



September 19, 2023

New Mexico Oil Conservation Division

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

**Re: Closure Request
MCA 409 Flowline
Incident Number NAPP2318846991
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 MCA 409 flowline (Site). The purpose of the assessment, excavation, and soil sampling activities was to address impacts to soil resulting from a release of crude oil release 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 NAPP2318846991.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit L, Section 27, Township 17 South, Range 32 East, in Lea County, New Mexico (32.803715° N, -103.760309° W) and is associated with oil and gas exploration and production operations on Federal Land managed by Bureau of Land Management (BLM).

On June 21, 2023, a damaged surface poly flowline resulted in the release of approximately 5.7 barrels (bbls) of crude oil onto the surrounding pasture. No released fluids were recovered; however, a scrape of the saturated surface soil was completed during initial spill response activities. Maverick reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on July 5, 2023. The release was assigned Incident Number NAPP2318846991.

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 desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential Site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NMOSE) well RA-12721 POD 5, located

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approximately 0.30 miles southwest of the Site. The well was drilled during April 2020 and has a reported depth to groundwater of 124 feet bgs. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well record is included in Appendix A.

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: 20,000 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 June 28, 2023, site assessment activities were completed at the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Four assessment soil samples (SS01 through SS04) were collected around the visible release extent at a depth of 0.5 feet bgs to confirm the lateral extent of the release. Three assessment soil samples (SS05 through SS07) were collected within the release extent at a depth of 0.5 feet bgs to assess surficial soil within the release. The release extent and soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site visit and a photographic log is included in Appendix B.

The 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 SS04, collected around the release extent, indicated that all COC concentrations were compliant with the most stringent Table I Closure Criteria and provided lateral definition of the release. Laboratory analytical results for assessment soil samples SS05 through SS07, collected within the release extent, indicated that TPH and chloride concentrations exceeded the Site Closure Criteria and/or reclamation requirements. Based on visible staining in the release area and laboratory analytical results for the assessment soil samples, delineation and excavation activities were warranted.

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DELINEATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

Between July 18, 2023 and August 24, 2023, Ensolum personnel were at the Site to complete additional assessment activities to delineate the vertical extent of the release. Potholes were advanced via backhoe within the release extent at the location of initial assessment samples SS05 through SS07. Soil from the potholes was field screened for volatile aromatic hydrocarbons (VOCs) utilizing a calibrated photoionization detector (PID) and chloride Hach® chloride QuanTab® test strips. Final depth of the potholes was determined by field screening results indicating compliance with the most stringent Table I Closure Criteria. Field screening results and observations for the potholes were logged on lithologic soil sampling logs, which are included in Appendix C. Discrete delineation soil samples were collected from each pothole (SS05 through SS07) at depths ranging from 1-foot to 11 feet bgs. The delineation samples were collected, handled, and analyzed as described above. The delineation soil sample locations were mapped utilizing a handheld GPS and are presented on Figure 2. Photographic documentation was completed during the Site visits and a photographic log is included in Appendix B.

Laboratory analytical results for the delineation samples collected from pothole SS05, advanced near the release point, indicated that TPH and chloride concentrations exceeded the Site Closure Criteria and/or reclamation requirements in the top four feet. All COC concentrations were compliant the Site Closure Criteria at depths below four feet and compliant with the most stringent Table I Closure Criteria in the final depth sample, collected at 11 feet bgs. Laboratory analytical results for the delineation samples collected from potholes SS06 and SS07, advanced south of the release point, indicated that TPH and chloride concentrations exceeded reclamation requirements at depths ranging from 0.5 feet to 1-foot bgs. All COC concentrations were compliant the most stringent Table I Closure Criteria at a depth of 1-foot bgs in pothole SS06 and at a depth of 3 feet bgs in pothole SS07.

Based on delineation soil sample analytical results, the vertical extent of the release was successfully delineated and excavation activities proceeded.

EXCAVATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

Between August 21, 2023 and August 28, 2023, Ensolum personnel were at the Site to oversee excavation of impacted soil as indicated by visible staining in the release area and laboratory analytical results for the delineation soil samples. To direct excavation activities, soil was field screened for VOCs and chloride. Excavation activities were performed using hand shovels, track-mounted backhoe, and transport vehicles. The excavation was completed to depths ranging from 1-foot to 6.25 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 FS17, FS10A, FS11A, and FS15A were collected from the floor of the excavation at depths ranging from 1-foot to 6.25 feet bgs. Composite soil samples SW01 through SW07 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 4 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 excavation floor samples FS01 through FS09, FS10A, FS11A, FS12 through FS14, FS15A, FS16, and FS17 and excavation sidewall samples SW01 through SW07, collected from the final excavation extent, indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirements for samples collected in the top four feet. Laboratory analytical results for excavation floor samples FS10, FS11, and FS15 initially exceeded the Site Closure Criteria for TPH or chloride; additional soil was removed from these areas and subsequent floor samples



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FS10A, FS11A, and FS15A were compliant. Laboratory analytical results are summarized on Table 1 and the complete laboratory analytical reports are included as Appendix D.

The excavation measured approximately 2,850 square feet in areal extent. A total of approximately 460 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.

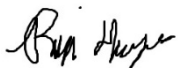
CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the June 21, 2023, release of crude oil. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirements, where applicable. Additionally, the release was laterally and vertically delineated to below the most stringent Table I Closure Criteria. Based on the laboratory analytical results, no further remediation is required. Maverick will backfill the excavation with material purchased locally and recontour the Site to match pre-existing conditions.

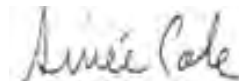
Initial response efforts and excavation of impacted soil have mitigated impacts at this Site. Depth to groundwater has been determined to be greater than 100 feet bgs within 0.5 miles of the Site and no sensitive receptors were identified near the release extent. Maverick believes the remedial actions completed are protective of human health, the environment, and groundwater and respectfully requests closure for Incident NAPP2318846991. NMOCD notifications are included in Appendix E and the final Form C-141 is included in Appendix F.

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

Sincerely,
Ensolum, LLC



Ronni Hayes
Assistant Geologist



Aimee Cole
Senior Managing Scientist

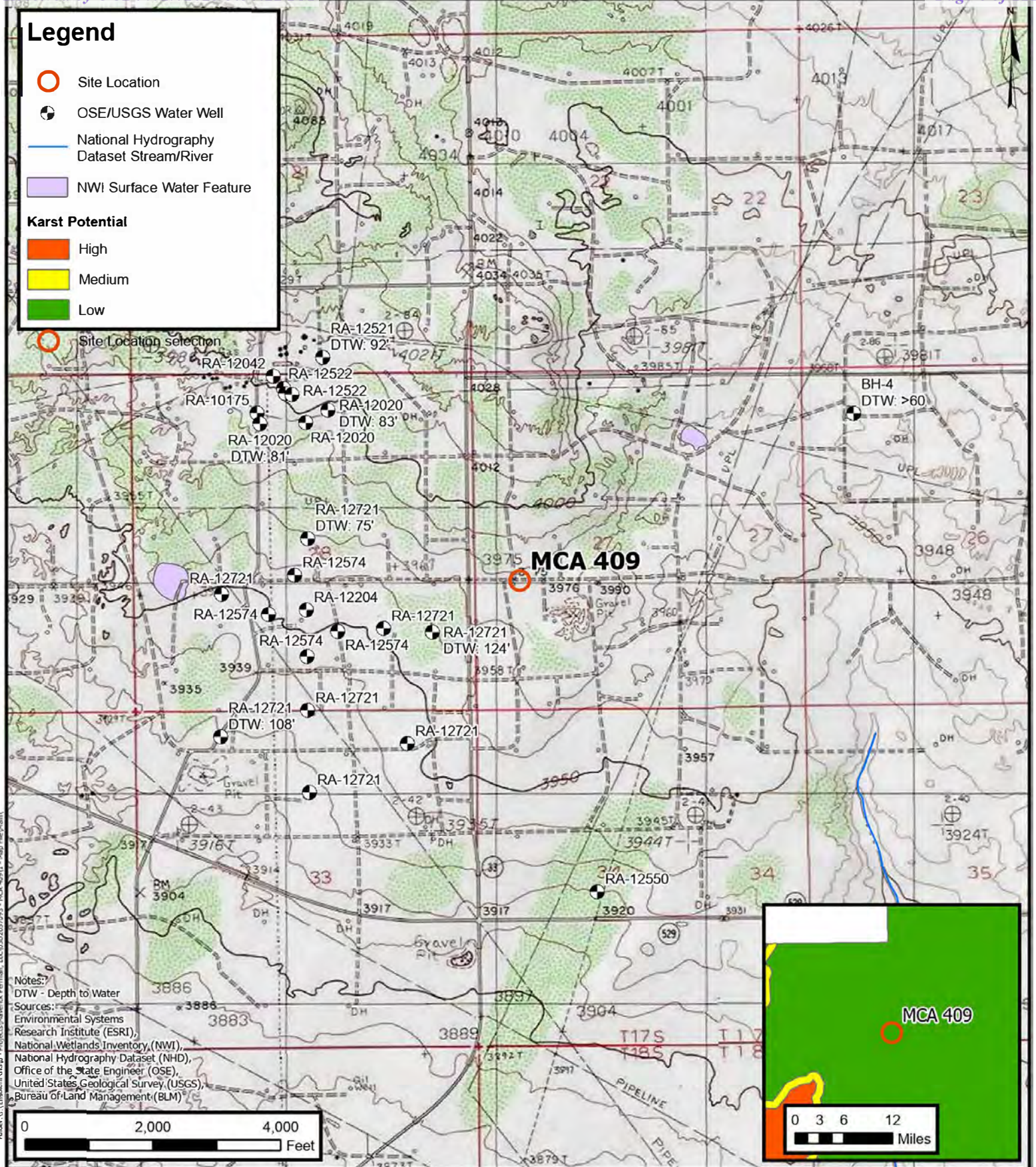
cc: Bryce Wagoner, Maverick Natural Resources
Bureau of Land Management

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	Lithologic Soil Sampling Logs
Appendix D	Laboratory Analytical Reports & Chain of Custody Documentation
Appendix E	NMOCD Notifications
Appendix F	Final C-141



FIGURES



Site Receptor Map

Maverick Permian, LLC

MCA 409

Incident Number: NAPP2318846991

Unit L, Sec 27, T17S R32E




Lea County, New Mexico

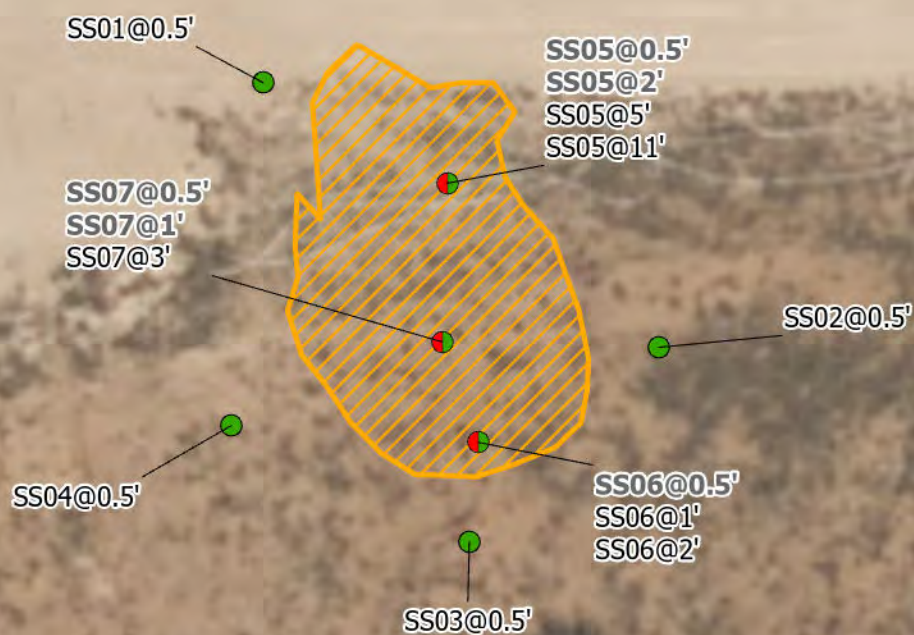
FIGURE

1

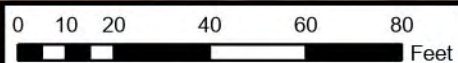


Legend

-  Release Extent
-  Soil sample in compliance with closure criteria
-  Soil sample with initial concentrations exceeding closure criteria

**Notes:**

Sample ID @ Depth Below Ground Surface.
 Samples in bold indicate sample exceeded applicable closure criteria.
 Grey text indicate soil sample was removed during excavation activities.



