



April 27, 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 Mesa Dolphin - Poly Line Weld Leak Incident Number nAPP2303736433 Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of BTA Oil Producers, LLC (BTA), has prepared this *Closure Request* to document assessment, excavation, and soil sampling activities performed at the Mesa Dolphin - Poly Line Weld Leak (Site). The purpose of the excavation and soil sampling activities was to address impacts to soil resulting from a produced water release at the Site. Based on field screening activities, excavation activities, and laboratory analytical results from soil sampling events, BTA is submitting this *Closure Request*, describing remediation that has occurred and requesting no further action for Incident Number nAPP2303736433.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit D, Section 11, Township 26 South, Range 32 East, in Lea County, New Mexico (32.06489°, -103.65264°) and is associated with oil and gas exploration and production operations on federal land managed by the Bureau of Land Management (BLM).

On January 30, 2023, a failed weld on a polyline resulted in the release of approximately 23 barrels (bbls) of produced water into the surrounding pasture. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 18 bbls of produced water were recovered. BTA reported the release to the New Mexico Oil Conservation Division (NMOCD) and submitted a *Release Notification Form C-141* (Form C-141) on February 14, 2023. The release was assigned Incident Number nAPP2303736433.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential Site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater is New Mexico Office of the State Engineer (NMOSE) soil boring C-04549-POD 1, drilled approximately 250 feet southwest of the Site. The soil boring was drilled to a total depth of 103 feet bgs. No groundwater was encountered during drilling activities and following a waiting period of at least

BTA Oil Producers, LLC Closure Request Mesa Dolphin - Poly Line Weld Leak

72 hours to allow for the slow infill of groundwater, the soil boring was backfilled using drill cuttings and hydrated bentonite chips. All wells used for depth to groundwater determination are depicted on Figure 1 and the associated well records are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is a dry wash, located approximately 195 feet west of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium 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): 100 mg/kg
- Chloride: 600 mg/kg

DELINEATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

Between February 7, 2023, and March 13, 2023, Ensolum personnel were at the Site to complete assessment and delineation activities based on visible staining in the release area and information provided by the Form C-141. Delineation soil samples SS01 through SS11 were collected within and around the release extent, at depths ranging from 0.5 feet to 1-foot bgs. The soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach[®] chloride QuanTab[®] test strips. Visual observations and field screenings were logged on Lithologic Soil Sampling Logs which are included in Appendix B. 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 site assessment and a photographic log is included in Appendix C.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the following chemicals of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 4500.0.

Laboratory analytical results for delineation soil samples SS04 through SS07 indicated all COC concentrations were compliant with the Closure Criteria and successfully defined the lateral extent of the release. Laboratory analytical results for delineation soil samples SS03 and SS08 through SS11, collected at 0.5 feet and 1-foot bgs within the release extent, indicated all COC concentrations were compliant with the Closure Criteria. Laboratory analytical results for SS01 and SS02, collected within the release at a depth of 0.5 feet bgs, indicated chloride concentrations exceeded the Site Closure Criteria. Based on laboratory analytical results for soil sample SS01 and SS02, excavation activities were warranted.



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EXCAVATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On March 14, 2023, Ensolum personnel were at the Site to oversee excavation activities based on visible staining and laboratory analytical results for soil samples SS01 and SS02. Excavation activities were performed utilizing hand shovels. To direct excavation activities, soil was screened for VOCs and chloride. The excavation was completed to a depth of 1-foot bgs. Photographic documentation of the excavation activities is included in Appendix C.

Following removal of impacted soil, 5-point composite soil samples were collected every 200 square feet from the floor and sidewall of the excavation extents. 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. Due to the shallow depth of the excavation extent, the sidewalls were incorporated into the floor samples. Composite soil samples FS01 through FS10 were collected from the floor of the excavation at a depth of 1-foot bgs. The soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 3.

Laboratory analytical results for the excavation soil sample FS01 through FS10 indicated all COC concentrations were compliant with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Appendix D.

The excavation area measured approximately 2,000 square feet. A total of 75 cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported and properly disposed of at the Delaware Basin Landfill (DBLF) Facility in Jal, New Mexico.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the January 30, 2023, produced water release. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated all COCs were compliant with the Closure Criteria. Based on the soil sample analytical results, no further remediation was required.

