ENSOLUM

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 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

Kun Huge

Ronni Hayes Assistant Geologist

Since Cale

Aimee Cole Senior Managing Scientist

ENSOLUM

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 1Soil 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

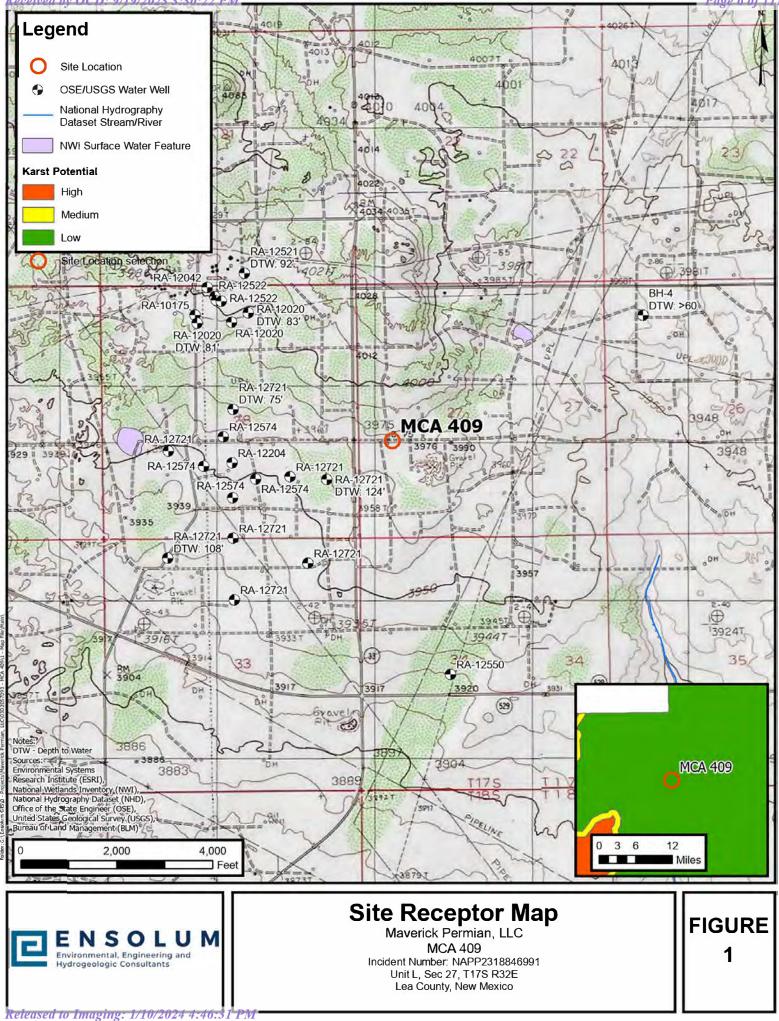


FIGURES

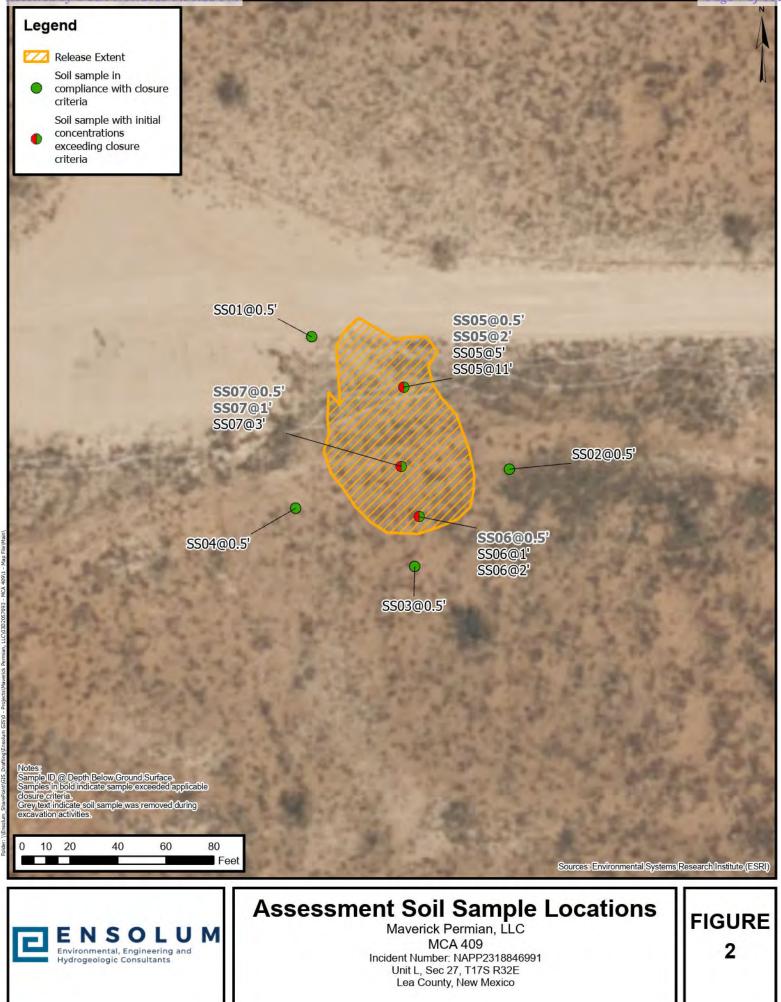
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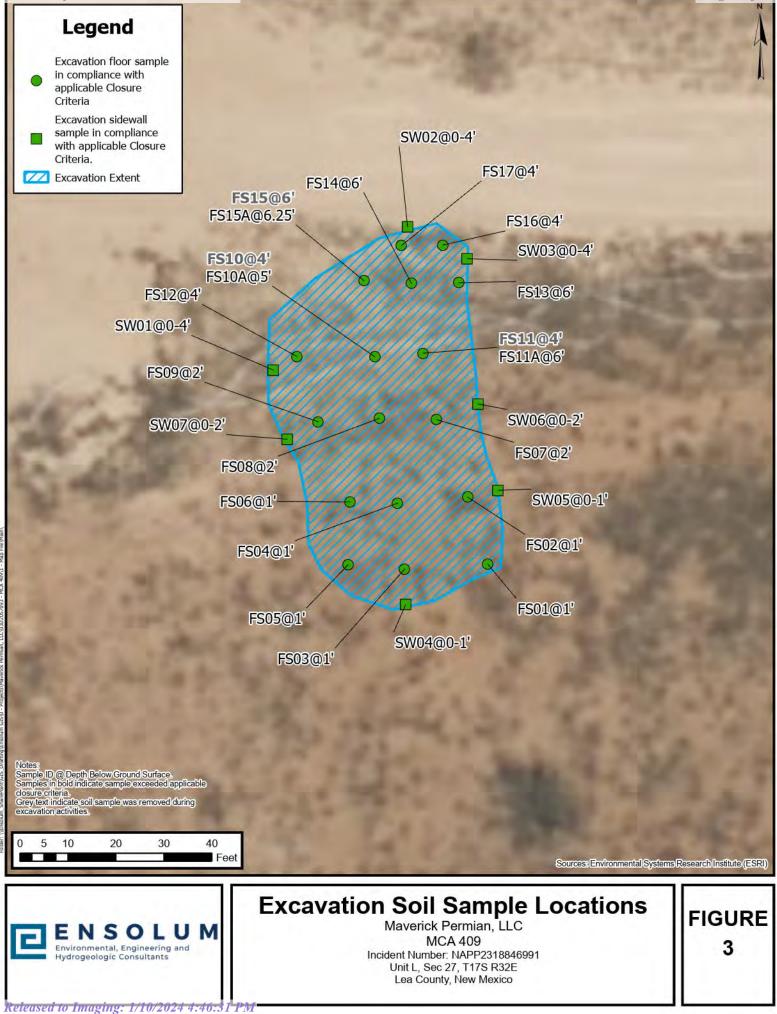
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TABLES