Sources: Environmental Systems Research Institute (ESRI)

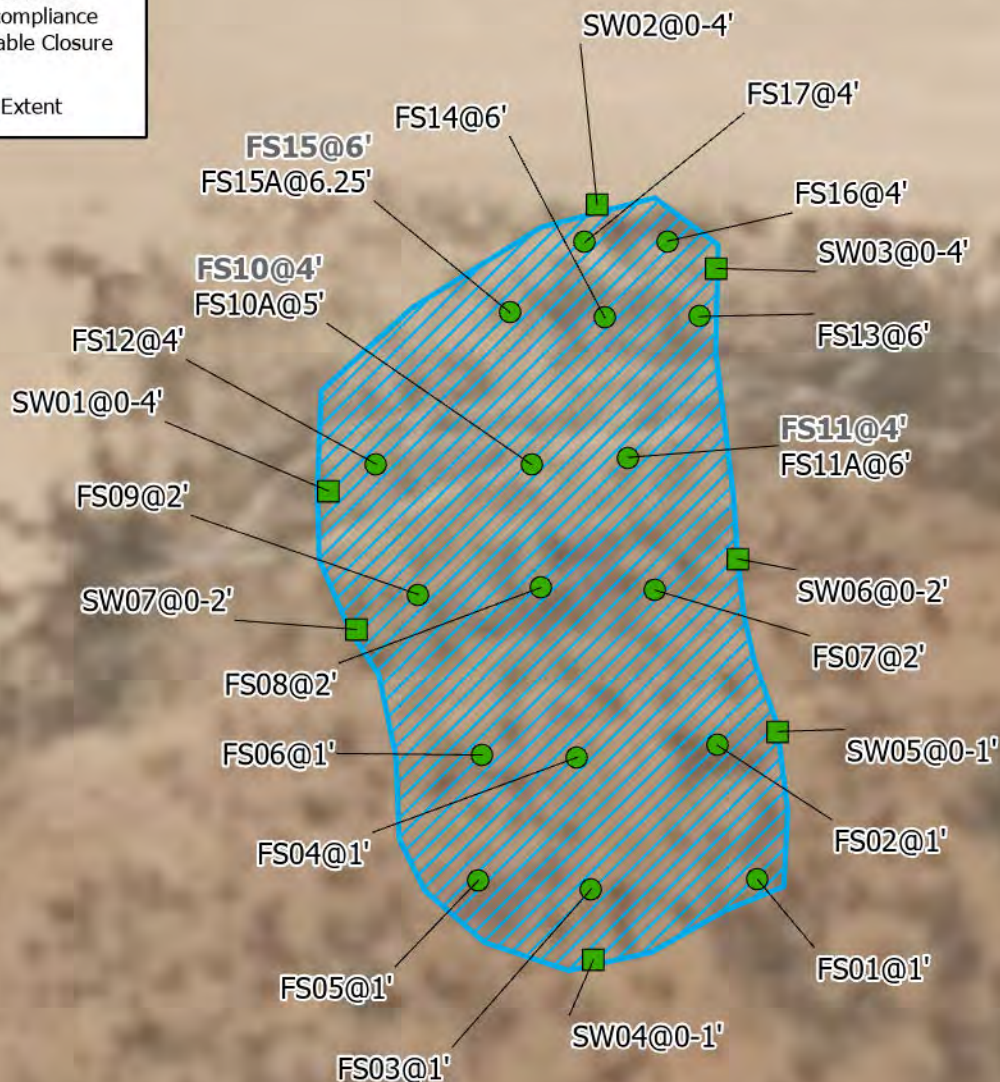
**Assessment Soil Sample Locations**

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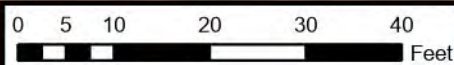
FIGURE**2**

Legend

- Excavation floor sample in compliance with applicable Closure Criteria
- Excavation sidewall sample in compliance with applicable Closure Criteria.
- ▨ Excavation Extent



Notes:
 Sample ID @ Depth Below Ground Surface.
 Samples in bold indicate sample exceeded applicable closure criteria.
 Grey text indicate soil sample was removed during excavation activities.



Sources: Environmental Systems Research Institute (ESRI)

Excavation Soil Sample Locations

Maverick Permian, LLC
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FIGURE

3





TABLES

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
MCA 409 Flowline
Maverick Permian, LLC
Lea County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Assesment Soil Samples										
SS01*	06/28/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS02*	06/28/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SS03*	06/28/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SS04*	06/28/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS05*	06/28/2023	0.5	0.618	103	1,700	8,770	1,540	10,470	12,010	2,760
SS05*	07/18/2023	2	<2.00	77.8	1,500	7,260	1,320	8,760	10,080	2,160
SS05	07/19/2023	5	<0.050	2.16	43.7	812	157	856	1,013	336
SS05	08/24/2023	11	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SS06*	06/28/2023	0.5	<0.050	<0.300	<10.0	114	31.2	114	145	1,280
SS06*	07/18/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS06*	07/18/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS07*	06/28/2023	0.5	<0.050	<0.300	<10.0	978	232	978	1,210	2,760
SS07*	07/18/2023	1	<0.050	<0.300	<10.0	170	41.2	211	211	432
SS07*	07/18/2023	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48
Excavation Floor Soil Samples										
FS01*	8/21/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS02*	8/21/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
FS03*	8/21/2023	1	<0.050	<0.300	<10.0	46.7	<10.0	46.7	46.7	432.0
FS04*	8/21/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS05*	8/21/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS06*	8/25/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144.0
FS07*	8/22/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS08*	8/22/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS09*	8/22/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
FS10	8/22/2023	4	<0.050	12.9	226.0	2,350	452	2,576	3,028	3,320.0
FS10A	8/25/2023	5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
MCA 409 Flowline
Maverick Permian, LLC
Lea County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
FS11	8/22/2023	4	0.220	34.1	675.0	4,310	807	4,985	5,792	1,410.0
FS11A	8/25/2023	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	384.0
FS12	8/24/2023	4	<0.050	<0.300	<10.0	65.4	10.3	65.4	75.7	176
FS13	8/28/2023	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	336
FS14	8/28/2023	6	<0.050	<0.300	<10.0	91.9	20.5	91.9	112.4	432
FS15	8/28/2023	6	<0.050	1.42	27.6	1,680	376	1,707.6	2,084	1,200
FS15A	9/6/2023	6.25	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
FS16	8/28/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS17	8/28/2023	4	<0.050	<0.300	<10.0	81.7	18.3	81.7	100	144
Excavation Sidewall Soil Samples										
SW01*	8/28/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SW02*	8/28/2023	0-4	<0.050	<0.300	<10.0	24.7	<10.0	24.7	24.7	48.0
SW03*	8/28/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW04*	8/28/2023	0-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW05*	8/28/2023	0-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW06*	8/29/2023	0-2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW07*	8/29/2023	0-2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

TPH: Total Petroleum Hydrocarbon

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

Concentrations in **bold** exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable.**Grey** text represents samples that have been excavated

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




APPENDIX A

Referenced Well Records



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)				(quarters are smallest to largest)				(NAD83 UTM in meters)		
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y			
NA	RA 12721 POD5	2	4	4	28	17S	32E	615650	3629961			
x												
Driller License:		1456		Driller Company:			WHITE DRILLING COMPANY					
Driller Name:		WHITE, JOHNNOWN.GENER										
Drill Start Date:		04/27/2020		Drill Finish Date:			04/28/2020		Plug Date:			
Log File Date:		05/18/2020		PCW Rev Date:						Source: Shallow		
Pump Type:					Pipe Discharge Size:						Estimated Yield:	
Casing Size:		2.00		Depth Well:			130 feet		Depth Water:		124 feet	
x												
Water Bearing Stratifications:				Top	Bottom	Description						
				109	121	Sandstone/Gravel/Conglomerate						
				121	125	Sandstone/Gravel/Conglomerate						
				125	130	Sandstone/Gravel/Conglomerate						
x												
Casing Perforations:				Top	Bottom							
				90	130							

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

8/1/23 9:15 AM

POINT OF DIVERSION SUMMARY



APPENDIX B

Photographic Log



Photographic Log

Maverick Permian, LLC

MCA 409 Flowline

NAPP2318846991



Photograph 1

Date: 06/21/2023

Description: Staining during initial release

View: East



Photograph 2

Date: 06/26/2023

Description: Site during initial assessment activities

View: East



Photograph 3

Date: 07/18/2023

Description: Point of release during delineation activities

View: North



Photograph 4

Date: 08/18/2023

Description: HVAC line spotting

View: North

**Photographic Log**

Maverick Permian, LLC

MCA 409 Flowline

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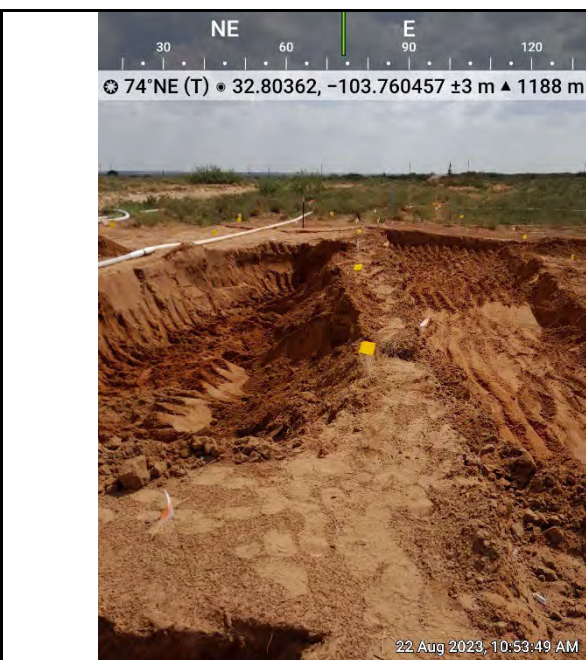