Excavation of stained soil has mitigated impacts at this Site. BTA believes these remedial actions are protective of human health, the environment, and groundwater. As such, BTA respectfully requests closure for Incident Number nAPP2303736433.



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BTA Oil Producers, LLC Closure Request Mesa Dolphin - Poly Line Weld Leak

If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or tmorrissey@ensolum.com.

Sincerely, Ensolum, LLC

Peter Van Patten Project Geologist

Daniel R. Moir, PG Senior Managing Geologist

cc: Bob Hall, BTA Nathan Sirgo, BTA Bureau of Land Management

Appendices:

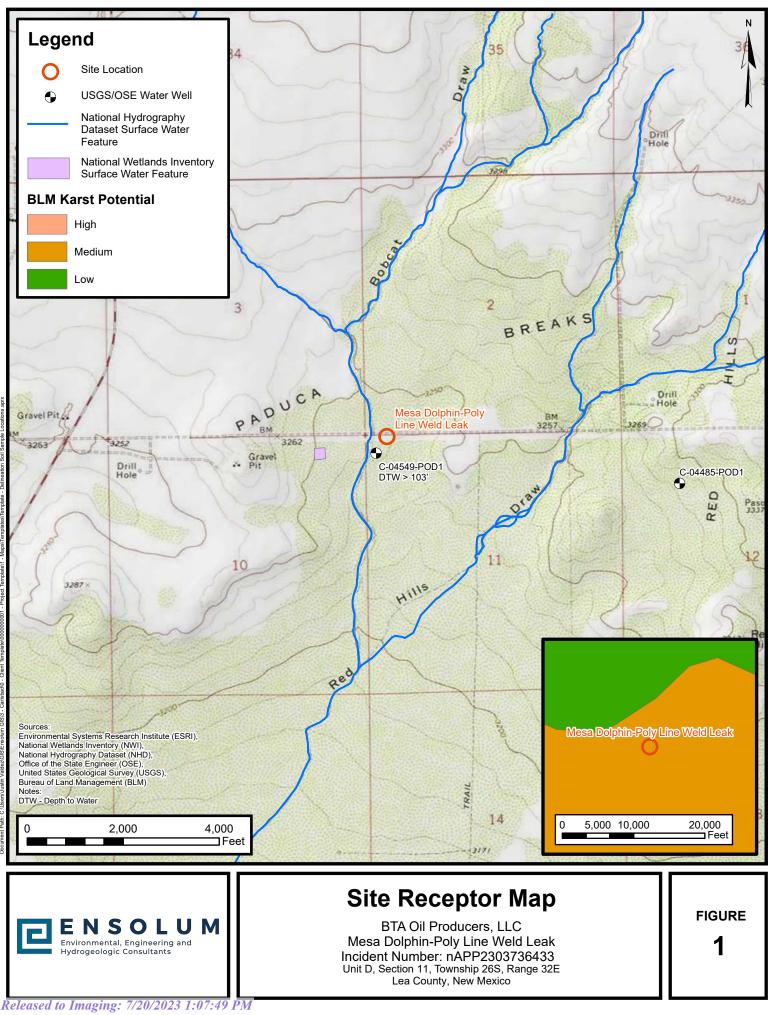
- Figure 1 Site Receptor Map
- Figure 2 Delineation Soil Sample Locations
- Figure 3 Excavation Soil Sample Locations
- Table 1Soil Sample Analytical Results
- Appendix A Referenced Well Records
- Appendix B Lithologic/Soil Sampling Logs
- Appendix C Photographic Log
- Appendix D Laboratory Analytical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

