	Per	Address: 3122 Notional Purks Hury	<	-														
Project #: 0362057104	2057104	Project Owner:	Mayoric	VC	6/6	1			City	::	City: Carlebao	560	0																		_	630
Project Name: SEMU	EMU Permian	127 Flowline	c R	Release	50				Sta	te:	State: NM		Zip: 88220	800	22	O																
Project Location: 32	~7	3,1991	1						Pho	one	#: (720	Phone #: (720) 384-1365	128	736	5				-												
Sampler Name:	Chall Hamilton	,							Fax #:	#							-															
FOR LAB USE ONLY			2.	\dashv	+	N A	MATRIX			핆	PRESERV.	. 		SAI	SAMPLING	NG		***************************************				-										
1841851 Lab I.D.	Sample I.D.	Depth (feet))RAB OR (C)OMP CONTAINERS	ROUNDWATER	ASTEWATER	DIL	L	UDGE	HER:	ID/BASE:	EJCOOL	HÉR :					3TEX	21-	-PH		,											
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0	F525	f											4/1	4/10/14		0860	×	×	×.							-						
PLEASE NOTE: Liability an analyses. All claims includin service. In no event shall Ca affiliates or successors arisin	PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive rendy for any claim arising whether based in contract or fort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successoris arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.	ant's exclusive remedy for an cause whatsoever shall be c quental damages, including of services hereunder by C.	ny claim ai deemed w without lir ardinal, re	rising v aived u nitatior gardle	hether nless i , busin	based nade ir ess int nether	in con) writin erruptio	tract o g and ons, lo laim is	eceives of u	shall ted by use, or	Cardin Cardin loss o	nal with	the an hin 30 its incuabove	days at urred by stated	aid by ter cor ter cor / client reason	the client f npletion of its subsid	or the fithe applic laries, wise.	able														
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April 12, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: SEMU PERMIAN 127 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 04/11/24 14:43.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. 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 accreditated 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.

Wite Sough

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,

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager



Analytical Results For:

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

Received: 04/11/2024 Sampling Date: 04/11/2024

Reported: 04/12/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Dionica Hinojos

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: SW 02 13'-15' (H241902-01)

BTEX 8021B	mg/	kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2024	ND	2.14	107	2.00	2.20	
Toluene*	<0.050	0.050	04/11/2024	ND	2.07	104	2.00	2.35	
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.01	101	2.00	2.19	
Total Xylenes*	<0.150	0.150	04/11/2024	ND	5.86	97.7	6.00	2.30	
Total BTEX	<0.300	0.300	04/11/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	89.2	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2000	16.0	04/12/2024	ND	416	104	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	188	93.9	200	3.64	
DRO >C10-C28*	102	10.0	04/12/2024	ND	189	94.5	200	10.7	
EXT DRO >C28-C36	13.7	10.0	04/12/2024	ND					
Surrogate: 1-Chlorooctane	80.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	92.3	% 49.1-14	8						

Cardinal Laboratories *=Accredited Analyte

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Me Sough

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



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

Cardinal Laboratories *=Accredited Analyte

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Mile Sough

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



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

Company Name: Ensolum, LLC		BILL TO		
Project Manager: Aimee Cole		P.O. #:	ANALYSIS REQUEST	
Address: 3122 National Parks Hwy		Company EAC, I.IM	<u></u>	
City: Carlsbad	State: NM Zip: 88220	Attn: A. Mas / No		
Phone #: (720) 384-7365	Fax#:	Address:		
Project #: 03E 205 7/04	Project Owner:	City:		
Project Name: SEMU PERMIAN		State: Zip:		
n: 3d.5495	03. 1991	# #		
Sampler Name: Mario Sarki	15			
FOR LAB USE ONLY		PRESERV. SAMPLING		
Hab I.D. Sample I.D.	(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER GOIL DIL SLUDGE	DATE	BTEX TPH Cl-	
Loms	- # V	S (c		
LEASE NOTE: Liability and Damages, Cardinat's liability and nalyses. All claims including those for negligence and any other writer, in no event shall Cardinal be liable for incidental or commission of the control of the performant of the control of the performant of the control of the control of the performant of the control of the c	PLEASE NOTE: Lability and Damages. Cardinal's liability and client's exclusive remody for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. At claims including those for negligence and any other cause whateoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without thirdition, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries,	tort, shall be limited to the amount paid by the client is seehed by Cardinal within 30 days after completion of seehed by or loss of profits incurred by client, its subside the contract of the contract	for the policable districts.	
	Time: 4',11/34 Received By:	D -	☐ Yes ☐ No emailed. Please prov	
relinquished By:	Date: Received By.	REMARKS:	KS:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other: C.	Observed Temp. °C Sample Condition Cool Intact Corrected Temp. °C Tyes Tyes	CHECKED BY: (Initials)	Standard Rush	ဂိ
FURM-006 R 3.2 10/07/21	† Cardinal cannot accent verbal change	Correction	Correction Factor -0.5°C	ဂိ



April 16, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: SEMU PERMIAN 127 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 04/15/24 14:43.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. 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 accreditated 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.