Photograph 5

Date: 08/21/2023

Description: Excavation activities

View: East

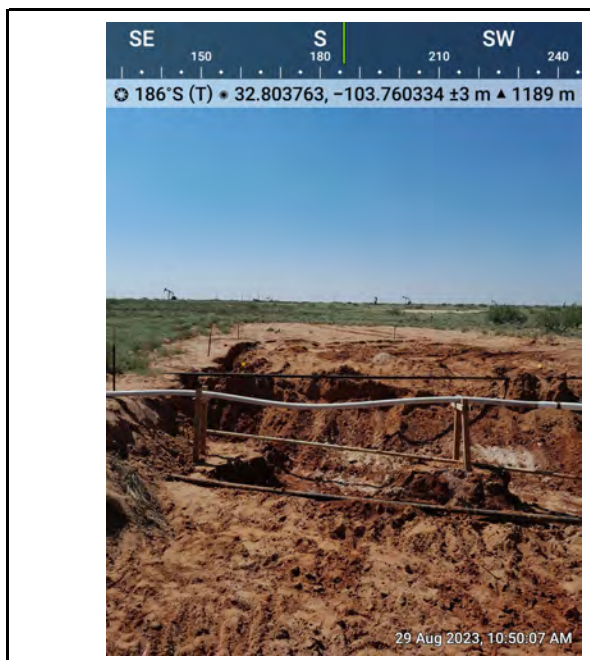


Photograph 6

Date: 08/22/2023

Description: Excavation activities

View: East



Photograph 7

Date: 08/29/2023

Description: Excavation activities

View: South



Photograph 8

Date: 08/29/2023


Description: Excavation activities


View: Southeast




APPENDIX C

Lithologic Soil Sampling Logs

 ENSOLUM								Sample Name: SS05		Date: 8/24/2023	
								Site Name: MCA 409 Flowline			
								Incident Number: NAPP2318846991			
								Job Number: 03D2057093			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Ronni Hayes		Method: Trackhoe	
Coordinates: 32.8036754, -103.7603388								Hole Diameter: ~3'		Total Depth: 11 ft bgs	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
						0					
Dry	1500	3119	N	SS05	1	1	SP-SM	SAND, very fine to fine, reddish brown, no stain, strong odor, noncohesive			
Dry	5812.8	3338	N	SS05	2	2	SAA	SAA			
Dry	4944.8	1582.1	N	SS05	3	3	SAA	SAA, medium brown no odor, noncohesive			
Dry	498.4	729.2	N	SS05	4	4	SP-SM	SAND, fine, poorly sorted, some limestone gravel, dark red, no staining, strong odor, noncohesive			
Dry	554.4	630.1	N	SS05	5	5	SAA	SAA			
Moist	1,114.4	102.6	N	SS05	6	6	SAA	SAA, some cohesiveness			
Moist	1,982.40	25.4	N	SS05	7	7	SAA	SAA			
Moist	1,848	1.3	N	SS05	8	8	SP-SM	SAND, fine-coarse, poorly sorted, no staining, odor, some cohesiveness, reddish, some limestone			
Moist	1,982.40	10.3	N	SS05	9	9	SAA				
Moist	806.9	5.6	N	SS05	10	10	SAA				
Moist	<173.8	0.3	N	SS05	11	11	SAA	SAA, no odor			
								TD at 11 ft bgs			

 ENSOLUM		Sample Name: SS06		Date: 7/18/2023				
		Site Name: MCA 409 Flowline						
		Incident Number: NAPP2318846991						
		Job Number: 03D2057093						
LITHOLOGIC / SOIL SAMPLING LOG								
Coordinates: 32.8035379, -103.7603195			Logged By: Ronni Hayes		Method: Hand auger			
			Hole Diameter: ~4"		Total Depth: 2			
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
Dry	<173.8	0.5	N	SS06	1	1	SP-SM	SAND, very fine to fine, reddish brown, no stain, no odor, noncohesive
Dry	<173.8	0.3	N	SS06	2	2	SAA	SAA
								TD at 2 ft bgs

								Sample Name: SS07		Date: 7/18/2023	
								Site Name: MCA 409 Flowline			
								Incident Number: NAPP2318846991			
								Job Number: 03D2057093			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Ronni Hayes		Method: Hand auger	
Coordinates: 32.8035956, -103.7603436								Hole Diameter: ~4"		Total Depth: 3 ft bgs	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
						0					
Dry	448	2.3	N	SS07	1	1	SP-SM	SAND, very fine to fine, reddish brown, no stain, small odor, noncohesive			
Dry	<173.8	1.5	N	SS07	2	2	SAA	SAA			
Dry	<173.8	0.7	N	SS07	3	3	SP-SM	SAND, very fine to fine, medium brown, no stain, no odor, noncohesive			
								TD at 3 ft bgs			



APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation



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

July 03, 2023

KALEI JENNINGS

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 409 FLOWLINE

Enclosed are the results of analyses for samples received by the laboratory on 06/28/23 13:45.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
KALEI JENNINGS
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 06/28/2023
Reported: 07/03/2023
Project Name: MCA 409 FLOWLINE
Project Number: 03D2057093
Project Location: MAVERICK (32.4813-103.4538)

Sampling Date: 06/26/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: SS 01 0.5' (H233337-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/29/2023	ND	1.91	95.3	2.00	6.33	
Toluene*	<0.050	0.050	06/29/2023	ND	2.01	100	2.00	6.35	
Ethylbenzene*	<0.050	0.050	06/29/2023	ND	2.05	102	2.00	5.94	
Total Xylenes*	<0.150	0.150	06/29/2023	ND	6.21	103	6.00	6.36	
Total BTEX	<0.300	0.300	06/29/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/29/2023	ND	352	88.0	400	12.8	

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	06/29/2023	ND	199	99.6	200	4.24	
DRO >C10-C28*	<10.0	10.0	06/29/2023	ND	192	96.0	200	4.61	
EXT DRO >C28-C36	<10.0	10.0	06/29/2023	ND					

Surrogate: 1-Chlorooctane 112 % 48.2-134

Surrogate: 1-Chlorooctadecane 125 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
KALEI JENNINGS
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 06/28/2023
Reported: 07/03/2023
Project Name: MCA 409 FLOWLINE
Project Number: 03D2057093
Project Location: MAVERICK (32.4813-103.4538)

Sampling Date: 06/26/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: SS 02 0.5' (H233337-02)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/29/2023	ND	1.91	95.3	2.00	6.33		
Toluene*	<0.050	0.050	06/29/2023	ND	2.01	100	2.00	6.35		
Ethylbenzene*	<0.050	0.050	06/29/2023	ND	2.05	102	2.00	5.94		
Total Xylenes*	<0.150	0.150	06/29/2023	ND	6.21	103	6.00	6.36		
Total BTEx	<0.300	0.300	06/29/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	06/29/2023	ND	352	88.0	400	12.8		

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	06/29/2023	ND	199	99.6	200	4.24	
DRO >C10-C28*	<10.0	10.0	06/29/2023	ND	192	96.0	200	4.61	
EXT DRO >C28-C36	<10.0	10.0	06/29/2023	ND					

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
KALEI JENNINGS
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 06/28/2023
Reported: 07/03/2023
Project Name: MCA 409 FLOWLINE
Project Number: 03D2057093
Project Location: MAVERICK (32.4813-103.4538)

Sampling Date: 06/26/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: SS 03 0.5' (H233337-03)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/29/2023	ND	1.91	95.3	2.00	6.33		
Toluene*	<0.050	0.050	06/29/2023	ND	2.01	100	2.00	6.35		
Ethylbenzene*	<0.050	0.050	06/29/2023	ND	2.05	102	2.00	5.94		
Total Xylenes*	<0.150	0.150	06/29/2023	ND	6.21	103	6.00	6.36		
Total BTEx	<0.300	0.300	06/29/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	06/29/2023	ND	352	88.0	400	12.8		

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	06/29/2023	ND	199	99.6	200	4.24	
DRO >C10-C28*	<10.0	10.0	06/29/2023	ND	192	96.0	200	4.61	
EXT DRO >C28-C36	<10.0	10.0	06/29/2023	ND					

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 113 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
KALEI JENNINGS
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 06/28/2023
Reported: 07/03/2023
Project Name: MCA 409 FLOWLINE
Project Number: 03D2057093
Project Location: MAVERICK (32.4813-103.4538)

Sampling Date: 06/26/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: SS 04 0.5' (H233337-04)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/29/2023	ND	1.91	95.3	2.00	6.33		
Toluene*	<0.050	0.050	06/29/2023	ND	2.01	100	2.00	6.35		
Ethylbenzene*	<0.050	0.050	06/29/2023	ND	2.05	102	2.00	5.94		
Total Xylenes*	<0.150	0.150	06/29/2023	ND	6.21	103	6.00	6.36		
Total BTX	<0.300	0.300	06/29/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/29/2023	ND	352	88.0	400	12.8		

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	06/29/2023	ND	199	99.6	200	4.24	
DRO >C10-C28*	<10.0	10.0	06/29/2023	ND	192	96.0	200	4.61	
EXT DRO >C28-C36	<10.0	10.0	06/29/2023	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

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

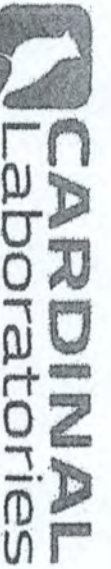
Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC

Project Manager: Hale, Jennifer

Address: 8122 Nat'l Park Highway

City: Grants State: NM Zip: 88220

Phone #: _____ Fax #: _____

Project #: 03D057093 Project Owner: Maverick

Project Name: MCA 404 FIDUINE

Project Location: 824613 - 103,4538

Sample Name: Yellowed Fertilizer

FOR LAB USE ONLY

Lab I.D. _____ Sample I.D. _____

Depth (feet)

(G)RAB OR (G)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE TIME

MATRIX

PRESERV

SAMPLING

ANALYSIS REQUEST

P.O. #: A.A.

Company: _____

Address: _____

City: _____

State: _____

Zip: _____

Phone #: _____

Fax #: _____

PLEASE NOTE: Liability and Damages. Cardinal's liability and claims exclusion 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 90 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 with respect to or related to the performance of services hereunder by Cardinal. Receipt of this notice shall constitute a binding agreement on the part of the client to release Cardinal from all claims of the above stated nature or otherwise.