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E N S O L U M

				M Mave	TABLE 1E ANALYTICAICA 409 Flowlinerick Permian, ICounty, New Me	e _LC				
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 Tal	ble I Closure Cri 19.15.29)	teria (NMAC	10	50	NE	NE	NE	1,000	2,500	20,000
				Asse	sment Soil Sam	ples				
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
				Excavat	ion Floor Soil S	amples				
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

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naging:	Sample Designation
1/10/2	NMOCD 1
024	FS11
4:4	FS11A
6:3	FS12
1 P)	FS13
M	FS14
	FS15

				M Mave	E ANALYTICA CA 409 Flowlin erick Permian, L County, New Me	e .LC				
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 Tal	ble I Closure Cri 19.15.29)	teria (NMAC	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
				Excavatio	n 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

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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

			· •				E 3=SW						
			· ·				largest)		(NAD83				
Well Tag	POE) Number	Q64 (Q16 Q	<u>)</u> 4	Sec	Tws	Rng	Х	K	Y		
NA	RA	12721 POD5	2	4	4	28	17S	32E	615650) 36	529961	6	
x Driller Lic	ense:	1456	Driller	Comp	anj	y:	WE	ITE DF	RILLING (COMP	ANY		
Driller Na	me:	WHITE, JOHNN	IOWN.GEN	ER									
Drill Start	Date:	04/27/2020	Drill Fi	nish I	Date	e:	04	1/28/202	20 F	Plug D	ate:		
Log File D	ate:	05/18/2020	PCW R	lcv Da	te:				S	Source	:	S	Shallow
Pump Type:		Pipe Di	Pipe Discharge Size:					ŀ	Estima	ted Yi	eld:		
Casing Siz	æ:	2.00	Depth V	Depth Well:			1.	30 feet	Ι	Depth	Water	: 1	24 feet
X	Wate	er Bearing Stratif	fications:		To	рŀ	Bottom	Desci	ription				
					10	9	121	Sands	stone/Grav	el/Cor	nglome	erate	
					12	1	125	Sands	stone/Grav	el/Cor	nglome	erate	
					12	5	130	Sands	stone/Grav	vel/Cor	nglome	erate	
X		Casing Per	forations:		Toj	рŀ	Bottom						
					9	0	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.

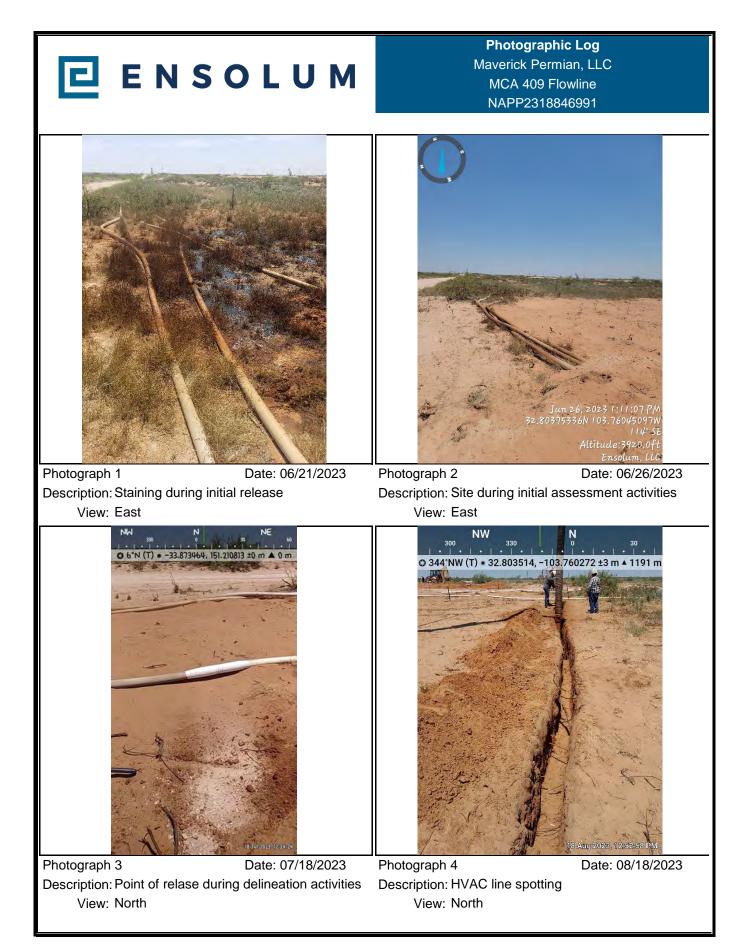
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POINT OF DIVERSION SUMMARY



APPENDIX B

Photographic Log





Photographic Log Maverick Permian, LLC MCA 409 Flowline NAPP2318846991



Photograph 5 Date: 08/21/2023 Description: Excavation activities View: East



Photograph 6 Date: 08/22/2023 Description: Excavation activities View: East



View: South

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View: Southeast



APPENDIX C

Lithologic Soil Sampling Logs

	_							Sample Name: SS05	Date: 8/24/2023			
								Site Name: MCA 409 Flowline				
) () L	U		Incident Number: NAPP2318846	5991			
								Job Number: 03D2057093				
	Lľ	THOLOG		SOIL SAN	IPLING LO	G		Logged By: Ronni Hayes	Method: Trackhoe			
Coordinat	tes: 32.80367					-		Hole Diameter: ~3'	Total Depth: 11 ft bgs			
					I Chloride Te	st Strips and	PID for cl	hloride and vapor, respectively. C				
	on factor of s											
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 - 1	SP-SM	SAND, very fine to fine, reastrong odor, noncohesive	ddish brown, no stain,			
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, dark red, no staining, stror	-			
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 odor, some cohesiveness,	-			
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				

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								Sample Name: SS06	Date: 7/18/2023
			NI	C	ΟΙ			Site Name: MCA 409 Flowline	
				3				Incident Number: NAPP231884	6991
								Job Number: 03D2057093	
		LITHOL	OGI	C / SOIL S		LOG		Logged By: Ronni Hayes	Method: Hand auger
				3.7603195				Hole Diameter: ~4"	Total Depth: 2
								PID for chloride and vapor, resp factor included.	ectively. Chloride test
Moisture	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic D	Descriptions
	<173.8		N	SS06 SS06				SAND, very fine to fine, re no odor, noncohesive SAA	eddish brown, no stain,
					-	_		TD at 2 ft bgs	

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							Sample Name: SS07	Date: 7/18/2023
		NI	C	ΟΙ			Site Name: MCA 409 Flowline	
			3				Incident Number: NAPP231884	46991
							Job Number: 03D2057093	
				SAMPLING	i log		Logged By: Ronni Hayes	Method: Hand auger
Coordinates: 3							Hole Diameter: ~4"	Total Depth: 3 ft bgs
							PID for chloride and vapor, responder for chloride and vapor, responder for the second s	pectively. Chloride test
Moisture Content Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic I	Descriptions
Dry 448	2.3	N	SS07	1 - 1 -		SP-SM	SAND, very fine to fine, r small odor, noncohesive	eddish brown, no stain,
Dry <173.8	3 1.5	N	SS07	2	2	SAA	SAA	
Dry <173.8	0.7	N	SS07	3 _	3	SP-SM	SAND, very fine to fine, r no odor, noncohesive	nedium brown, no stain,
				-	-		TD at 3 ft bgs	



APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation



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/ga/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



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 01 0.5' (H233337-01)

BTEX 8021B	mg/	′kg	Analyze	d 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 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/29/2023	ND	352	88.0	400	12.8	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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 9	48.2-13	4						
Surrogate: 1-Chlorooctadecane	125 9	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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 02 0.5' (H233337-02)

BTEX 8021B	mg,	/kg	Analyze	d 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 9	% 71.5-13	4						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	06/29/2023	ND	352	88.0	400	12.8	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	116 9	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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 03 0.5' (H233337-03)