Celey D. Keine

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



Analytical Results For:

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

Received: 04/15/2024 Sampling Date: 04/15/2024

Reported: 04/16/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact
Project Number: 03E2057104 Sample Received By: Shalyn Rodriguez

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: SW 02 8-15 (H241966-01)

BTEX 8021B	mg/	kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/15/2024	ND	2.29	114	2.00	1.75	
Toluene*	<0.050	0.050	04/15/2024	ND	2.20	110	2.00	1.74	
Ethylbenzene*	<0.050	0.050	04/15/2024	ND	2.13	107	2.00	1.77	
Total Xylenes*	< 0.150	0.150	04/15/2024	ND	6.26	104	6.00	2.04	
Total BTEX	<0.300	0.300	04/15/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	90.8	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	560	16.0	04/16/2024	ND	464	116	400	7.14	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/16/2024	ND	192	96.1	200	0.121	
DRO >C10-C28*	88.6	10.0	04/16/2024	ND	189	94.4	200	6.17	
EXT DRO >C28-C36	<10.0	10.0	04/16/2024	ND					
Surrogate: 1-Chlorooctane	85.9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	79.5	% 49.1-14	8						

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Celey & Keene

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

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

Received: 04/15/2024 Sampling Date: 04/15/2024

Reported: 04/16/2024 Sampling Type: Soil

Project Name: SEMU PERMIAN 127 FLOWLINE RELEASE Sampling Condition: Cool & Intact Sample Received By: Project Number: 03E2057104 Shalyn Rodriguez

Project Location: MAVERICK 32.5495, -103.1991

Sample ID: SW 04 4-9 (H241966-02)

BTEX 8021B	mg/	kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/15/2024	ND	2.29	114	2.00	1.75	
Toluene*	<0.050	0.050	04/15/2024	ND	2.20	110	2.00	1.74	
Ethylbenzene*	<0.050	0.050	04/15/2024	ND	2.13	107	2.00	1.77	
Total Xylenes*	<0.150	0.150	04/15/2024	ND	6.26	104	6.00	2.04	
Total BTEX	<0.300	0.300	04/15/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	88.9	% 71.5-13	4						
Chloride, SM4500CI-B	mg/	'kg	Analyze	d By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	816	16.0	04/16/2024	ND	464	116	400	7.14	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/16/2024	ND	192	96.1	200	0.121	
DRO >C10-C28*	14.0	10.0	04/16/2024	ND	189	94.4	200	6.17	
EXT DRO >C28-C36	<10.0	10.0	04/16/2024	ND					
Surrogate: 1-Chlorooctane	89.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	81.5	% 49.1-14	8						

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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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Celeg D. Freene

Celey D. Keene, Lab Director/Quality Manager

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



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

Company Name: Ensolum, LLC	m, LLC		BILL TO				
Project Manager: Aimee Cole	Cole		P.O. #:		ANA	ANALYSIS REQUEST	JEST
Address: 3122 National Parks Hwy	Parks Hwy		Company: TOSOLUM	Maric			
City: Carlsbad	State: NM Zi	Zip: 88220	Attn: AiMee COIR	100			
Phone #: (720) 384-7365	Fax #:				_		
Project #: 03 [2057/04	Project Owner:		City:				
Project Name: SEMU PERMIAN	ian 127 flowling	Release	State: Zip:		_		
Project Location: 32,5445	-103,1991		# 73	72/2			
Sampler Name: MA(10	50		Fax #:	8			
FOR LAB USE ONLY		MATRIX	PRESERV SAMPLING	LING		_	
Lab I.D. Sam	Sample I.D. Depth (feet) OR (feet)	AINERS DWATER WATER	SE: OL	×			
Hayllad		# CONT	ACID/BA CE / CO OTHER:	BTE	C1		
	8-15	-	1	-		 	
MOMC	7 6-4	9	V 4/15/24	ς.	<		
PLEASE NOTE: Liability and Damages, Cardi	nal's liability and olian's own as something.						
analyses. All claims including those for negligy service. In no event shall Cardinal be liable for affiliates or successors arising out of or related	analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above the control of the	waived unless made in writing and rece waived unless made in writing and rece limitation, business interruptions, loss o regardless of whether such claim is base	rt, shall be limited to the amount paid be lived by Cardinal within 30 days after or f use, or loss of profits incurred by clier fuse, or loss of the above stated and the live of the above stated and the live of the above stated and the live of t	the client for the mpletion of the applicable t, its subsidiaries,			
- Maneunhiller	Date: 1/15/24 Rec	Received By:		Verbal Result:	s ☐ No Add'I Phone #:	hone #:	
Relinquished By:	Time: /4; 43	0	Money	ALO) E OENSOIU M, LOM / MS& (K) S O	uM, LoM/MSal	ride Email address: MS&(K/Sのののののののののののののののののののののののののののののののののののの	100 M / 2001
Delivered By: (Circle Ore)	Time:			REMARKS:			
Sampler - UPS - Bus - Other		Ca	CHECKED BY: To	Turnaround Time:	Standard E	ly) s	ple Condition
		Ares Ares	THE THE PERSON NAMED IN COLUMN TWO IN COLUMN	Thermometer ID #113	,	Yes Yes	Observed Temp. "C