Relinquished By: _____ Date: 12-28-23 Received By: _____

Relinquished By: _____ Date: 1-3-24 Received By: Spedding

REMARKS:

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

All Results are emailed. Please provide Email address:

Delivered By: (Circle One)

Observed Temp. 24.1

Sample Condition Cool Intact ☒ Yes ☐ No

CHECKED BY: SV

Thermal Time: _____

Standard ☒ Bacteria (only) Sample Condition

Rush ☐ Cool Intact ☐ Yes ☐ No

Thermometer ID #113

Correction Factor -0.5°C

Corrected Temp. °C

Sampler - UPS - Bus - Other:

Corrected Temp. 24.1

Cool Intact ☒ Yes ☐ No

CHECKED BY: SV

Thermal Time: _____

Standard ☒ Bacteria (only) Sample Condition

Rush ☐ Cool Intact ☐ Yes ☐ No

Thermometer ID #113

Correction Factor -0.5°C

Corrected Temp. °C

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



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

July 03, 2023

KALEI JENNINGS

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 409 FLOWLINE

Enclosed are the results of analyses for samples received by the laboratory on 06/28/23 13:45.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
KALEI JENNINGS
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/28/2023	Sampling Date:	06/26/2023
Reported:	07/03/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Shalyn Rodriguez
Project Location:	MAVERICK (32.4813-103.4538)		

Sample ID: SS 05 0.5' (H233338-01)

BTEx 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.618	0.500	06/29/2023	ND	1.91	95.3	2.00	6.33	
Toluene*	17.4	0.500	06/29/2023	ND	2.01	100	2.00	6.35	
Ethylbenzene*	29.9	0.500	06/29/2023	ND	2.05	102	2.00	5.94	
Total Xylenes*	54.7	1.50	06/29/2023	ND	6.21	103	6.00	6.36	
Total BTEX	103	3.00	06/29/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 166 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2760	16.0	06/29/2023	ND	352	88.0	400	12.8	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	1700	100	06/29/2023	ND	199	99.6	200	4.24	
DRO >C10-C28*	8770	100	06/29/2023	ND	192	96.0	200	4.61	
EXT DRO >C28-C36	1540	100	06/29/2023	ND					

Surrogate: 1-Chlorooctane 252 % 48.2-134

Surrogate: 1-Chlorooctadecane 195 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
KALEI JENNINGS
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 06/28/2023
Reported: 07/03/2023
Project Name: MCA 409 FLOWLINE
Project Number: 03D2057093
Project Location: MAVERICK (32.4813-103.4538)

Sampling Date: 06/26/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: SS 06 0.5' (H233338-02)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/29/2023	ND	1.91	95.3	2.00	6.33	
Toluene*	0.058	0.050	06/29/2023	ND	2.01	100	2.00	6.35	
Ethylbenzene*	0.073	0.050	06/29/2023	ND	2.05	102	2.00	5.94	
Total Xylenes*	<0.150	0.150	06/29/2023	ND	6.21	103	6.00	6.36	
Total BTX	<0.300	0.300	06/29/2023	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1280	16.0	06/29/2023	ND	352	88.0	400	12.8		

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	06/29/2023	ND	199	99.6	200	4.24	
DRO >C10-C28*	114	10.0	06/29/2023	ND	192	96.0	200	4.61	
EXT DRO >C28-C36	31.2	10.0	06/29/2023	ND					

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 123 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
KALEI JENNINGS
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 06/28/2023
Reported: 07/03/2023
Project Name: MCA 409 FLOWLINE
Project Number: 03D2057093
Project Location: MAVERICK (32.4813-103.4538)

Sampling Date: 06/26/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: SS 07 0.5' (H233338-03)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/29/2023	ND	1.91	95.3	2.00	6.33	
Toluene*	<0.050	0.050	06/29/2023	ND	2.01	100	2.00	6.35	
Ethylbenzene*	<0.050	0.050	06/29/2023	ND	2.05	102	2.00	5.94	
Total Xylenes*	<0.150	0.150	06/29/2023	ND	6.21	103	6.00	6.36	
Total BTEX	<0.300	0.300	06/29/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2760	16.0	06/29/2023	ND	352	88.0	400	12.8		

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	06/29/2023	ND	199	99.6	200	4.24	
DRO >C10-C28*	978	10.0	06/29/2023	ND	192	96.0	200	4.61	
EXT DRO >C28-C36	232	10.0	06/29/2023	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 145 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

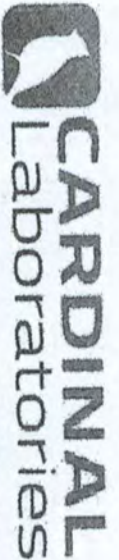
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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC Project Manager: Haley Jennings Address: 8122 N. Ft. Park Highway City: Jourd'hood State: MN Zip: 55020 Phone #: Fax #: Project #: BDD057093 Project Name: MGA 409 Elevation Project Location: 824813 -103.4538 Sampler Name: J. L. Brown FOR LAB USE ONLY										P.O. #: A.A. Company: Attn: Address: City: State: Zip: Phone #: Fax #:									
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										MATRIX PRESERV. SAMPLING BTX TPH Chlorides									
Relinquished By: Date: 10-28-23 Time: 1345 Received By: Steven Jensen Observed Temp. °C: 0.4 Corrected Temp. °C: -0.2 Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Checked By: (Signature) Remarks:										Relinquished By: Date: 10-28-23 Time: 1345 Received By: Steven Jensen Observed Temp. °C: 0.4 Corrected Temp. °C: -0.2 Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Checked By: (Signature) Remarks:									



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

July 24, 2023

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 409 FLOWLINE

Enclosed are the results of analyses for samples received by the laboratory on 07/18/23 14:02.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	07/18/2023	Sampling Date:	07/18/2023
Reported:	07/24/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Shalyn Rodriguez
Project Location:	MAVERICK (32.803715, -103.760309)		

Sample ID: SS 06 - 1' (H233727-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/23/2023	ND	2.20	110	2.00	3.31	
Toluene*	<0.050	0.050	07/23/2023	ND	2.13	107	2.00	3.64	
Ethylbenzene*	<0.050	0.050	07/23/2023	ND	2.06	103	2.00	3.45	
Total Xylenes*	<0.150	0.150	07/23/2023	ND	6.23	104	6.00	3.69	
Total BTX	<0.300	0.300	07/23/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/21/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/21/2023	ND	186	93.0	200	3.17	
DRO >C10-C28*	<10.0	10.0	07/21/2023	ND	191	95.5	200	3.35	
EXT DRO >C28-C36	<10.0	10.0	07/21/2023	ND					

Surrogate: 1-Chlorooctane 111 % 48.2-134

Surrogate: 1-Chlorooctadecane 129 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	07/18/2023	Sampling Date:	07/18/2023
Reported:	07/24/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Shalyn Rodriguez
Project Location:	MAVERICK (32.803715, -103.760309)		

Sample ID: SS 06 - 2' (H233727-02)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/23/2023	ND	2.20	110	2.00	3.31		
Toluene*	<0.050	0.050	07/23/2023	ND	2.13	107	2.00	3.64		
Ethylbenzene*	<0.050	0.050	07/23/2023	ND	2.06	103	2.00	3.45		
Total Xylenes*	<0.150	0.150	07/23/2023	ND	6.23	104	6.00	3.69		
Total BTEx	<0.300	0.300	07/23/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/21/2023	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	07/21/2023	ND	186	93.0	200	3.17	
DRO >C10-C28*	<10.0	10.0	07/21/2023	ND	191	95.5	200	3.35	
EXT DRO >C28-C36	<10.0	10.0	07/21/2023	ND					

Surrogate: 1-Chlorooctane 112 % 48.2-134

Surrogate: 1-Chlorooctadecane 136 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	07/18/2023	Sampling Date:	07/18/2023
Reported:	07/24/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Shalyn Rodriguez
Project Location:	MAVERICK (32.803715, -103.760309)		

Sample ID: SS 07 - 1' (H233727-03)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/23/2023	ND	2.20	110	2.00	3.31		
Toluene*	<0.050	0.050	07/23/2023	ND	2.13	107	2.00	3.64		
Ethylbenzene*	<0.050	0.050	07/23/2023	ND	2.06	103	2.00	3.45		
Total Xylenes*	<0.150	0.150	07/23/2023	ND	6.23	104	6.00	3.69		
Total BTEX	<0.300	0.300	07/23/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	432	16.0	07/21/2023	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	07/21/2023	ND	186	93.0	200	3.17	
DRO >C10-C28*	170	10.0	07/21/2023	ND	191	95.5	200	3.35	
EXT DRO >C28-C36	41.2	10.0	07/21/2023	ND					

Surrogate: 1-Chlorooctane 110 % 48.2-134

Surrogate: 1-Chlorooctadecane 132 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	07/18/2023	Sampling Date:	07/18/2023
Reported:	07/24/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Shalyn Rodriguez
Project Location:	MAVERICK (32.803715, -103.760309)		

Sample ID: SS 07 - 3' (H233727-04)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/22/2023	ND	1.96	97.9	2.00	0.349		
Toluene*	<0.050	0.050	07/22/2023	ND	1.97	98.5	2.00	0.125		
Ethylbenzene*	<0.050	0.050	07/22/2023	ND	2.02	101	2.00	0.166		
Total Xylenes*	<0.150	0.150	07/22/2023	ND	5.95	99.1	6.00	0.336		
Total BTX	<0.300	0.300	07/22/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	07/21/2023	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	07/21/2023	ND	186	93.0	200	3.17	
DRO >C10-C28*	<10.0	10.0	07/21/2023	ND	191	95.5	200	3.35	
EXT DRO >C28-C36	<10.0	10.0	07/21/2023	ND					

Surrogate: 1-Chlorooctane 112 % 48.2-134

Surrogate: 1-Chlorooctadecane 132 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	07/18/2023	Sampling Date:	07/18/2023
Reported:	07/24/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Shalyn Rodriguez
Project Location:	MAVERICK (32.803715, -103.760309)		

Sample ID: SS 05 - 2' (H233727-05)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<2.00	2.00	07/22/2023	ND	1.96	97.9	2.00	0.349	
Toluene*	12.5	2.00	07/22/2023	ND	1.97	98.5	2.00	0.125	
Ethylbenzene*	23.7	2.00	07/22/2023	ND	2.02	101	2.00	0.166	
Total Xylenes*	41.6	6.00	07/22/2023	ND	5.95	99.1	6.00	0.336	
Total BTEX	77.8	12.0	07/22/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2160	16.0	07/21/2023	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	1500	100	07/21/2023	ND	186	93.0	200	3.17	
DRO >C10-C28*	7260	100	07/21/2023	ND	191	95.5	200	3.35	
EXT DRO >C28-C36	1320	100	07/21/2023	ND					

Surrogate: 1-Chlorooctane 218 % 48.2-134

Surrogate: 1-Chlorooctadecane 196 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	07/18/2023	Sampling Date:	07/18/2023
Reported:	07/24/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Shalyn Rodriguez
Project Location:	MAVERICK (32.803715, -103.760309)		

Sample ID: SS 05 - 5' (H233727-06)

BTEx 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/22/2023	ND	1.96	97.9	2.00	0.349	
Toluene*	0.183	0.050	07/22/2023	ND	1.97	98.5	2.00	0.125	
Ethylbenzene*	0.580	0.050	07/22/2023	ND	2.02	101	2.00	0.166	
Total Xylenes*	1.40	0.150	07/22/2023	ND	5.95	99.1	6.00	0.336	
Total BTEX	2.16	0.300	07/22/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 156 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	07/21/2023	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	43.7	10.0	07/21/2023	ND	170	84.8	200	7.89	
DRO >C10-C28*	812	10.0	07/21/2023	ND	183	91.4	200	6.97	QM-07
EXT DRO >C28-C36	157	10.0	07/21/2023	ND					

Surrogate: 1-Chlorooctane 115 % 48.2-134

Surrogate: 1-Chlorooctadecane 154 % 49.1-148

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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