BTEX 8021B	mg	/kg	Analyze	d 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	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/29/2023	ND	352	88.0	400	12.8	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	113 9	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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 04 0.5' (H233337-04)

BTEX 8021B	mg,	′kg	Analyze	d 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	113 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/29/2023	ND	352	88.0	400	12.8	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	111 9	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C

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

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

Project Manager: Address: SIZ Phone #: Project Name: Project Location: Sampler Name: Sampler Name: For use ONLY For USE ONLY For USE ONLY AD3 3337	101 East) (575) 39 Company Name: Ensjolum,
Sample I.D.	Maria 3-23
State: 1/1/1/21 Fax #: Project Owner: 1 Flow Uning Flow Uning	26 FAX (575) 393-2476
GROUNDWATER WASTEWATER OIL SLUDGE	
P.O. #: Company: Address: City: State: Phone #: Phone #: Preserv ACID/BASE: ICE / COOL OTHER : ACID/BASE: ICE / COOL ICE /	1111111111111111111111111111111111111
TIME BTEX	0
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	ANALYSIS REQ
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	** Multillings P.0. #: Althou Sample I.D. Fax #: Multillings Fax #: Address: MUA HOH Flow Fax #: Address: Fax #: MUA HOH Flow Flow Address: Fax #: MUA HOH Flow Flow Address: Fax #: MUA HOH Flow Fax #: Fax #: Fax #: MUA HOH Flow Fax #: Fax #: Fax #: MUA HOH Fax #: Fax #: Fax #: Fax #: MUA HATSH MATRX PRESERV Samplane MATR MATRX PRESERV Samplane MUA HATSH MATRX PRESERV Samplane MATR MATRX PRESERV Samplane MATR MATRX PRESERV Samplane MATR MATRX PRESERV Samplane MATR MATR M

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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.

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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,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



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	Analyze	d 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	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2760	16.0	06/29/2023	ND	352	88.0	400	12.8	
TPH 8015M	mg	/kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	195	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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 06 0.5' (H233338-02)

BTEX 8021B	mg/	kg	Analyze	d 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 BTEX	<0.300	0.300	06/29/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	111 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1280	16.0	06/29/2023	ND	352	88.0	400	12.8	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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 9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	123 9	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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 07 0.5' (H233338-03)

BTEX 8021B	mg	/kg	Analyze	d 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 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	145	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager

PLEASE NOTE: Liability and Damages. Calcinatis liability and clients encline analyses. All claims including down for medigance and any other cause with analyses or successors which code of related to incidental or conceptional and analyses or successors which code of a related to incidental or conceptional and calcine or successors which code of a related to the performance of service Relinquished By: Relinquished By: Delivered By: (Circle One) Delivered By: (Circle One) Conception No.2.10001121	Project Manager: MALL A Address: SIZ Not I A Phone #: Project Name: MALA 409 Project Location: SL 4413 Sampler Name: MALA 409 FOR V& VALA 409 FOR V& SAMPLE I.D. Lab I.D. Sample I.D. 423338 5006 2 5506	101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476
Carrows Temp. "CO. 41: Cool Intact Corrector Temp. "CO. 41: Cool Intact Cool Intact Turnal No	Fax #: Project Owner: Project Owner: Projec	Aboratories Aboratories 11 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476
ave remark for any dam subject whethe based in contract or bit shall be lained to be amount paid by the cleric for the advect shall be lained to be amount paid by the cleric for the advect shall be lained to be amount paid by the cleric for the advect shall be lained to be amount paid by the cleric for the advect shall be lained to be amount paid by the cleric for the advect shall be lained to be amount paid by the cleric for the advect shall be lained to be amount paid by the cleric for the advect shall be lained to be amount paid by the cleric for the advect shall be lained to be amount paid by the cleric for the advect shall be lained to be amount paid by the cleric for the advect shall be lained to be amount paid by the cleric for the advect shall be lained to be amount paid by the cleric for the advect shall be lained to be amount paid by the cleric for the advect shall be lained to be amount paid by the cleric for the advect shall be lained to be amount paid by the cleric for the advect shall be lained to be amount paid by the cleric for the advect shall be lained to be amount paid by the cleric for the advect shall be lained to be amount paid by the cleric for the advect shall be lained to be amount paid by the cleric for the advect shall be anount paid by the cleric for the advect shall be anount paid by the cleric for the advect shall be amount paid by the cleric for the advect shall be amount paid by the cleric for the advect shall be amount paid by the cleric for the advect shall be amount paid by the cleric for the advect shall be an advect shall be lained to paid by the cleric for the advect shall be an advect shall be an advect advect shall be an advect advect shall be an advect shall be advect shall be an advect shall be an advect shall be an advect shall be advect shall be advect shall be an advect shall be advect shall be anvecle for the advect shall be advect shall be a	RESERV VICE / COOL OTHER : Zip: Zip: A.A.	CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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Page 6 of 6



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/ga/lab_accred_certif.html.

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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,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



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)

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	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<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 % 48.2-13		4						
Surrogate: 1-Chlorooctadecane	129	% 49.1-14	0						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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	Analyze	d 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	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/21/2023	ND	432	108	400	3.77	
TPH 8015M	mg,	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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 9	48.2-13	4						
Surrogate: 1-Chlorooctadecane	136	% 49.1-14	8						

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*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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	Analyze	d 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	% 71.5-13	4						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	07/21/2023	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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	48.2-13	4						
Surrogate: 1-Chlorooctadecane	132	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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)

BTEX 8021B	mg/	′kg	Analyze	d 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 BTEX	<0.300	0.300	07/22/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	109 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	07/21/2023	ND	432	108	400	3.77	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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 9	48.2-13	4						
Surrogate: 1-Chlorooctadecane	132 9	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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	Analyze	d 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	% 71.5-13	4						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2160	16.0	07/21/2023	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	196	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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	Analyze	d 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	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	07/21/2023	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	d By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	154	% 49.1-14	8						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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 SM4500CI-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

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager

Received by OCD: 9/19/2023 3:30:22 PM

BILL TO BILL TO ANALYSIS RE At Hung F0.8 F1.1 F0.8 Bit Hung Company: Evision Address: Company: Evision Bit Hung Address: Chip: Address: Bit Hung Chip: State: Zip: Bit Hung Chip: State: Zip: Bit Hung Chip: State: Zip: Bit Hung Chip: Fill State: Zip: Bit Hung Bit Hung Bit Hung Bit Hung Bit Hung Bit Hung

Released to Imaging: 1/10/2024 4:46:31 PM



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/ga/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



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)

BTEX 8021B	mg	/kg	Analyze	d By: JH					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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 BTEX	12.9	0.300	08/23/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	138	% 71.5-13	4						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3320	16.0	08/23/2023	ND	416	104	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	104	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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	Analyze	d 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	% 71.5-13	4						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1410	16.0	08/23/2023	ND	416	104	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	113	% 49.1-14	8						