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

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 341231

QUESTIONS

Operator:	OGRID:
Maverick Permian LLC	331199
1000 Main Street, Suite 2900	Action Number:
Houston, TX 77002	341231
	Action Type:
	[C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2331056887
Incident Name	NAPP2331056887 SEMU PERMIAN 127 FLOWLINE RELEASE @ 30-025-33895
Incident Type	Produced Water Release
Incident Status	Reclamation Report Received
Incident Well	[30-025-33895] SEMU PERMIAN #127

Location of Release Source	
Please answer all the questions in this group.	
Site Name	SEMU PERMIAN 127 FLOWLINE RELEASE
Date Release Discovered	11/06/2023
Surface Owner	Private

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

Crude Oil Released (bbls) Details	Cause: Corrosion Flow Line - Production Crude Oil Released: 4 BBL Recovered: 1 BBL Lost: 3 BBL.
Produced Water Released (bbls) Details	Cause: Corrosion Flow Line - Production Produced Water Released: 35 BBL Recovered 18 BBL Lost: 17 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Flowline corrosion lead to a release of approximately 35 bbls of produced water and 4 bbls of into open pasture. 20 bbls of fluid was recovered during the initial response.

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

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

<u>District III</u> 1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

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 341231

QUESTIONS (continued)

Operator:	OGRID:
Maverick Permian LLC	331199
1000 Main Street, Suite 2900	Action Number:
Houston, TX 77002	341231
	Action Type:
	[C-141] Reclamation Report C-141 (C-141-v-Reclamation)

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	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e	gas only) are to be submitted on the C-129 form.

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	Not answered.

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

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

I hereby agree and sign off to the above statement	Name: Aimee Cole Email: acole@ensolum.com Date: 05/06/2024
--	--

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

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 3

Action 341231

QUESTIONS (continued)

Operator:	OGRID:
Maverick Permian LLC	331199
1000 Main Street, Suite 2900	Action Number:
Houston, TX 77002	341231
	Action Type:
	[C-141] Reclamation Report C-141 (C-141-v-Reclamation)

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 51 and 75 (ft.)	
What method was used to determine the depth to ground water	Attached Document	
Did this release impact groundwater or surface water	No	
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 1 and 5 (mi.)	
Any other fresh water well or spring	Between 1 and 5 (mi.)	
Incorporated municipal boundaries or a defined municipal fresh water well field	Between 1 and 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 provide	ed 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 contamin	nation 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)	3520	
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	679	
GRO+DRO (EPA SW-846 Method 8015M)	569	
BTEX (EPA SW-846 Method 8021B or 8260B)	1.1	
Benzene (EPA SW-846 Method 8021B or 8260B)	0	
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes comp which includes the anticipated timelines for beginning and completing the remediation.	pleted efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC,	
On what estimated date will the remediation commence	03/18/2024	
On what date will (or did) the final sampling or liner inspection occur	04/15/2024	
On what date will (or was) the remediation complete(d)	04/15/2024	
What is the estimated surface area (in square feet) that will be reclaimed	5700	
What is the estimated volume (in cubic yards) that will be reclaimed	845	
What is the estimated surface area (in square feet) that will be remediated	5700	
What is the estimated volume (in cubic yards) that will be remediated	3200	
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	d 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.

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

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

<u>District III</u> 1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

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 4

Action 341231

QUESTIONS (continued)

Operator:	OGRID:
Maverick Permian LLC	331199
1000 Main Street, Suite 2900	Action Number:
Houston, TX 77002	341231
	Action Type:
	[C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

appropriate district office no later than 90 days after the release discovery date.		
/ reduce contaminants:		
(Select all answers below that apply.)		
Yes		
R360 Artesia LLC LANDFARM [fEEM0112340644]		
Not answered.		
Not answered.		
Not answered.		
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.