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

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

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum LLC		P.O. #:		BILL TO											
Project Manager: Aimee Cole		Company: Ensolum LLC		ANALYSIS REQUEST											
Address: 3122 Maximal Parks Hwy		Attn: Aimee Cole													
City: Carlsbad		Address:													
State: NM Zip: 88225		City:													
Phone #: 720-384-7305 Fax #:		State:													
Project #: 0372057093 Project Owner:		Zip:													
Project Name: MCA 409 Flowline		Phone #:													
Project Location: 32.863715, -103.760309		Fax #:													
Sampler Name: Boni Hays															
FOR LAB USE ONLY															
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX		PRESERV		SAMPLING			
H233721		SS06-1'		G		1		GROUNDWATER		✓		DATE		TIME	
1		SS06-2'		↓		↓		WASTEWATER		X		7/18/23		930	
2		SS07-1'		↓		↓		SOIL		X		↓		935	
3		SS07-2'		↓		↓		OIL		X		↓		100	
4		SS07-3'		↓		↓		SLUDGE		X		↓		1030	
5		SS05-2'		↓		↓		OTHER:		X		↓		1105	
6		SS05-5'		↓		↓		ACID/BASE:		X		↓		1135	
								ICE / COOL		X					
								OTHER:							
<p>PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.</p>															
Relinquished By: [Signature]		Date: 7/18/23		Received By: [Signature]		Date: 7/18/23		Sample Condition		CHECKED BY: [Signature]		Turnaround Time: Standard		Bacteria (only) Sample Condition	
Relinquished By: [Signature]		Time: 11:23		Received By: [Signature]		Time: 4:08		Cool Intact		(Initials)		Rush		Cool Intact	
Delivered By: (Circle One)		Observed Temp. °C		Corrected Temp. °C		Sample Condition		Cool Intact		CHECKED BY: [Signature]		Thermometer ID #149		Corrected Temp. °C	
Sampler: UPS - Bus - Other:		4.1		4.1		Cool Intact		Cool Intact		[Signature]		#149		Corrected Temp. °C	
<p>Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #:</p> <p>All Results are emailed. Please provide Email address:</p> <p>REMARKS: ace@ensolum.com, falcornata@ensolum.com</p>															

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



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

August 23, 2023

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 409 FLOWLINE

Enclosed are the results of analyses for samples received by the laboratory on 08/22/23 15:30.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	08/22/2023	Sampling Date:	08/22/2023
Reported:	08/23/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Shari Cisneros
Project Location:	MAVERICK (32.803715, -103.760309)		

Sample ID: FS 10 4' (H234557-01)

BTX 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/23/2023	ND	1.88	94.1	2.00	2.98	
Toluene*	1.53	0.050	08/23/2023	ND	2.11	106	2.00	0.793	
Ethylbenzene*	3.33	0.050	08/23/2023	ND	2.16	108	2.00	0.470	
Total Xylenes*	8.09	0.150	08/23/2023	ND	6.53	109	6.00	1.12	
Total BTX	12.9	0.300	08/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 138 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3320	16.0	08/23/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	226	10.0	08/23/2023	ND	199	99.5	200	4.76	
DRO >C10-C28*	2350	10.0	08/23/2023	ND	207	103	200	5.88	
EXT DRO >C28-C36	452	10.0	08/23/2023	ND					

Surrogate: 1-Chlorooctane 112 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	08/22/2023	Sampling Date:	08/22/2023
Reported:	08/23/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Shari Cisneros
Project Location:	MAVERICK (32.803715, -103.760309)		

Sample ID: FS 11 4' (H234557-02)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.220	0.050	08/23/2023	ND	1.88	94.1	2.00	2.98	
Toluene*	5.84	0.050	08/23/2023	ND	2.11	106	2.00	0.793	
Ethylbenzene*	8.48	0.050	08/23/2023	ND	2.16	108	2.00	0.470	
Total Xylenes*	19.5	0.150	08/23/2023	ND	6.53	109	6.00	1.12	
Total BTEX	34.1	0.300	08/23/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1410	16.0	08/23/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	675	10.0	08/23/2023	ND	199	99.5	200	4.76		
DRO >C10-C28*	4310	10.0	08/23/2023	ND	207	103	200	5.88		
EXT DRO >C28-C36	807	10.0	08/23/2023	ND						

Surrogate: 1-Chlorooctane 140 % 48.2-134

Surrogate: 1-Chlorooctadecane 113 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

August 28, 2023

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 409 FLOWLINE

Enclosed are the results of analyses for samples received by the laboratory on 08/22/23 15:00.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	08/22/2023	Sampling Date:	08/22/2023
Reported:	08/28/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Shari Cisneros
Project Location:	MAVERICK (32.803715, -103.760309)		

Sample ID: FS 07 2' (H234568-01)

BTEx 8021B			mg/kg		Analyzed By: JH/				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/25/2023	ND	1.89	94.5	2.00	1.65	
Toluene*	<0.050	0.050	08/25/2023	ND	1.88	94.2	2.00	0.877	
Ethylbenzene*	<0.050	0.050	08/25/2023	ND	1.97	98.3	2.00	1.47	
Total Xylenes*	<0.150	0.150	08/25/2023	ND	5.83	97.1	6.00	0.914	
Total BTEX	<0.300	0.300	08/25/2023	ND					

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

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/24/2023	ND	416	104	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/24/2023	ND	147	73.7	200	2.66	
DRO >C10-C28*	<10.0	10.0	08/24/2023	ND	163	81.5	200	3.18	
EXT DRO >C28-C36	<10.0	10.0	08/24/2023	ND					

Surrogate: 1-Chlorooctane 95.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	08/22/2023	Sampling Date:	08/22/2023
Reported:	08/28/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Shari Cisneros
Project Location:	MAVERICK (32.803715, -103.760309)		

Sample ID: FS 08 2' (H234568-02)

BTEx 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/25/2023	ND	1.89	94.5	2.00	1.65		
Toluene*	<0.050	0.050	08/25/2023	ND	1.88	94.2	2.00	0.877		
Ethylbenzene*	<0.050	0.050	08/25/2023	ND	1.97	98.3	2.00	1.47		
Total Xylenes*	<0.150	0.150	08/25/2023	ND	5.83	97.1	6.00	0.914		
Total BTEX	<0.300	0.300	08/25/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	08/24/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/24/2023	ND	147	73.7	200	2.66	
DRO >C10-C28*	<10.0	10.0	08/24/2023	ND	163	81.5	200	3.18	
EXT DRO >C28-C36	<10.0	10.0	08/24/2023	ND					

Surrogate: 1-Chlorooctane 96.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	08/22/2023	Sampling Date:	08/22/2023
Reported:	08/28/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Shari Cisneros
Project Location:	MAVERICK (32.803715, -103.760309)		

Sample ID: FS 09 2' (H234568-03)

BTEx 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/25/2023	ND	1.89	94.5	2.00	1.65		
Toluene*	<0.050	0.050	08/25/2023	ND	1.88	94.2	2.00	0.877		
Ethylbenzene*	<0.050	0.050	08/25/2023	ND	1.97	98.3	2.00	1.47		
Total Xylenes*	<0.150	0.150	08/25/2023	ND	5.83	97.1	6.00	0.914		
Total BTEX	<0.300	0.300	08/25/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	08/24/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/24/2023	ND	155	77.6	200	1.22	
DRO >C10-C28*	<10.0	10.0	08/24/2023	ND	146	73.1	200	4.25	
EXT DRO >C28-C36	<10.0	10.0	08/24/2023	ND					

Surrogate: 1-Chlorooctane 69.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 73.5 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

August 28, 2023

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 409 FLOWLINE

Enclosed are the results of analyses for samples received by the laboratory on 08/22/23 14:47.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	08/22/2023	Sampling Date:	08/21/2023
Reported:	08/28/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Shalyn Rodriguez
Project Location:	MAVERICK (32.803715, -103.760309)		

Sample ID: FS 01 1' (H234570-01)

BTX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/25/2023	ND	2.09	104	2.00	0.484	
Toluene*	<0.050	0.050	08/25/2023	ND	2.12	106	2.00	0.390	
Ethylbenzene*	<0.050	0.050	08/25/2023	ND	2.07	104	2.00	0.224	
Total Xylenes*	<0.150	0.150	08/25/2023	ND	6.29	105	6.00	0.353	
Total BTX	<0.300	0.300	08/25/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.0 % 71.5-134

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/24/2023	ND	416	104	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/24/2023	ND	155	77.6	200	1.22	
DRO >C10-C28*	<10.0	10.0	08/24/2023	ND	146	73.1	200	4.25	
EXT DRO >C28-C36	<10.0	10.0	08/24/2023	ND					

Surrogate: 1-Chlorooctane 78.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.3 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 08/22/2023
 Reported: 08/28/2023
 Project Name: MCA 409 FLOWLINE
 Project Number: 03D2057093
 Project Location: MAVERICK (32.803715, -103.760309)

Sampling Date: 08/21/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: FS 02 1' (H234570-02)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/25/2023	ND	2.09	104	2.00	0.484	
Toluene*	<0.050	0.050	08/25/2023	ND	2.12	106	2.00	0.390	
Ethylbenzene*	<0.050	0.050	08/25/2023	ND	2.07	104	2.00	0.224	
Total Xylenes*	<0.150	0.150	08/25/2023	ND	6.29	105	6.00	0.353	
Total BTEX	<0.300	0.300	08/25/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.0 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/24/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/24/2023	ND	155	77.6	200	1.22	
DRO >C10-C28*	<10.0	10.0	08/24/2023	ND	146	73.1	200	4.25	
EXT DRO >C28-C36	<10.0	10.0	08/24/2023	ND					

Surrogate: 1-Chlorooctane 77.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.5 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	08/22/2023	Sampling Date:	08/21/2023
Reported:	08/28/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Shalyn Rodriguez
Project Location:	MAVERICK (32.803715, -103.760309)		

Sample ID: FS 03 1' (H234570-03)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/25/2023	ND	2.09	104	2.00	0.484		
Toluene*	<0.050	0.050	08/25/2023	ND	2.12	106	2.00	0.390		
Ethylbenzene*	<0.050	0.050	08/25/2023	ND	2.07	104	2.00	0.224		
Total Xylenes*	<0.150	0.150	08/25/2023	ND	6.29	105	6.00	0.353		
Total BTEX	<0.300	0.300	08/25/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.4 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	432	16.0	08/24/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/24/2023	ND	155	77.6	200	1.22	
DRO >C10-C28*	46.7	10.0	08/24/2023	ND	146	73.1	200	4.25	
EXT DRO >C28-C36	<10.0	10.0	08/24/2023	ND					

Surrogate: 1-Chlorooctane 76.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 08/22/2023
 Reported: 08/28/2023
 Project Name: MCA 409 FLOWLINE
 Project Number: 03D2057093
 Project Location: MAVERICK (32.803715, -103.760309)

Sampling Date: 08/21/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: FS 04 1' (H234570-04)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/25/2023	ND	2.09	104	2.00	0.484		
Toluene*	<0.050	0.050	08/25/2023	ND	2.12	106	2.00	0.390		
Ethylbenzene*	<0.050	0.050	08/25/2023	ND	2.07	104	2.00	0.224		
Total Xylenes*	<0.150	0.150	08/25/2023	ND	6.29	105	6.00	0.353		
Total BTEX	<0.300	0.300	08/25/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.6 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	08/24/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/24/2023	ND	155	77.6	200	1.22	
DRO >C10-C28*	<10.0	10.0	08/24/2023	ND	146	73.1	200	4.25	
EXT DRO >C28-C36	<10.0	10.0	08/24/2023	ND					

Surrogate: 1-Chlorooctane 78.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.7 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	08/22/2023	Sampling Date:	08/21/2023
Reported:	08/28/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Shalyn Rodriguez
Project Location:	MAVERICK (32.803715, -103.760309)		

Sample ID: FS 05 1' (H234570-05)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/25/2023	ND	2.09	104	2.00	0.484	
Toluene*	<0.050	0.050	08/25/2023	ND	2.12	106	2.00	0.390	
Ethylbenzene*	<0.050	0.050	08/25/2023	ND	2.07	104	2.00	0.224	
Total Xylenes*	<0.150	0.150	08/25/2023	ND	6.29	105	6.00	0.353	
Total BTX	<0.300	0.300	08/25/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 92.5 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	08/24/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/24/2023	ND	155	77.6	200	1.22	
DRO >C10-C28*	<10.0	10.0	08/24/2023	ND	146	73.1	200	4.25	
EXT DRO >C28-C36	<10.0	10.0	08/24/2023	ND					