Cardinal Laboratories

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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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Celey D. Keene, Lab Director/Quality Manager

		the second secon							
	(575) 393-2326 FAX (575) 393-2476	AX (575) 393-2	476						
Company Name: Ensolum, LLC	: Ensolum, LLC			in the second	BILL TO			ANALYSIS REQUEST	
Project Manager: Aimee Cole	r: Aimee Cole			P.O. #:	Aimee (s En	Ensolum	_		
Address: 3122 N	Address: 3122 National Parks Hwy			Company: BTA Oj					
City: Carlsbad		State: NM	Zip: 88220	Attn: Kevin Jones	n Jones				-
Phone #: 720-384-7365	4-7365	Fax #:		Address:	Address: 104 S Pecos St				-
Project #:03D2057093	57093	Project Owner: Maverick	r: Maverick	City: Midland	und				
Project Name: I	Project Name: MCA 409 Flowline			State: Tex	State: Texas Zip: 79701				
Project Location	Project Location:32.803715, -103.760309	309		Phone #: 4	Phone #: 432-312-2203				
Sampler Name: Ronni Hayes	Ronni Hayes			Fax #:					
FOR LAB USE ONLY			MATRIX	RIX PRESERV.	RV. SAMPLING	G	-		
Lab I.D. Ha 34557	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL	OIL SLUDGE OTHER : ACID/BASE: ICE / COOL	OTHER :	BTEX	TPH CI-		
2	1510	4.	1	X	22/22/8	× 229	XX		
ف	FSII	Ч.	C - x	×		× 4201	X		
PLEASE NOTE: Liability an analyses. All claims includin socies in no event shall Ca	PLEASE NOTE: Lability and Damages. Cardina's lability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount; pad by the client for the analyses. All claims including those for negligeness and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardina within 30 days after completion of the applicable services in the value of the soft for the value of the soft or the soft incurred by Cardina within 30 days after completion of the applicable services in the value of the soft of the for the value of the soft of the soft incurred by Cardina within 30 days after completion of the applicable services in the value of the soft of the for the value of the soft of the soft of the soft of the value of the soft of the formed by the client is subdidinities.	lient's exclusive remedy for a r cause whatsoever shall be environted damagese includin	Iny claim arising whether based deemed waived unless made in a whork limitation business inte	in contract or tort, shall be limit writing and received by Cardle rruntions loss of use or loss	ted to the amount paid by the amount paid by the amount paid by the amount paid by the second by client to the second by the secon	e client for the pletion of the applicable ts subsidiaries			
Arfiliates or successors arising Relinquished By: Relinquished By:	Relinquished By:	e of services hereunder by Bate: Date:	e: Received By: Working State (results of the above stated resons or otherwise Part 20/23 State Received By: Working State (resons or otherwise) Received By: Working State (resons or otherwise) Received By: Received By: Remarks	WARDAW	of the above stated reasons Ve All RE	All Result: DY All Result: DY All Results are emailed CO PO CHS REMARKS:	12 Yes I No nailed. Please pro	verbal Result: □ Yes □ No Add'I Phone #: All Results are emailed. Please provide Email address: a. a) e@ ensylum . am j pullomatry @ ensylum . (b)m REMARKS:	6m
		Time:							

Received by OCD: 9/19/2023 3:30:22 PM

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

Observed Temp. °C

Ter

....l.02

Sample Condition Cool Intact Yes Yes No No No

CHECKED BY:

Thermometer ID #N3 Correction Factor -0.5

Rush ZYW Standard

Bacteria (only) Sample Condition Cool Intact Observed Temp. °C Ves Yes Nc No Corrected Temp. °C

Z

Turnaround

Time

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

Page 5 of 5

Page 48 of 111

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



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/ga/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



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	Analyze	d 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 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/24/2023	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	109	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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	Analyze	d 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 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/24/2023	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	109	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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	Analyze	d 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 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	08/24/2023	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	73.5	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager

Received by OCD: 9/19/2023 3:30:22 PM

Delivered By: (Circle One) Sampler - UPS - Bus - Ott	Relinquished By	PLEASE NOTE: Liability and analyses. All claims including astrice. In no event shall Can astrate or surcesors arking	we-	Lab I.D.	Sampler Name: Ronni Hayes	Project Location	Project Name: N	Project #:03D2057093	Phone #: 720-384-7365	City: Carlsbad	Address: 3122 N	Project Manager: Aimee Cole	Company Name: Ensolum, LLC	
ner:		nd Damages, Cardinal's liability and c ing those for negligence and any othe sardnal be faither for incidental or cons	FS08 FS08	Sample I.D.	Ronni Hayes	Project Location:32.803715, -103.760309	Project Name: MCA 409 Flowline	57093	4-7365		Address: 3122 National Parks Hwy	: Aimee Cole	Ensolum, LLC	aboratories 101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476
Observed Temp. °C Corrected Temp. °C/,	Time:	lient's anclusive remedy for any claim arising v r cause whotsoever remedy for any claim arising v r cause whotsoever remed be deemed waived u exported thermodic by Cardinal, repardie	4.4.4	Depth (feet)		0309	-	Project Owner: Maverick	Fax #:	State: NM			the local and	ADOLATOLIES 11 East Marland, Hobbs, NM 88240 1575) 393-2326 FAX (575) 393-2476
Sample Condition	Received By: Received By:	claim arsing whether based in cor emed waived unless made in write without limitation, business interruption (drink), reparties on whether write (drink), reparties on whether write)	× × ×	G) (G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL				er: Maverick		Zip: 88220				8240 2476
a Temp. °C Sample Condition CHECKED BY: Turnaround Time: Standard Base a Temp. °C Cool Intext (Initials) Thermometer ID Rush Cool a Temp. °C No No No Cool Cool Cool Cardinal cannot constructed to the construction No No Cool Cool	LANDA STREADOW SALE	PLEASE NOTE: Labelity and Damages. Cardinar's labelity and client's exclusive remedy for any claim ansing whether based in contract or tort, shall be limited to the annult pad by the client for the analyses. All claims including those for negligence and any other cause whitedower thall be deemed waived unless made in writing and received by Cardinal be liable for incidental or consequential damages. Including whose writing and received by Cardinal writin 30 days after completion of the applicable service. In one event shall Cardinal be liable for incidental or consequential damages. Including whose writing and received by Cardinal writin 30 days after completion of the applicable service. In one event shall Cardinal be liable for incidental or consequential damages. Including writing the set integration of the applicable service.	××× ×××	SLUDGE OTHER : ACID/BASE: ICE / COOL OTHER :		Phone #: 432-312-2203	State: Texas Zip: 79701	City: Midland	Address: 104 S Pecos St	Attn: Kevin Jones	Company: BTA Oil	P.O. #: ATACE	BILL	
Turnaround Time:	All Result: Yes All Results are emailed. I O.C. e.O. e.O. e.O. J. Yes REMARKS:	ount paid by the client for the applicable and the applicable and the applicable red by client, its subsidiaries.	\$ 1030 X	DATE TIME TPH		2-2203	0: 79701		Pecos St	es			1 70	CHAIN-OF
Rush Rush	Please prov			BTEX Cl-										F-CUSTOD
icteria (only) S ol Intact Yes Yes	Add'I Phone #: ide Email address: the Compart @ on Schulm ; (c) a											ANALYSIS RE		-CUSTODY AND ANALYSIS REQUEST
Sample Condition Observed Temp. °C	r 1 (b) 1 m						_	_	•			REQUEST		YSIS REQ



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/ga/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



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)

BTEX 8021B	mg/	′kg	Analyze	d 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	95.0	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/24/2023	ND	416	104	400	0.00	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	83.3	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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 02 1' (H234570-02)

BTEX 8021B	mg,	/kg	Analyze	d 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	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/24/2023	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	79.5	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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	Analyze	d 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	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	08/24/2023	ND	416	104	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	79.4	% 49.1-14	8						

Cardinal Laboratories

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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 04 1' (H234570-04)

BTEX 8021B	mg,	/kg	Analyze	d 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	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/24/2023	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	79.7	% 49.1-14	8						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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)

BTEX 8021B	mg/	/kg	Analyze	d 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	92.5	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/24/2023	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	78.0	% 49.1-14	8						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

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 whatscever 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 whose 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 whose site to the services interruptors, loss of profits incurred by client, its subsidiaries, afflictes or successor arising out of or related to 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.