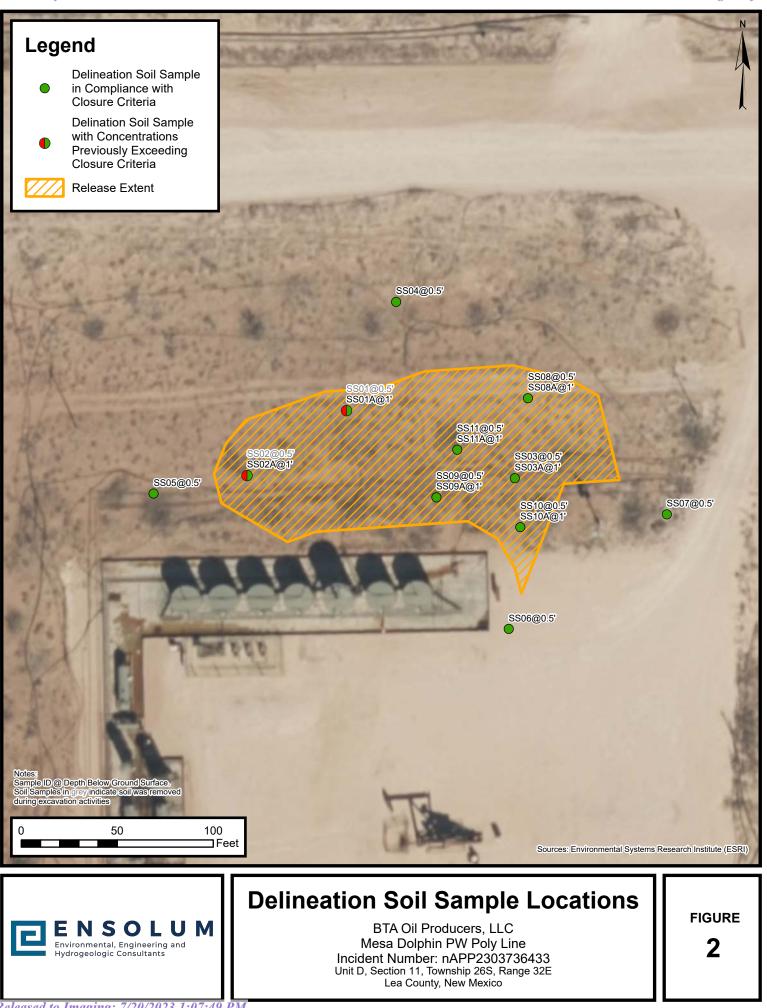




FIGURES

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TABLES

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ENSOLUM

				Mesa Dolp BTA	TABLE 1 LE ANALYTIC ohin - Poly Lin Oil Producers County, New M	e Weld Leak s, LLC				
Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I C	Closure Criteria (NMAC 19.15.29)	10	50	NE	NE	NE	NE	100	600
				Asse	essment Soil Sa	imples				
SS01	02/07/2023	0.5	< 0.050	<0.300	<10.0	5,170	1,260	5,170	1,260	1,310
SS01A	03/13/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SS02	02/07/2023	0.5	< 0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,600
SS02A	03/13/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS03	02/07/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	464
SS03A	03/13/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS04	02/07/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SS05	02/07/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS06	02/07/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	288
SS07	02/07/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS08	03/13/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
SS08A	03/13/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
SS09	03/13/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS09A	03/13/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
SS10	03/13/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
SS10A	03/13/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SS11	03/13/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SS11A	03/13/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0

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ENSOLUM

				Mesa Dolp BTA	TABLE 1 LE ANALYTIC hin - Poly Line Oil Producers County, New M	e Weld Leak s, LLC				
Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I C	losure Criteria (I	NMAC 19.15.29)	10	50	NE	NE	NE	NE	100	600
				Excava	tion Floor Soil	Samples		•	•	•
FS01	03/14/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS02	03/14/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS03	03/14/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS04	03/14/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS05	03/14/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS06	03/14/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS07	03/14/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS08	03/14/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS09	03/14/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS10	03/14/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0

GRO: Gasoline Range Organics

TPH: Total Petroleum Hydrocarbon

DRO: Diesel Range Organics

ORO: Oil Range Organics

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.

Grey text indicates sample was excavated.

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APPENDIX A

Referenced Well Records



WELL RECORD & LOG OFFICE OF THE STATE ENGINEER

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WELL TAG ID NO.