Surrogate: 1-Chlorooctane 76.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.0 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

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

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Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

August 30, 2023

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 409 FLOWLINE

Enclosed are the results of analyses for samples received by the laboratory on 08/24/23 14:23.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	08/24/2023	Sampling Date:	08/24/2023
Reported:	08/30/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Shalyn Rodriguez
Project Location:	MAVERICK (32.803715, -103.760309)		

Sample ID: SS 05 @ 11' (H234610-01)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/28/2023	ND	2.18	109	2.00	2.88		
Toluene*	<0.050	0.050	08/28/2023	ND	2.20	110	2.00	4.36		
Ethylbenzene*	<0.050	0.050	08/28/2023	ND	2.13	106	2.00	3.40		
Total Xylenes*	<0.150	0.150	08/28/2023	ND	6.44	107	6.00	4.73		
Total BTEX	<0.300	0.300	08/28/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 89.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	08/28/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2023	ND	170	85.2	200	3.31	
DRO >C10-C28*	<10.0	10.0	08/28/2023	ND	189	94.3	200	8.70	
EXT DRO >C28-C36	<10.0	10.0	08/28/2023	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 114 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 08/24/2023
 Reported: 08/30/2023
 Project Name: MCA 409 FLOWLINE
 Project Number: 03D2057093
 Project Location: MAVERICK (32.803715, -103.760309)

Sampling Date: 08/24/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: FS 12 @ 4' (H234610-02)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/28/2023	ND	2.18	109	2.00	2.88		
Toluene*	<0.050	0.050	08/28/2023	ND	2.20	110	2.00	4.36		
Ethylbenzene*	<0.050	0.050	08/28/2023	ND	2.13	106	2.00	3.40		
Total Xylenes*	<0.150	0.150	08/28/2023	ND	6.44	107	6.00	4.73		
Total BTEx	<0.300	0.300	08/28/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 90.6 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	08/28/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/28/2023	ND	170	85.2	200	3.31	
DRO >C10-C28*	65.4	10.0	08/28/2023	ND	189	94.3	200	8.70	
EXT DRO >C28-C36	10.3	10.0	08/28/2023	ND					

Surrogate: 1-Chlorooctane 95.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

Cardinal Laboratories

*=Accredited Analyte

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

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

Celey D. Keene, Lab Director/Quality Manager



Insdum LLC

Page 5 of 5



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

August 31, 2023

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 409 FLOWLINE

Enclosed are the results of analyses for samples received by the laboratory on 08/25/23 15:03.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	08/25/2023	Sampling Date:	08/25/2023
Reported:	08/31/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK (32.803715, -103.760309)		

Sample ID: FS 10 A 5' (H234648-01)

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/29/2023	ND	1.85	92.5	2.00	2.93	
Toluene*	<0.050	0.050	08/29/2023	ND	2.15	108	2.00	3.91	
Ethylbenzene*	<0.050	0.050	08/29/2023	ND	2.20	110	2.00	4.28	
Total Xylenes*	<0.150	0.150	08/29/2023	ND	6.56	109	6.00	5.27	
Total BTX	<0.300	0.300	08/29/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/29/2023	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/29/2023	ND	173	86.3	200	0.892	
DRO >C10-C28*	<10.0	10.0	08/29/2023	ND	172	86.0	200	0.0308	
EXT DRO >C28-C36	<10.0	10.0	08/29/2023	ND					

Surrogate: 1-Chlorooctane 80.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.4 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	08/25/2023	Sampling Date:	08/25/2023
Reported:	08/31/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK (32.803715, -103.760309)		

Sample ID: FS 11 A 6' (H234648-02)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/29/2023	ND	1.85	92.5	2.00	2.93		
Toluene*	<0.050	0.050	08/29/2023	ND	2.15	108	2.00	3.91		
Ethylbenzene*	<0.050	0.050	08/29/2023	ND	2.20	110	2.00	4.28		
Total Xylenes*	<0.150	0.150	08/29/2023	ND	6.56	109	6.00	5.27		
Total BTEx	<0.300	0.300	08/29/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	384	16.0	08/29/2023	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/29/2023	ND	173	86.3	200	0.892	
DRO >C10-C28*	<10.0	10.0	08/29/2023	ND	172	86.0	200	0.0308	
EXT DRO >C28-C36	<10.0	10.0	08/29/2023	ND					

Surrogate: 1-Chlorooctane 78.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.8 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	08/25/2023	Sampling Date:	08/25/2023
Reported:	08/31/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK (32.803715, -103.760309)		

Sample ID: FS 06 1' (H234648-03)

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/29/2023	ND	1.85	92.5	2.00	2.93		
Toluene*	<0.050	0.050	08/29/2023	ND	2.15	108	2.00	3.91		
Ethylbenzene*	<0.050	0.050	08/29/2023	ND	2.20	110	2.00	4.28		
Total Xylenes*	<0.150	0.150	08/29/2023	ND	6.56	109	6.00	5.27		
Total BTX	<0.300	0.300	08/29/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	08/29/2023	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/29/2023	ND	173	86.3	200	0.892	
DRO >C10-C28*	<10.0	10.0	08/29/2023	ND	172	86.0	200	0.0308	
EXT DRO >C28-C36	<10.0	10.0	08/29/2023	ND					

Surrogate: 1-Chlorooctane 74.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.7 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

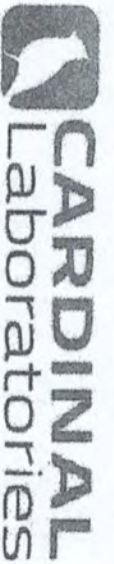
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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC

Project Manager: Ane Cole

Address: 3122 National Parks Hwy

City: Caberd State: NM Zip: 88220

Phone #: 7203847310 Fax #: _____

Project #: 03D057093 Project Owner: Maverick

Project Name: MCA 409 Fluidline

Project Location: 32.803715, -103.7160309

Sampler Name: Roni Hays

FOR LAB USE ONLY

Lab I.D. Sample I.D. Depth (feet)

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.		MATRIX							PRESERV.		SAMPLING		ANALYSIS REQUEST									
			# CONTAINERS		GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	BTEX	TPH	C-							
4834448	FS10A	5'	C	1	X									8/15/23	120	X	X	X							
	FS11A	10'	C	1	X										122	X	X	X							
	FS06	11'	C	1	X										129	X	X	X							

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

Relinquished By: _____ Date: 8-25-23 Received By: _____

Relinquished By: PHH Date: 8-25-23 Received By: Ensolum

Delivered By: (Circle One) Observed Temp. °C: 23 Sample Condition: Cool Intact CHECKED BY: (Initials) PHH

Sampler - UPS - Bus - Other: Corrected Temp. °C: _____

Turnaround Time: _____ Standard _____ Bacteria (only) Sample Condition _____

Thermometer ID #419 #140 Rush _____ Cool Intact _____ Observed Temp. °C _____

Correction Factor 0.55C Yes _____ No _____ Corrected Temp. °C _____

REMARKS: oale@ensolum.com, jpharmat@ensolum.com



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

September 05, 2023

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 409 FLOWLINE

Enclosed are the results of analyses for samples received by the laboratory on 08/29/23 12:45.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 08/29/2023
 Reported: 09/05/2023
 Project Name: MCA 409 FLOWLINE
 Project Number: 03D2057093
 Project Location: MAVERICK 32.803715, -103.760309

Sampling Date: 08/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SW 01 @ 0-4' (H234685-01)

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/30/2023	ND	1.76	87.9	2.00	0.722	
Toluene*	<0.050	0.050	08/30/2023	ND	1.78	89.2	2.00	0.253	
Ethylbenzene*	<0.050	0.050	08/30/2023	ND	1.84	91.9	2.00	1.19	
Total Xylenes*	<0.150	0.150	08/30/2023	ND	5.40	90.0	6.00	2.13	
Total BTEX	<0.300	0.300	08/30/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	08/30/2023	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	08/30/2023	ND	223	112	200	2.90	
DRO >C10-C28*	<10.0	10.0	08/30/2023	ND	222	111	200	0.250	
EXT DRO >C28-C36	<10.0	10.0	08/30/2023	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 118 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 08/29/2023
 Reported: 09/05/2023
 Project Name: MCA 409 FLOWLINE
 Project Number: 03D2057093
 Project Location: MAVERICK 32.803715, -103.760309

Sampling Date: 08/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SW 02 @ 0-4' (H234685-02)

BTX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/30/2023	ND	1.76	87.9	2.00	0.722		
Toluene*	<0.050	0.050	08/30/2023	ND	1.78	89.2	2.00	0.253		
Ethylbenzene*	<0.050	0.050	08/30/2023	ND	1.84	91.9	2.00	1.19		
Total Xylenes*	<0.150	0.150	08/30/2023	ND	5.40	90.0	6.00	2.13		
Total BTX	<0.300	0.300	08/30/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	08/30/2023	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	08/30/2023	ND	188	93.8	200	8.82	
DRO >C10-C28*	24.7	10.0	08/30/2023	ND	195	97.7	200	4.92	
EXT DRO >C28-C36	<10.0	10.0	08/30/2023	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 120 % 49.1-148

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 08/29/2023
 Reported: 09/05/2023
 Project Name: MCA 409 FLOWLINE
 Project Number: 03D2057093
 Project Location: MAVERICK 32.803715, -103.760309

Sampling Date: 08/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SW 03 @ 0-4' (H234685-03)

BTX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/31/2023	ND	1.76	87.9	2.00	0.722		
Toluene*	<0.050	0.050	08/31/2023	ND	1.78	89.2	2.00	0.253		
Ethylbenzene*	<0.050	0.050	08/31/2023	ND	1.84	91.9	2.00	1.19		
Total Xylenes*	<0.150	0.150	08/31/2023	ND	5.40	90.0	6.00	2.13		
Total BTX	<0.300	0.300	08/31/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	08/30/2023	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	08/30/2023	ND	188	93.8	200	8.82	
DRO >C10-C28*	<10.0	10.0	08/30/2023	ND	195	97.7	200	4.92	
EXT DRO >C28-C36	<10.0	10.0	08/30/2023	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 124 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 08/29/2023
 Reported: 09/05/2023
 Project Name: MCA 409 FLOWLINE
 Project Number: 03D2057093
 Project Location: MAVERICK 32.803715, -103.760309

Sampling Date: 08/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SW 04 @ 0-1' (H234685-04)

BTX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/31/2023	ND	1.76	87.9	2.00	0.722		
Toluene*	<0.050	0.050	08/31/2023	ND	1.78	89.2	2.00	0.253		
Ethylbenzene*	<0.050	0.050	08/31/2023	ND	1.84	91.9	2.00	1.19		
Total Xylenes*	<0.150	0.150	08/31/2023	ND	5.40	90.0	6.00	2.13		
Total BTX	<0.300	0.300	08/31/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	08/30/2023	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	08/30/2023	ND	188	93.8	200	8.82	
DRO >C10-C28*	<10.0	10.0	08/30/2023	ND	195	97.7	200	4.92	
EXT DRO >C28-C36	<10.0	10.0	08/30/2023	ND					

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 124 % 49.1-148

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Analytical Results For:

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

Received: 08/29/2023
 Reported: 09/05/2023
 Project Name: MCA 409 FLOWLINE
 Project Number: 03D2057093
 Project Location: MAVERICK 32.803715, -103.760309

Sampling Date: 08/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SW 05 @ 0-1' (H234685-05)

BTX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/31/2023	ND	1.76	87.9	2.00	0.722		
Toluene*	<0.050	0.050	08/31/2023	ND	1.78	89.2	2.00	0.253		
Ethylbenzene*	<0.050	0.050	08/31/2023	ND	1.84	91.9	2.00	1.19		
Total Xylenes*	<0.150	0.150	08/31/2023	ND	5.40	90.0	6.00	2.13		
Total BTX	<0.300	0.300	08/31/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	08/30/2023	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/30/2023	ND	188	93.8	200	8.82	
DRO >C10-C28*	<10.0	10.0	08/30/2023	ND	195	97.7	200	4.92	
EXT DRO >C28-C36	<10.0	10.0	08/30/2023	ND					

Surrogate: 1-Chlorooctane 98.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 115 % 49.1-148

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Analytical Results For:

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

Received: 08/29/2023
 Reported: 09/05/2023
 Project Name: MCA 409 FLOWLINE
 Project Number: 03D2057093
 Project Location: MAVERICK 32.803715, -103.760309

Sampling Date: 08/29/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SW 06 @ 0-2' (H234685-06)

BTX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/31/2023	ND	1.76	87.9	2.00	0.722		
Toluene*	<0.050	0.050	08/31/2023	ND	1.78	89.2	2.00	0.253		
Ethylbenzene*	<0.050	0.050	08/31/2023	ND	1.84	91.9	2.00	1.19		
Total Xylenes*	<0.150	0.150	08/31/2023	ND	5.40	90.0	6.00	2.13		
Total BTX	<0.300	0.300	08/31/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	08/30/2023	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/30/2023	ND	188	93.8	200	8.82	
DRO >C10-C28*	<10.0	10.0	08/30/2023	ND	195	97.7	200	4.92	
EXT DRO >C28-C36	<10.0	10.0	08/30/2023	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 117 % 49.1-148

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Analytical Results For:

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

Received: 08/29/2023
 Reported: 09/05/2023
 Project Name: MCA 409 FLOWLINE
 Project Number: 03D2057093
 Project Location: MAVERICK 32.803715, -103.760309

Sampling Date: 08/29/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SW 07 @ 0-2' (H234685-07)

BTX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/31/2023	ND	1.76	87.9	2.00	0.722		
Toluene*	<0.050	0.050	08/31/2023	ND	1.78	89.2	2.00	0.253		
Ethylbenzene*	<0.050	0.050	08/31/2023	ND	1.84	91.9	2.00	1.19		
Total Xylenes*	<0.150	0.150	08/31/2023	ND	5.40	90.0	6.00	2.13		
Total BTX	<0.300	0.300	08/31/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	08/30/2023	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/30/2023	ND	188	93.8	200	8.82	
DRO >C10-C28*	<10.0	10.0	08/30/2023	ND	195	97.7	200	4.92	
EXT DRO >C28-C36	<10.0	10.0	08/30/2023	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 121 % 49.1-148

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Analytical Results For:

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

Received: 08/29/2023
 Reported: 09/05/2023
 Project Name: MCA 409 FLOWLINE
 Project Number: 03D2057093
 Project Location: MAVERICK 32.803715, -103.760309

Sampling Date: 08/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS 13 @ 6' (H234685-08)

BTEX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/31/2023	ND	1.76	87.9	2.00	0.722		
Toluene*	<0.050	0.050	08/31/2023	ND	1.78	89.2	2.00	0.253		
Ethylbenzene*	<0.050	0.050	08/31/2023	ND	1.84	91.9	2.00	1.19		
Total Xylenes*	<0.150	0.150	08/31/2023	ND	5.40	90.0	6.00	2.13		
Total BTEX	<0.300	0.300	08/31/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	08/30/2023	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/30/2023	ND	188	93.8	200	8.82	
DRO >C10-C28*	<10.0	10.0	08/30/2023	ND	195	97.7	200	4.92	
EXT DRO >C28-C36	<10.0	10.0	08/30/2023	ND					

Surrogate: 1-Chlorooctane 97.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

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Analytical Results For:

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

Received: 08/29/2023
 Reported: 09/05/2023
 Project Name: MCA 409 FLOWLINE
 Project Number: 03D2057093
 Project Location: MAVERICK 32.803715, -103.760309

Sampling Date: 08/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS 14 @ 6' (H234685-09)

BTX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/31/2023	ND	1.76	87.9	2.00	0.722		
Toluene*	<0.050	0.050	08/31/2023	ND	1.78	89.2	2.00	0.253		
Ethylbenzene*	<0.050	0.050	08/31/2023	ND	1.84	91.9	2.00	1.19		
Total Xylenes*	<0.150	0.150	08/31/2023	ND	5.40	90.0	6.00	2.13		
Total BTX	<0.300	0.300	08/31/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	432	16.0	08/30/2023	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/30/2023	ND	188	93.8	200	8.82	
DRO >C10-C28*	91.9	10.0	08/30/2023	ND	195	97.7	200	4.92	
EXT DRO >C28-C36	20.5	10.0	08/30/2023	ND					

Surrogate: 1-Chlorooctane 88.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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Analytical Results For:

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

Received: 08/29/2023
 Reported: 09/05/2023
 Project Name: MCA 409 FLOWLINE
 Project Number: 03D2057093
 Project Location: MAVERICK 32.803715, -103.760309

Sampling Date: 08/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS 15 @ 6' (H234685-10)

BTEx 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/31/2023	ND	1.76	87.9	2.00	0.722		
Toluene*	0.080	0.050	08/31/2023	ND	1.78	89.2	2.00	0.253		
Ethylbenzene*	0.429	0.050	08/31/2023	ND	1.84	91.9	2.00	1.19		
Total Xylenes*	0.915	0.150	08/31/2023	ND	5.40	90.0	6.00	2.13		
Total BTEX	1.42	0.300	08/31/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 126 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1200	16.0	08/30/2023	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	27.6	10.0	08/30/2023	ND	188	93.8	200	8.82	
DRO >C10-C28*	1680	10.0	08/30/2023	ND	195	97.7	200	4.92	
EXT DRO >C28-C36	376	10.0	08/30/2023	ND					

Surrogate: 1-Chlorooctane 93.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Analytical Results For:

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

Received: 08/29/2023
 Reported: 09/05/2023
 Project Name: MCA 409 FLOWLINE
 Project Number: 03D2057093
 Project Location: MAVERICK 32.803715, -103.760309

Sampling Date: 08/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS 16 @ 4' (H234685-11)

BTEx 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/31/2023	ND	1.76	87.9	2.00	0.722		
Toluene*	<0.050	0.050	08/31/2023	ND	1.78	89.2	2.00	0.253		
Ethylbenzene*	<0.050	0.050	08/31/2023	ND	1.84	91.9	2.00	1.19		
Total Xylenes*	<0.150	0.150	08/31/2023	ND	5.40	90.0	6.00	2.13		
Total BTEX	<0.300	0.300	08/31/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	08/30/2023	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/31/2023	ND	188	93.8	200	8.82	
DRO >C10-C28*	<10.0	10.0	08/31/2023	ND	195	97.7	200	4.92	
EXT DRO >C28-C36	<10.0	10.0	08/31/2023	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 124 % 49.1-148

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Analytical Results For:

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

Received: 08/29/2023
 Reported: 09/05/2023
 Project Name: MCA 409 FLOWLINE
 Project Number: 03D2057093
 Project Location: MAVERICK 32.803715, -103.760309

Sampling Date: 08/28/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS 17 @ 4' (H234685-12)

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/31/2023	ND	1.76	87.9	2.00	0.722	
Toluene*	<0.050	0.050	08/31/2023	ND	1.78	89.2	2.00	0.253	
Ethylbenzene*	<0.050	0.050	08/31/2023	ND	1.84	91.9	2.00	1.19	
Total Xylenes*	<0.150	0.150	08/31/2023	ND	5.40	90.0	6.00	2.13	
Total BTEX	<0.300	0.300	08/31/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	08/30/2023	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/30/2023	ND	188	93.8	200	8.82	
DRO >C10-C28*	81.7	10.0	08/30/2023	ND	195	97.7	200	4.92	
EXT DRO >C28-C36	18.3	10.0	08/30/2023	ND					

Surrogate: 1-Chlorooctane 124 % 48.2-134

Surrogate: 1-Chlorooctadecane 144 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

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

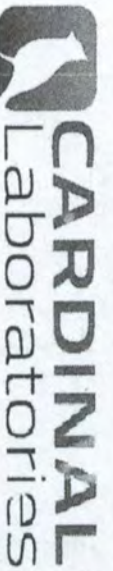
Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF CUSTODY AND ANALYSIS REQUEST

Company Name: FASOLUM LLC Project Manager: FINE COLE Address: 3122 NARROWAL PARKS HWY City: CARLSBAD State: NM Zip: 88226 Phone #: 720 384 7265 Fax #: Project #: 03D2657093 Project Owner: MURIELA Project Name: MCAT 409 FLDLINE Project Location: 32.803715, -103.760304 Sample Name: B. am. + lys				BILL TO P.O. #: A. Fine Cole Company: Attn: Address: City: State: Zip: Phone #: Fax #:													
FOR LAB USE ONLY				ANALYSIS REQUEST													
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	TPH	CI-	BTEX
H234685	SW01 @ 0-4'	C1	1			X							8/28/23	1305			
1	SW02 @ 0-4'													1310			
2	SW03 @ 0-4'													1315			
3	SW04 @ 0-1'													1320			
4	SW05 @ 0-1'													1325			
5	SW06 @ 0-2'													1047			
6	SW07 @ 0-2'													1049			
7	FS13 @ 0-1'													1250			
8	FS14 @ 0-1'													1255			
9	FS15 @ 0-1'													1257			

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Relinquished By:	Date:	Received By:	Date:	Turnaround Time:	Standard	Bacteria (only) Sample Condition
John	8/28/23	Debra	8/28/23		<input checked="" type="checkbox"/> Rush	<input checked="" type="checkbox"/> Bacteria (only) Sample Condition
Relinquished By:	Date:	Received By:	Date:	Thermometer ID #140	<input type="checkbox"/> Cool	<input type="checkbox"/> Intact
				Correction Factor 0°C	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Delivered By: (Circle One)	Observed Temp. °C	Corrected Temp. °C	Sample Condition	CHECKED BY: (Initials)	Turnaround Time:	Standard
Sample - UPS - Bus - Other:	39°C		<input checked="" type="checkbox"/> Cool <input checked="" type="checkbox"/> Intact	Debra		<input checked="" type="checkbox"/> Rush
			<input type="checkbox"/> Yes <input type="checkbox"/> No			<input type="checkbox"/> Bacteria (only) Sample Condition
			<input type="checkbox"/> No <input type="checkbox"/> No			<input type="checkbox"/> Cool <input type="checkbox"/> Intact
						<input type="checkbox"/> Yes <input type="checkbox"/> No
						<input type="checkbox"/> Observed Temp. °C
						<input type="checkbox"/> Corrected Temp. °C