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager

101 East Marland, Hobbs, NM 88240 ator Ies

Company Name: Ensolum, LLC	Ensolum, LLC			BILL	10		P	ANALYSIS REQUEST
Project Manager: Aimee Cole	Aimee Cole			P.Q. #: A: Mec	(SEnsolum		_	
Address: 3122 Na	Address: 3122 National Parks Hwy			Company: BTA Oil	-			
City: Carlsbad		State: NM	Zip: 88220	Attn: Kevin Jones	ŭ			
Phone #: 720-384-7365	1-7365	Fax #:		Address: 104 S Pecos St	ecos St	-		
Project #:03D2057093	7093	Project Owner: Maverick	r: Maverick	City: Midland				
Project Name: M	Project Name: MCA 409 Flowline			State: Texas Zip: 79701	79701		_	
Project Location:	Project Location:32.803715, -103.760309	309		Phone #: 432-312-2203	2-2203			
Sampler Name: Ronni Hayes	Ronni Hayes			Fax #:				-
FOR LAB USE ONLY			MATRIX	PRESERV.	SAMPLING			
Lab I.D.	Sample I.D.	Depth (feet)	AB OR (C)OMP NTAINERS UNDWATER TEWATER	ER : COOL ER :		TPH BTEX	CI	1
H234570	- Chi	1.	GRO WA SOI	ACI ACI ICE OTH		+		
	1021	1.	C X	x 8/.	8/21/23 1130	XX	×	
2	F502	. 1 .			Shill I		-	
w	1203	. (1			1218			
4	host	1			1240			
S	FS05	1			132	AA	A	
		1,	*	4	6			
LEASE NOTE: Liability and nalyses. All claims including	Damages, Cardinal's liability and ci those for negligence and any other	ent's exclusive remedy for a cause whatsoever shall be	PLEASE NOTE: Labelity and Damages. Cardinal's labelity and client's exclusive remedy for any claim nising whether based in contract or fort, shall be limited to the amount paid by the client for the analyse. All claims including those for negligence and any other cause whateoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable	ct or fort, shall be limited to the a	mount paid by the client for I	he applicable		
Relinquished By:	Relinquished By:	Parte: Pa	Or services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwate Party Parties, Parties, Party Par	d By:	All Results are	Result: Ves Vesult: Ves Vesult: Ves	Yes I No Ac ed. Please provide	Sons or otherwise.

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

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

Corrected Temp. °C

Sample Condition Cool Intact Tes Pres

CHECKED BY: (Initials) ١

Turnaround Time:

Standard

Correction Fester B.5% + UT

Time:

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

DD



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/ga/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



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	Analyze	d 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	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/28/2023	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	114 9	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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: FS 12 @ 4' (H234610-02)

BTEX 8021B	mg,	/kg	Analyze	d 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	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	08/28/2023	ND	432	108	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	109	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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 SM4500CI-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

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager

$\begin{array}{c c} 393-2326 \ \mbox{FAX (57)} \\ \label{eq:standard} e$	Sample Contract of the state	393-2326 FAX (576) 393-2476 Iver Gradies BILL TO Iver Gradies Pole State: Typ: Gradies TSUS Fax #: Address: Hould Rule Typ: Gradies State: Typ: Gradies Hould Rule Typ: Gradies State: Typ: Gradies Hould Rule Fax #: Address: Hould Rule Fax #: Address: Hould Rule Fax #: Address: Hould Rule Fax #: Fax #: Hould Rule Fax #: Fax #: Sample I.D. Gradies Fax #: Gradies Gradies Fax #: Sample I.D. Gradies Fax #: Sample I.D. Gradies Fax #: Gradies Gradies Fax #: Sample I.D. Gradies Fax #: Sample I.D. Gradies Fax #: Sample I.D. Gradies Fax #: Gradies Gradies Fax #: Sample Condition Sample Condition Cicic Fax #: Time: Time: Fax #: Fax #: Time: Famble Condition	Sample LD. Slut: To Slut: To Company: Exclusion Company: Exclusion <th>PLEASE NOTE: Liability and Damages, Cardina analyses. All claims, including those for negligen service. In no event shall, Cardina the liable for in antifiates or surcessors arising out of or related to Relinquished By: Relinquished By: Delivered By: (Circle One) Sampler - UPS - Bus - Other:</th> <th> يە</th> <th>Lab I.D.</th> <th>Sampler Name:</th> <th>Project Location:</th> <th>Project #: MUA</th> <th>Phone #: 770-</th> <th>city: Carlobus</th> <th>Address: 3122</th> <th>Project Manager:</th> <th>Company Name:</th>	PLEASE NOTE: Liability and Damages, Cardina analyses. All claims, including those for negligen service. In no event shall, Cardina the liable for in antifiates or surcessors arising out of or related to Relinquished By: Relinquished By: Delivered By: (Circle One) Sampler - UPS - Bus - Other:	يە	Lab I.D.	Sampler Name:	Project Location:	Project #: MUA	Phone #: 770-	city: Carlobus	Address: 3122	Project Manager:	Company Name:
Z476 BILL TO Zip: C6/20 Atm: Zip: C6/20 Atm: Address: Atm: Atm: Address: Phone #: State: Zip: MATRIX PRESERV. SA Phone #: Phone #: Phone #: Phone #: Yes Solil Oil State: Zip: Original Address: Value Preservic SA Proved By: X Oil Date Received By: X Oil Sample Condition Cool. Intack Keck Poil Cool. Intack Cool. Intack	P.O. #: Company: Evidual Attn:: Aiwe Git Attn:: Aiwe Git State: Zip: Phone #: Phone #: Ph	BILL TO P.O. #: Company: Exclusion Company: Exclusion Address: Dance Phone #: Phone #: Phone #: Particle Prove Company: Exclusion Address: Phone #: Phone #: Particle Particle Particle Prove	BILL TO ANA P. 0. #: Company: Company: Exident LLC Address: Phone #: Phone #: Phone #: Phone #: Phone #: Pax #: Salue: Zip: Phone #: Phone #: Phone #: Pax #: Phone #: Pax #: Phone #: Phone #: Phone #:	rdinal's liability and client's exclusiv ligence and any other cause what for incidential or consequential dan ad to the performance of services Pate: Date: Date: Date: Time: Corrected	81	Sample I.D.	in teller	903715 -103 -	HUA Flowline A	C9<1-185	S	Partus	0	Ensolum LUC
BILL To P.O. #: Company: Exclose Attn: Attn: Address: City: State: Ice Phone #: Fax #: PRESERV: SAI ACID/BASE: ICE / COOL State: ICE / COOL STOTHER: PRESERV: SAI Contract, shall be limited to the amount from rowed by Condinal within 30 days a not newed by Condinal within 30 days a not newed upon any of the above stated by mit beau upon any of the above stated by Condinal within 30 days a not newed upon any of the above stated by Condinal within 30 days a not newed upon any of the above stated by Condinal within 30 days a not newed upon any of the above stated by Condinal within 30 days a not newed upon any of the above stated by Condinal within 30 days a not newed upon any of the above stated by Condinal within 30 days a not newed upon any of the above stated by Condinal within 30 days a not newed upon any of the above stated by Condinal within 30 days a not new of the above stated by Condinal within 30 days a not newed upon any of the above stated by Condinal within 30 days a not new of the above stated by Condinal within 30 days a not new of the above stated by Condinal within 30 days a not new of the above stated by Condinal within 30 days a not new of the above stated by Condinal within 30 days a not new of the above stated by Condinal within 30 days a not new of the above stated by Condinal within 30 days a not new of the above stated by Condinal within 30 days a not new of the above stated by Condinal within 30	BILL TO P.O. #: Company: Exclusion Attn: A. Ince G. B. Address: Zip: Phone #: Fax #: PRESERV. SAMPLING OTHER: DATE ICE / COOL: BIE/ DATE TIME BIE/ DATE Reserv. SAMPLing ACID/BASE: DATE ICE / COOL: BIE/ DATE TIME BIE/ DATE Tumarount paid by floatent for the of ports incounts paid by floatent for the of ports incound by client, is subsidiaries, mis based upon any of the above staller completion of the subsidiaries, mis based upon any of the above staller completion of the subsidiaries, mis based upon any of the above staller completion of the subsidiaries, mis based upon any of the above staller completion of the results are employed above the subsidiaries, mis based upon any of the above staller completion of the results are employed above the above staller completion of the results are employed above the a	Rush Rush	ANA TPH X X TPH X X TPH X X CI- Standard Man July Man Gan July Man Gan July Man Gan July Man	r any claim arising whether based in contra be deemed waiwed whether based in contra ing without fination, business interruption Professi, regardless of whether such claim Received By: Received By: Received By:		# CONTAINERS GROUNDWATER WASTEWATER SOIL OIL		369			Zip: 48020	Chant		
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Page 67 of 111