Name: Aimee Cole
I hereby agree and sign off to the above statement
Email: acole@ensolum.com

Date: 05/06/2024

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.

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

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 5

Action 341231

QUESTIONS (continued)

Operator:	OGRID:
Maverick Permian LLC	331199
1000 Main Street, Suite 2900	Action Number:
Houston, TX 77002	341231
	Action Type:
	[C-141] Reclamation Report C-141 (C-141-v-Reclamation)

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 No submission

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

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

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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 6

Action 341231

QUESTIONS	(continued)

Operator:	OGRID:
Maverick Permian LLC	331199
1000 Main Street, Suite 2900	Action Number:
Houston, TX 77002	341231
	Action Type:
	[C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	331591
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	04/11/2024
What was the (estimated) number of samples that were to be gathered	4
What was the sampling surface area in square feet	800

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	5700
What was the total volume (cubic yards) remediated	3200
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	5700
What was the total volume (in cubic yards) reclaimed	845
Summarize any additional remediation activities not included by answers (above)	The top four feet meet reclamation requirements, below 4 feet meets closure criteria.

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.

Name: Aimee Cole
I hereby agree and sign off to the above statement
Email: acole@ensolum.com
Date: 05/06/2024

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

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<u>District III</u> 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 7

Action 341231

QUESTIONS (continued)

Operator:	OGRID:
Maverick Permian LLC	331199
1000 Main Street, Suite 2900	Action Number:
Houston, TX 77002	341231
	Action Type:
	[C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Reclamation Report		
Only answer the questions in this group if all reclamation steps have been completed.		
Requesting a reclamation approval with this submission	Yes	
What was the total reclamation surface area (in square feet) for this site	5700	
What was the total volume of replacement material (in cubic yards) for this site	3200	
Per Paragraph (1) of Subsection D of 19.15.29.13 NMAC the reclamation must contain a minimum of four feet of non-waste containing, uncontaminated, earthen material with chloride concentrations less than 6 mg/kg as analyzed by EPA Method 300.0, or other test methods approved by the division. The soil cover must include a top layer, which is either the background thickness of topsoil or one foot of suitable mate to establish vegetation at the site, whichever is greater.		
Is the soil top layer complete and is it suitable material to establish vegetation	Yes	
On what (estimated) date will (or was) the reseeding commence(d)	04/23/2024	
Summarize any additional reclamation activities not included by answers (above)	Excavation was backfilled and seeded. Backfill material was sampled and met reclamation requirements.	
The responsible party must attach information demonstrating they have complied with all applicable reclamation requirements and any conditions or directives of the OCD. This demonstration should be in the form of attachments (in .pdf format) including a scaled site map, any proposed reseeding plans or relevant field notes, photographs of reclaimed area, and a narrative of the reclamation activities. Refer to 19.15.29.13 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.

Name: Aimee Cole
Email: acole@ensolum.com
Date: 05/06/2024

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

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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QUESTIONS, Page 8

Action 341231

QUESTIONS (continued)

Operator:	OGRID:
Maverick Permian LLC	331199
1000 Main Street, Suite 2900	Action Number:
Houston, TX 77002	341231
	Action Type:
	[C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Revegetation Report		
Only answer the questions in this group if all surface restoration, reclamation and re-vegetation obligations have been satisfied.		
Requesting a restoration complete approval with this submission	No	
Per Paragraph (4) of Subsection (D) of 19.15.29.13 NMAC for any major or minor release containing liquids, the responsible party must notify the division when reclamation and re-vegetation are complete.		

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1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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CONDITIONS

Action 341231

CONDITIONS

Operator:	OGRID:
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1000 Main Street, Suite 2900	Action Number:
Houston, TX 77002	341231
	Action Type:
	[C-141] Reclamation Report C-141 (C-141-v-Reclamation)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	The reclamation report has been approved pursuant to 19.15.29.13 E. NMAC. The acceptance of this 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; or if the location fails to revegetate properly. In addition, OCD approval does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.	6/11/2024
amaxwell	A revegetation report will not be accepted until revegetation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	6/11/2024
amaxwell	All revegetation activities will need to be documented and included in the revegetation report. The revegetation report will need to include: An executive summary of the revegetation activities including: Seed mix, Method of seeding, dates of when the release area was reseeded, information pertinent to inspections, information about any amendments added to the soil, information on how the vegetative cover established meets the life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds per 19.15.29.13 D.(3) NMAC, and any additional information; a scaled Site Map including area that was revegetated in square feet; and pictures of the revegetated areas during reseeding activities, inspections, and final pictures when revegetation is achieved.	6/11/2024