FORM-006 R 3-9-07 11/23

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



CARDINAL
Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

September 08, 2023

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 409 FLOWLINE

Enclosed are the results of analyses for samples received by the laboratory on 09/06/23 13:56.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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: 09/06/2023
 Reported: 09/08/2023
 Project Name: MCA 409 FLOWLINE
 Project Number: 03D2057093
 Project Location: MAVERICK 32.803715, -103.760309

Sampling Date: 09/06/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS 15 A @ 6.25' (H234820-01)

BTX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/07/2023	ND	2.00	99.9	2.00	0.798		
Toluene*	<0.050	0.050	09/07/2023	ND	1.99	99.4	2.00	6.58		
Ethylbenzene*	<0.050	0.050	09/07/2023	ND	2.09	105	2.00	0.404		
Total Xylenes*	<0.150	0.150	09/07/2023	ND	6.18	103	6.00	1.90		
Total BTX	<0.300	0.300	09/07/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	09/07/2023	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/07/2023	ND	184	92.1	200	0.382	
DRO >C10-C28*	<10.0	10.0	09/07/2023	ND	178	89.0	200	2.29	
EXT DRO >C28-C36	<10.0	10.0	09/07/2023	ND					

Surrogate: 1-Chlorooctane 88.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 100 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

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

Celey D. Keene, Lab Director/Quality Manager



ANALYSIS REQUEST

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



APPENDIX E

NMOCD Notifications

From: [Wells, Shelly, EMNRD](#)
To: [Aimee Cole](#)
Cc: [Bratcher, Michael, EMNRD](#); [Velez, Nelson, EMNRD](#)
Subject: RE: [EXTERNAL] Maverick - Sampling Notification (Week of 8/21/2023)
Date: Wednesday, August 16, 2023 12:57:32 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

You don't often get email from shelly.wells@emnrd.nm.gov. [Learn why this is important](#)

[**EXTERNAL EMAIL**]

Good afternoon Aimee,

The OCD has received your notification. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thank you,

Shelly

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

From: Aimee Cole <acole@ensolum.com>
Sent: Wednesday, August 16, 2023 12:42 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Subject: [EXTERNAL] Maverick - Sampling Notification (Week of 8/21/2023)

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

Maverick Permian, LLC plans to complete sampling activities at the following sites the week of August 21, 2023.

- MCA 409 Flowline/ NAPP2318846991
 - Sampling Dates: 8/21/2023 – 8/25/2023
- ABO 3 Battery / nAPP2314448299
 - Sampling Dates: 8/21/2023 – 8/25/2023

Thank you,



Aimee Cole

Senior Managing Scientist

720-384-7365

Ensolum, LLC



From: [Wells, Shelly, EMNRD](#)
To: [Aimee Cole](#)
Cc: [Bratcher, Michael, EMNRD](#); [Velez, Nelson, EMNRD](#)
Subject: RE: [EXTERNAL] Maverick - Sampling Notification (Week of 8/28/2023)
Date: Wednesday, August 23, 2023 3:33:02 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

[**EXTERNAL EMAIL**]

Hi Aimee,

The OCD has received your notification. When reporting sampling at multiple locations it is required to provide the date and time for each location. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thank you,

Shelly

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

From: Aimee Cole <acole@ensolum.com>
Sent: Wednesday, August 23, 2023 1:48 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Subject: [EXTERNAL] Maverick - Sampling Notification (Week of 8/28/2023)

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

Maverick Permian, LLC plans to complete sampling activities at the following sites the week of August 28, 2023.

- MCA 409 Flowline/ NAPP2318846991
 - Sampling Dates: 8/28/2023 – 8/29/2023

- ABO 3 Battery / nAPP2314448299
 - Sampling Dates: 8/28/2023 – 8/29/2023
- Grayburg Eumont Strawn Battery / NAPP2302036818
 - Sampling Dates: 8/28/2023
- MCA 95 / NAPP2306757137
 - Sampling Dates: 8/28/2023 – 9/1/2023
- MCA 301 / NAPP2307558601
 - Sampling Dates: 8/31/2023 – 9/1/2023

Thank you,



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

From: [Wells, Shelly, EMNRD](#)
To: [Aimee Cole](#)
Cc: [Bratcher, Michael, EMNRD](#); [Velez, Nelson, EMNRD](#)
Subject: RE: [EXTERNAL] Maverick - Sampling Notification (Week of 9/4/2023)
Date: Wednesday, August 30, 2023 2:02:54 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

[**EXTERNAL EMAIL**]

Good afternoon Aimee,

The OCD has received your notification. When reporting sampling at multiple locations it is required to provide the date and time for each location. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thank you,

Shelly

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

From: Aimee Cole <acole@ensolum.com>
Sent: Wednesday, August 30, 2023 2:28 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Subject: [EXTERNAL] Maverick - Sampling Notification (Week of 9/4/2023)

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

Maverick Permian, LLC plans to complete sampling activities at the following sites the week of September 4, 2023.

- MCA 409 Flowline/ NAPP2318846991
 - Sampling Date: 9/5/2023
- ABO 3 Battery / nAPP2314448299
 - Sampling Date: 9/5/2023

- Grayburg Eumont Strawn Battery / NAPP2302036818
 - Sampling Date: 9/6/2023
- MCA 301 / NAPP2307558601
 - Sampling Dates: 9/5/2023 – 9/8/2023

Thank you,



Aimee Cole

Senior Managing Scientist

720-384-7365

Ensolum, LLC



From: [Enviro, OCD, EMNRD](#)
To: [Kalei Jennings](#)
Cc: [Bratcher, Michael, EMNRD](#); [Velez, Nelson, EMNRD](#)
Subject: RE: [EXTERNAL] Maverick- Sampling Notification (Week of 7/17/2023)
Date: Friday, July 14, 2023 7:42:46 AM
Attachments: [image005.jpg](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)

[**EXTERNAL EMAIL**]

Kalei,

Notification requirements are **two business days**, per rule. You may proceed on your schedule. This, and all correspondence, should be included in the closure report to ensure inclusion in the project file.

JH

Jocelyn Harimon • Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
<http://www.emnrd.nm.gov>



From: Kalei Jennings <kjennings@ensolum.com>
Sent: Thursday, July 13, 2023 2:05 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Aimee Cole <acole@ensolum.com>
Subject: [EXTERNAL] Maverick- Sampling Notification (Week of 7/17/2023)

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

All,

Maverick Permian, LLC plans to complete sampling activities at the following site the week of July 17, 2023.

- MCA 204 / NAPP2311751602
 - Sampling Date: 7/17/2023 through 07/19/2023

- State F TG #001 / NAPP2233947938
 - Sampling Date: 7/17/2023 & 7/18/2023
- MCA 409 Flowline / NAPP2318846991
 - Sampling Date: 7/17/2023
- SEMU 34 / NAPP2314257831
 - Sampling Date: 7/19/2023 & 7/20/2023

Thank you,



Kalei Jennings

Senior Scientist

817-683-2503

Ensolum, LLC





APPENDIX F Final C-141

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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	NAPP2318846991
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: Maverick Permian, LLC	OGRID: 331199
Contact Name: Bryce Wagoner	Contact Telephone: 928-241-1862
Contact email: Bryce.Wagoner@mavresources.com	Incident # (assigned by OCD)
Contact mailing address: 1410 NW County Road Hobbs, NM 88240	

Location of Release Source

Latitude 32.803715 Longitude -103.760309
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: MCA 409 Flowline	Site Type:
Date Release Discovered : 06/21/2023	API# (if applicable) 30-025-38978

Unit Letter	Section	Township	Range	County
L	27	17S	32E	Lea

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (Name:)

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 5.7	Volume Recovered (bbls) 0.0
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)


Cause of Release
Release was caused by damage to a flowline resulting in approximately 5.7 bbls of crude oil to be released off-pad. No free-standing fluids were recovered. The source of the release has been stopped and the impacted areas have been secured.

Incident ID	NAPP2318846991
District RP	
Facility ID	
Application ID	

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

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Bryce Wagoner</u>	Title: <u>Permian HSE Specialist II</u>
Signature: 	Date: <u>07/05/2023</u>
email: <u>Bryce.Wagoner@mavresources.com</u>	Telephone: <u>928-241-1862</u>
<u>OCD Only</u>	
Received by: <u>Shelly Wells</u>	Date: <u>7/7/2023</u>

Incident ID	NAPP2318846991
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

NAPP2318846991

Pooled Fluids on the Surface										
	Length (ft.)	Width (ft.)	Depth (in)	# of Boundaries <i>*edges of pool where depth is 0. don't count shared boundaries</i>	Oil-Water Ratio (%)	Pooled Area (ft ²)	Estimated Average Depth (ft.)	Pooled Volume (bbl.)	Volume of Oil in Subsurface (bbl.)	Volume of Water in Subsurface (bbl.)
Rectangle A	50.0	40.0	12.0	0.0	0.01	2000.0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle B					0.01	0.0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle C						0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle D						0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Rectangle E						0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Total Volume (bbls):								0.00	0.00	0.00

Subsurface Fluids										
	Length (ft.)	Width (ft.)	Depth (in.)	Saturation (%) <i>*10% in consolidated sediments after rain to 50% in sand with no precipitation</i>	Oil-Water Ratio (%)	Area (ft ²)	Volume (bbl.)	Estimated Volume in Subsurface (bbl.)	Volume of Oil in Subsurface (bbl.)	Volume of Water in Subsurface (bbl.)
Rectangle A	20.0	40.0	6.0	0.1	0.01	800.0	71.2	5.7	0.06	5.6
Rectangle B				0.1	0.01	0.0	0.0	0.0	0.00	0.0
Rectangle C				0.1	0.01	0.0	0.0	0.0	0.00	0.0
Rectangle D				0.1	0.01	0.0	0.0	0.0	0.00	0.0
Rectangle E				0.1	0.01	0.0	0.0	0.0	0.00	0.0
Rectangle F						0.0	0.0	0.0	0.00	0.0
Rectangle G						0.0	0.0	0.0	0.00	0.0
Rectangle H						0.0	0.0	0.0	0.00	0.0
Rectangle I						0.0	0.0	0.0	0.00	0.0
Rectangle J						0.0	0.0	0.0	0.00	0.0
Total Volume (bbls):								5.70	0.06	5.64

TOTAL RELEASE VOLUME (bbls):	5.7
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District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 237291

CONDITIONS

Operator: Maverick Permian LLC 1111 Bagby Street Suite 1600 Houston, TX 77002	OGRID: 331199
	Action Number: 237291
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
scwells	None	7/7/2023

State of New Mexico
Oil Conservation Division

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Incident ID	NAPP2318846991
District RP	
Facility ID	
Application ID	

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

Printed Name: Bryce Wagoner

Title: Permian HSE Specialist

Signature:

Date: 9/19/2023

email: Bryce.Wagoner@mavresources.com

Telephone: 928-241-1862

OCD Only

Received by: _____

Date: _____

Incident ID	NAPP2318846991
District RP	
Facility ID	
Application ID	

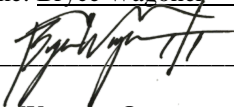
Closure

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

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

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

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

Printed Name: Bryce WagonerTitle: Permian HSE SpecialistSignature: Date: 9/19/2023email: Bryce.Wagoner@mavresources.comTelephone: 928-241-1862

OCD Only

Received by: _____

Date: _____

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

Closure Approved by: Scott Rodgers Date: 01/10/2024Printed Name: Scott RodgersTitle: Environmental Specialist Adv.

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1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 267198

CONDITIONS

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID: 331199
	Action Number: 267198
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
scott.rodgers	None	1/10/2024