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/ga/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



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)

BTEX 8021B	mg	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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	102	% 71.5-13	4						
Chloride, SM4500Cl-B mg/kg			Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/29/2023	ND	432	108	400	3.64	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	83.4	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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	Analyze	d 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	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	08/29/2023	ND	432	108	400	3.64	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	81.8	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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)

BTEX 8021B	mg/	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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	103 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	08/29/2023	ND	432	108	400	3.64	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	76.7	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C

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

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

IOT East Martand, Hobbs, NIP 88240 IS FAX (675) 393-2476 IS association of the second of	Milarland, Hobbs, NMI 88240 93-2326 FAX (575) 333-2476 State: MIL TO Company: State: TOG3 Project Owner: M.Ve/JA. City: State: Zip: Depth Depth Received Ite I.D. Depth (feet) Ite I.D. Depth Ite I.D.	Maranard, Hobbs, NMI 88240 93-2326 FAX (575) 333-2476 State: Diff. To State: State: M. Zip: State: Depth (feet) Depth Hully Depth (feet) It in adapted date nongly for grade and provide the state state and provide	Bit Harden () Bit L TO ALC a. LLC State: NM Zip: 302-2476 State: NM Zip: 70-8 Address: NAA Yaka For R: Address: NAA For R: Address: For R: NAA For R: Address: For R: NAA For R: Address: For R: NAB For R: For R: State: NAB For R: State: State: NAB State: State: State: NAB State: NAB State: State: NAB State: NAB State: State:	PLEASE NOTE: Lubelity and Damages. Cardnafts analyses. All claims lubuling the Damages. Cardnafts analyses of the sevent school and Cardinal be facilite for incid attillates or successions anising out of or relialed for incid attillates or successions anising out of or relialed for incid attillates or successions anising out of or relialed for bit Relinquished By: Relinquished By: Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Company Name: Project Manager: Address: 3177 City: Caddy Phone #: 776 Project Name: 7 Project Name: 7 Project Name: 7 Sampler Name: For ususe owny Address owny Address owny Sampler Name: 500 UN USE OWNY J
Houbs, NWI 88240 FAX (675) 333-2476 P.0. #: Pax &: P.0. #: Fax #: Project Owmer: M.Ve/M. Company: Address: Project Owmer: M.Ve/M. Depth (feet) Ifeet) O RAB OR State: M.Ve/M. City: State: Topject Owmer: M.Ve/M. City: State: Depth (feet) Ifeet) O RAB OR GO # Phone #: Fax #: Fax #: Depth (feet) Ifeet) O RAB OR Ifeet) Ifeet Ifeet) Ifeet Ifeet Ifee	FAX (675) 333-2476 EDILL TO FAX (675) 333-2476 F.O. #: Project Owner: M.Ve/JA Fox #: Project Owner: Project Owner: M.Ve/JA Company: State: Project Owner: M.Ve/JA City: State: Project Owner: M.Ve/JA City: State: Project Owner: M.Ve/JA City: State: Project Owner: M.Ve/JA Fax #: Phone #: Fax #: Fax #: Project Owner: M.Ve/JA If Geet) GROUNDWATER GROUNDWATER NATE Intervention Fax #: Depth GROUNDWATER GROUNDWATER NATE Intervention Salut Exact Date: Y X GROUNDWATER V X GROUNDWATER V X GROUNDWATER NATE Intervention Intervention GROUNDWATER NATE Intervention V X GROUNDWATER V X Intervention V X Intervention V X Intervention V X Intervention V X	PAX (676) 393-2476 PO. # PO. # PO. # FAX (676) 393-2476 Fax # Company: State: NLM Zip: 130-20 Ath: Fax # Fax # Project Owner: MuPu/JA City: Pax # Project Owner: MuPu/JA State: Pax # Po. # Pole for the state in the	ANY ANY ANY ANY ANY ANY ANY ANY	REASE NOTE: Lubbly and Damages, Cardinats liability and d stabless. All claims: lubbling the damages, Cardinats liability and d stabilities or successes arising out of or reliabed to the performance statistics or successes arising out of or reliabed to the performance Relinquished By: Relinquished By: Delivered By: (Circle One) Delivered By: (Circle One) Cardination of the performance of th	101 East Marland (575) 393-2326 Company Name: Ensolum, LLC Project Manager: AMee. Col Address: 3122 NAAMal City: Caddow Project #: 7203847348 Project Name: MCA 409 F Project Location: 32,80371 Sampler Name: MCA 409 F Project Name 400 F Project Name 400 F Project Name: MCA 400 F Project Name 40
B240 2476 2476 2476 2476 2476 2476 21p: 8120 Address: Company: Address: Company: Address: P.O. #: Address: P.O. #: Address: City: Fax #: Phone #: QC # CONTAINERS MATRIX PRESERV State: Image: Preserved Preserved Preserved Preserved Preserved By: Cool Indice Matrix Preserved By: Cool Indice Matrix Preserved By:	B240 BILL TO 2416 P.O. #: A.V.C.P. (2) P. 2416 Company: 210: 78/20 Attn: Address: ar: MUP/M. City: State: Tip: 700 Phone #: Phone #: Phone #: Phone #: Procestry SAMPLING PRESERV SAMPLING Procestry Procestry Procestry Procestry Procestry Procestry Procestry Procestry Procestry Procestry Procestry Procestry Procestry P	Parka BILL TO Zip: RU20 Pro. #: Address: Br. Mule/Lu State: Zip: Br. Nume/Lu State: Zip: Br. Nume/Lu State: Zip: Br. Nume/Lu Fax:#: Phone #: Br. Nume/Lu Br. Prome #: Br. Prome #: <	ANA ANA ANA ANA ANA ANA ANA ANA	reaction of the second	FAX (575) 393- FAX (575) 393- State: MM Fax #: Project Own Fax #: Project Own (feet) (feet)
BILL P.O. #: BILL P.O. #: Company: Address: City: Address: Phone #: Prozet: Phone #: Pax #: Phone #: Pax #: Phone #: Prozet: Phone #: <	BILL TO P.O. #: D.M.P. O. Address: Company: Address: City: State: Phone #: PRESERV SAMPLING PRESERV SAMPLING V OTHER: DATE TIME V <th<< td=""><td>BILL TO P.O. #: A.M.P.O./P.O./P. Attn: Attn: Attn: A.M.P.O./P. State: Zip: PRESERV SAMPLING PRESERV DATE TIME BERV Statistics X V V V V V V V V V V V V V V V V V V V V V V V V V V<td>ANY ANY ANY ANY ANY ANY ANY ANY</td><td>Py claim arising stretture based to contra thermost valued unless make it writings writhout inmalificit, business interactions and regardings of whether such data arising the second arising of the second arising the second arising of the second arising of the arises of the second arising of the second arising of the arises of the second arises of</td><td>CARCONTAINERS GROUNDWATER WASTEWATER X X X SOIL OIL OIL</td></td></th<<>	BILL TO P.O. #: A.M.P.O./P.O./P. Attn: Attn: Attn: A.M.P.O./P. State: Zip: PRESERV SAMPLING PRESERV DATE TIME BERV Statistics X V V V V V V V V V V V V V V V V V V V V V V V V V V <td>ANY ANY ANY ANY ANY ANY ANY ANY</td> <td>Py claim arising stretture based to contra thermost valued unless make it writings writhout inmalificit, business interactions and regardings of whether such data arising the second arising of the second arising the second arising of the second arising of the arises of the second arising of the second arising of the arises of the second arises of</td> <td>CARCONTAINERS GROUNDWATER WASTEWATER X X X SOIL OIL OIL</td>	ANY ANY ANY ANY ANY ANY ANY ANY	Py claim arising stretture based to contra thermost valued unless make it writings writhout inmalificit, business interactions and regardings of whether such data arising the second arising of the second arising the second arising of the second arising of the arises of the second arising of the second arising of the arises of the second arises of	CARCONTAINERS GROUNDWATER WASTEWATER X X X SOIL OIL OIL
	AMPLING	AMPLING AMPLING AMPLING AMPLING AMPLING AMPLING BT X Standard Turnaround Time: Standard Results are emailed. Please pro Outle BD/SJum. On July Results are emailed. Please pro	ANY ANY ANY ANY ANY ANY ANY ANY	thon cetted by Cardinal within 30 days a based upon any of the amount in a based upon any of the above stated (Initials) ps	OTHER : PLO. #: PLO. #

Page 6 of 6

Page 73 of 111



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/ga/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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,

Celez D. Keine

Celey D. Keene Lab Director/Quality Manager



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

Received:	08/29/2023	Sampling Date:	08/28/2023
Reported:	09/05/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK 32.803715, -103.760309		

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

BTEX 8021B	mg	/kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/30/2023	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	118 9	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM		
	AIMEE COLE		
	3122 NATIONAL PAR	(S HWY	
	CARLSBAD NM, 88220)	
	Fax To:		
08/29/2023		Sampling Date:	
00/05/2020		с. н. т.	

Received:	08/29/2023	Sampling Date:	08/28/2023
Reported:	09/05/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK 32.803715, -103.760309		

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

BTEX 8021B	mg/	′kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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	111 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/30/2023	ND	432	108	400	3.77	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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 9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	120 9	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



00/20/2022

Analytical Results For:

	ENSOLUM	
	AIMEE COLE	
	3122 NATIONAL PARKS HW	ſY
	CARLSBAD NM, 88220	
	Fax To:	
08/29/2023		Sampling Date:
00/05/2022		Compling Type

Receiveu.	00/29/2025	Sampling Date.	00/20/2025
Reported:	09/05/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK 32.803715, -103.760309		

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

Docoivod:

BTEX 8021B	mg/	′kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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	111 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/30/2023	ND	432	108	400	3.77	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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 9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	124 9	% 49.1-14	8						

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Celey D. Keene, Lab Director/Quality Manager



03D2057093

MAVERICK 32.803715, -103.760309

Dionica Hinojos

Sample Received By:

Analytical Results For:

ENSOLUM		
AIMEE COL	E	
3122 NATI	ONAL PARKS HWY	
CARLSBAD	NM, 88220	
Fax To:		
08/29/2023	Sampling Date:	08/28/2023
09/05/2023	Sampling Type:	Soil
MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact

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

Received:

Reported:

Project Name:

Project Number:

Project Location:

BTEX 8021B	mg/	kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
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	113 %	6 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/30/2023	ND	432	108	400	3.77	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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 9	6 48.2-13	4						
Surrogate: 1-Chlorooctadecane	124 9	6 49.1-14	8						

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Celey D. Keene, Lab Director/Quality Manager



	ENSOLUM
	AIMEE COLE
	3122 NATIONAL PARKS HWY
	CARLSBAD NM, 88220
	Fax To:
08/29/2023	Sampling Date:
09/05/2023	Sampling Type

Received:	08/29/2023	Sampling Date:	08/28/2023
Reported:	09/05/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK 32.803715, -103.760309		

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

BTEX 8021B	mg/	'kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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	115 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/30/2023	ND	416	104	400	3.77	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	115 9	49.1-14	8						

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Celey D. Keene, Lab Director/Quality Manager



MCA 409 FLOWLINE

MAVERICK 32.803715, -103.760309

03D2057093

Cool & Intact

Dionica Hinojos

Sampling Condition:

Sample Received By:

Analytical Results For:

	ENSOLUM		
	AIMEE COLE		
	3122 NATIONAL PARKS H	WY	
	CARLSBAD NM, 88220		
	Fax To:		
08/29/2023		Sampling Date:	08/29/2023
09/05/2023		Sampling Type:	Soil

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

Received:

Reported:

Project Name:

Project Number:

Project Location:

BTEX 8021B	mg/	kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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	113 %	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/30/2023	ND	416	104	400	3.77	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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 9	48.2-13	4						
Surrogate: 1-Chlorooctadecane	117 %	6 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



MAVERICK 32.803715, -103.760309

		ENSOLUM AIMEE COLE 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:	Y	
Received:	08/29/2023		Sampling Date:	08/29/2023
Reported:	09/05/2023		Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE		Sampling Condition:	Cool & Intact
Project Number:	03D2057093		Sample Received By:	Dionica Hinojos

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

Project Location:

BTEX 8021B	mg,	/kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/30/2023	ND	416	104	400	3.77	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	121	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	08/29/2023	Sampling Date:	08/28/2023
Reported:	09/05/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK 32.803715, -103.760309		

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

BTEX 8021B	mg/	kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	08/30/2023	ND	416	104	400	3.77	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	112 9	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	08/29/2023	Sampling Date:	08/28/2023
Reported:	09/05/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK 32.803715, -103.760309		

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

BTEX 8021B	mg/	′kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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	113 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	08/30/2023	ND	416	104	400	3.77	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	105 9	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	08/29/2023	Sampling Date:	08/28/2023
Reported:	09/05/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK 32.803715, -103.760309		

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

BTEX 8021B	mg,	/kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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	% 71.5-13	4						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1200	16.0	08/30/2023	ND	416	104	400	3.77	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	102	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	08/29/2023	Sampling Date:	08/28/2023
Reported:	09/05/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK 32.803715, -103.760309		

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

BTEX 8021B	mg,	/kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/30/2023	ND	416	104	400	3.77	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	124	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	08/29/2023	Sampling Date:	08/28/2023
Reported:	09/05/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK 32.803715, -103.760309		

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

BTEX 8021B	mg/	/kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	08/30/2023	ND	416	104	400	3.77	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	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 9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	144 9	% 49.1-14	8						

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*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C

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

Cardinal Laboratories

*=Accredited Analyte

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 whatscever 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 whose 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 whose site to the services interruptors, loss of profits incurred by client, its subsidiaries, afflictes or successor arising out of or related to the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

FU	20	H234685	Lab I.D.	FOR LAB USE ONLY	Sampler Name:	Project Location:	Project Name:
					No	25	MCA

Received by OC.	D: 9/19/	2023 3:	30:22 1	PM
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CHAIN-OF CUSTODY AND ANALYSIS REQUEST

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Company Name: (;	(575) 393-2326 FAX (575) 393-2476	1/6	BILL TO	70			ANALYSIS REQUEST	EQUEST
Project Manager:	Amee Gle		P.O. #: 17 11	maelale	-	_		
Address: 3	King	Huy	Company:			_		
-	shoud state: NIM	State: NIM Zip: 89 220	Attn:			_		
e #:	720 384 7365 Fax #:		Address:			_		
Project #: 03D	0372057043 Project Owner:		City:		_			
Project Name:	1 CA 409 Flanlinc		State: Zip:	-				
Project Location:	12	760309	Phone #:					
Sampler Name:	Monni Huncs		Fax #:			_		
FOR LAB USE ONLY	~	IP. MATRIX	PRESERV.	SAMPLING				
Lab I.D. Hz34685	Sample I.D.	(G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER :	DATE TIME	BTEX TPH	CI-		
11	6	×	×	8/28/23 259	XX			
. 12	F	¥ •		4 1303				
PLEASE NOTE: Liability and Damages, Cardinal's liability analyses. All claims including those for negligence and a service. In no went shall Cardinal be liable for incidental	ages. Cardinal's liabili for negligence and a be liable for incidental	y and client's exclusive remedy for any claim arising whether based in contract or bot, shall be limited to the amount paid by the client for the ny other cause whatboever shall be deemed waived unless made in writing and received by Candinal within 30 days after completion of the e or consequential damages, including without limitation, business interruptions, loss of use, or loss of profis incurred by client, its subsidiaries,	based in contract or tort, shall be limited to the emount the second second and received by Cardinal within 30 days a easi Interruptions, loss of use, or loss of profils incurred b	nount paid by the client for t days after completion of the urred by client, its subsidiari	he e applicable es,		+	
Relinquished By:	Da Tin Da	Received By Received By	*		are emailed. P	Yes □ No Add" Pt ed. Piaze provide Email a @ ensolumn · con	Verbai Result: ۲۴۵۵ المان Add'I Phone #: All Results are emailed. Ptease provide Email address: معطران ومجهد المان دوم REMARKS:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	One) Observed Temp. °C 34%	Sample Condition	an CHECKED BY: (Initials)	Y: Turnaround Time:	Time:	Standard	Z	Bacteria (only) Sample Condition Cool Intact Observed Temp. °C

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Received by OCD: 9/19/2023 3:30:22 PM

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

Corrected Temp. °C



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/ga/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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,

Celez D. Keine

Celey D. Keene Lab Director/Quality Manager



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

Received:	09/06/2023	Sampling Date:	09/06/2023
Reported:	09/08/2023	Sampling Type:	Soil
Project Name:	MCA 409 FLOWLINE	Sampling Condition:	Cool & Intact
Project Number:	03D2057093	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK 32.803715, -103.760309		

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

BTEX 8021B	mg,	/kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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 BTEX	<0.300	0.300	09/07/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	113 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	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	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	100	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C

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

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

Received by OCD: 9/19/2023 3:30:22 PM

Delivered By: (Circle One) Observed Temp. °C Q. IP Sample Condition Sampler - UPS - Bus - Other: Corrected Temp. °C Cool Affact Cool Affact FORM-DOD R 3-1 071 023 No No No	ceived By:	y and client's exclusive r or consequential damag	GROUNDWATE WASTEWATER Soil OIL	S ER	Sampler Name: Will anna Fail anna ta	MUA 409 Flowline	120-384-736	City: (10/15/0010 VALT POUTS HUNDY 20170	Project Manager: Ainvil Ustu	(575) 393-2326 FAX (575) 393-2476 Company Name: ひんらひししいひょししじ	רמטטומנטוופא
dition CHECKED BY: Turnaround Time: tt (Initials) Thermometer ID #140 No Thermometer ID #140 No Thermometer ID #140	All Results a All Results a All Results a All Results a Remarks:	emedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the eys including whord limited on business interruptions, loss of use, or trots in curred by client, its subadjaries, europer to Cardinal within 30 days after completion of the applicable europer business interruptions, loss of use, or tors of profits incurred by client, its subadjaries, europer to Cardinal within the applicable europer to cardinal europer to cardinal europer to cardinal europer europer to cardinal europer europer to cardinal europer e	SLUDGE OTHER : ACID/BASE: ICE / COOL OTHER : Q DATE TIME	X PRESERV. SAMPLING	Phone #: Fax #:	City: State: Zip:	Address:	Company: Attn:	P	BILL TO	
Time: Standard A Bacteria (only) Sample Condition ID #140 Cool Intact Observed Temp. °C I Vo No No Corrected Temp. °C	Medu DUNSOLUM, COM Fall Worked DUNSOLUM W Remarks:	s,	C BTE TP Chili	E X H Drick	15					ANALYSIS REQUEST	

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APPENDIX E

NMOCD Notifications

Released to Imaging: 1/10/2024 4:46:31 PM

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<u>|Shelly.Wells@emnrd.nm.gov</u> 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
То:	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<u>|Shelly.Wells@emnrd.nm.gov</u> 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.

JΗ

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

Released to Imaging: 1/10/2024 4:46:31 PM

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 Page1104eof 111

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: <u>Bryce.Wagoner@mavresources.com</u>	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# (<i>if applicable</i>) 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

Materia	Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)					
Crude Oil	Volume Released (bbls) 5.7	Volume Recovered (bbls) 0.0				
Produced Water	Volume Released (bbls)	Volume Recovered (bbls)				
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	Yes No				
Condensate	Volume Released (bbls)	Volume Recovered (bbls)				
Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)				
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)				
Cause of Balance						

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.

Page	2
1 age	4

Oil Conservation Division

Incident ID	NAPP2318846991
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Was this a major	If YES, for what reason(s) does the responsible party consider this a major release?
release as defined by	
19.15.29.7(A) NMAC?	
🗌 Yes 🖾 No	
If YES, was immediate ne	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

Initial Response

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

 \square The source of the release has been stopped.

The impacted area has been secured to protect human health and the environment.

Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

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

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

Printed Name:Bryce Wagoner	Title:Permian HSE Specialist II
Signature:	Date:07/05/2023
email:Bryce.Wagoner@mavresources.com	Telephone:928-241-1862
OCD Only	
Received by: <u>Shelly Wells</u>	Date: <u>7/7/2023</u>

Received by OCD: 9/19/2023/3:30:22 PM State of New Mexico

Oil Conservation Division

	Page Hube of 41	11
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(ft bgs)</u>
Did this release impact groundwater or surface water?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗌 Yes 🛛 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🛛 No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🛛 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🛛 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🗌 Yes 🛛 No
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🛛 No
Did the release impact areas not on an exploration, development, production, or storage site?	X Yes 🗌 No

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- \boxtimes Depth to water determination
- Determination of water sources and significant watercourses within ¹/₂-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.

Page 3

				Pooled F	luids on the S	urface				
	Length (ft.)	Width (ft.)	Depth (in)	# of Boundaries *edges of pool where depth is 0. don't count shared boundaries	Oil-Water Ratio (%)		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	1					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
-	•			•		Total Vol	ume (bbls):	0.00	0.00	0.00

				Sul	osurface Fluids	6				
	Length (ft.)	Width (ft.)	Depth (in.)	Saturation (%) *10% in consolidated sediments after rain to 50% in sand with no precipitation	Oil-Water Ratio (%)	Area (ft²)	Volume (bbl.)	Estimated Volume in Subsurface (bbl.)	Volume of Oil in Subsurface (bbl.)	Volume of Water in Subsurface (bbl.)
Rectangle A	20.0	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 Vol	ume (bbls):	5.70	0.06	5.64

TOTAL RELEASE VOLUME (bbls): 5.7

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

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

CONDITIONS

Created By Condition scwells None

CONDITIONS

Action 237291

Condition Date

7/7/2023

Received by OCD: 9/	19/2023 3:30:22 PM State of New Mexico			Page 109 of 111
			Incident ID	NAPP2318846991
Page 4	Oil Conservation Division		District RP	
			Facility ID	
			Application ID	
regulations all operator public health or the en failed to adequately in addition, OCD accepta and/or regulations. Printed Name: <u>Bryce</u> Signature:	the information given above is true and complete to the b bors are required to report and/or file certain release notifi- nvironment. The acceptance of a C-141 report by the O investigate and remediate contamination that pose a threa- ance of a C-141 report does not relieve the operator of r the Wagoner	ications and perform co CD does not relieve the it to groundwater, surfa esponsibility for compl 	prective actions for release operator of liability sho the water, human health	ases which may endanger ould their operations have or the environment. In leral, state, or local laws
OCD Only				
Received by:		Date:		

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Oil Conservation Division

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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.

□ A scaled site and sampling diagram as described in 19.15.29.11 NMAC □ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection) □ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling) □ Description of remediation activities I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete. Printed Name: Bryce Wagoner Title: Permian HSE Specialist Signature: 9/19/2023 email: Bryce.Wagoner@mavresources.com Title: 9/28-241-1862
must be notified 2 days prior to liner inspection) Image: Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling) Description of remediation activities I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete. Printed Name: Bryce Wagoner Title: Permian HSE Specialist Signature: MMM
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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: <u>Scott Rodgers</u> Date: <u>01/10/2024</u>
Printed Name: Scott Rodgers Title: Environmental Specialist Adv.

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

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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

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

CONDITIONS

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

Action 267198