PAGE 1 OF 2

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								The Advision				
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GENERAL AND WELL LOCATION	WELL OWN 104 S. Pec		IG ADDRESS					CITY Midland		state TX	79701	ZIP
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	14	19	5	Calich		ted, with fine-		- an		 Y	✓ N	
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Available data for this site SUMMARY OF ALL AVAILABLE DATA V GO

Well Site

DESCRIPTION:

Latitude 32°04'24", Longitude 103°41'54" NAD27 Eddy County, New Mexico , Hydrologic Unit 13070001 Well depth: not determined. Land surface altitude: 3,294 feet above NAVD88. Well completed in "Other aquifers" (N99990THER) national aquifer. Well completed in "Santa Rosa Sandstone" (231SNRS) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1983-01-26	1987-10-21	3
Revisions	Unavailable ((site:0) (times	eries:0)

OPERATION:

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

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APPENDIX B

Lithologic Soil Sampling Logs

_								Sample Name: SS01	Date: 3/13/2023			
		-	N	C	01			Site Name: Mesa Dolphin				
Ľ				9		- 0		Incident Number: NAPP23037364	33			
								Job Number: 03C2012020				
		LITHOL	OGI	C / SOIL S	SAMPLING	i log		Logged By: MR Method: Hand shovel				
Coord	inates: 32	2.06489,	-103.	65264				Hole Diameter: NA	Total Depth: 1'			
			-					PID for chloride and vapor, respec actor is included in all chloride scre	-			
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Des	scriptions			
М	2033	10.7	N	SS01	L 0.5	L 0.5	SP-SM	0-1' SAND, medium brown s medium grains, no stain,	sand, poorly sorted, no odor, moist.			
Μ	<173.6	0.1	Ν	SS01A	1	1	TD	Total Depth @ 1' bgs				
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								Sample Name: SS02	Date: 3/13/2023
					•			Site Name: Mesa Dolphin	Date: 3/ 13/ 2023
16			N	5	OL		M	Incident Number: NAPP2303	736433
								Job Number: 03C2012020	
		LITHOL	.OGI		SAMPLING	G LOG		Logged By: MR	Method: Hand shovel
Coord	inates: 32							Hole Diameter: NA	Total Depth: 1'
					ith HACH Ch	loride Test	Strips and	PID for chloride and vapor, re	espectively. Chloride test
perfor	med with	n 1:4 dilu	tion f	actor of so	il to distilled	water. A 40	0% error fa	actor is included in all chloride	e screenings.
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic	c Descriptions
М	2178	0.6	N	SS02	0.5	L 0.5	SP-SM	0-1' SAND, medium bro medium grains, no st	wn sand, poorly sorted, tain, no odor, moist.
Μ	<173.6	0.1	Ν	SS02A	1	- 1	TD	Total Depth @ 1' bgs	
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								Sample Name: SS03	Date: 3/13/2023
								Site Name: Mesa Dolphin	
16			N	5	01			Incident Number: NAPP2303	3736433
								Job Number: 03C2012020	
		LITHOL	OGI		SAMPLING	i LOG		Logged By: MR	Method: Hand shovel
Coord	inates: 32			-				Hole Diameter: NA	Total Depth: 1'
					ith HACH Ch	loride Test	Strips and	PID for chloride and vapor, r	espectively. Chloride test
perfor	med with	n 1:4 dilu	tion f	actor of so	il to distilled	water. A 40)% error fa	actor is included in all chlorid	e screenings.
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologi	c Descriptions
М	1422	0	N	SS03	0.5	L 0.5	SP-SM	0-1' SAND, medium bro medium grains, no s	own sand, poorly sorted, stain, no odor, moist.
М	<173.6	0.1	Ν	SS03A	1	1	Ŧ		
					-	-	TD	Total Depth @ 1' bgs	
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								Comple Name: 5509	Data: 2/12/2022
								Sample Name: SS08 Site Name: Mesa Dolphin	Date: 3/13/2023
			N	S	OL		M	Incident Number: NAPP2303	736433
								Job Number: 03C2012020	
			OGI		SAMPLING	6106		Logged By: MR	Method: Hydrovac
Coord	inates: 32							Hole Diameter: NA	Total Depth: 1'
					vith HACH Ch	loride Test	Strips and	PID for chloride and vapor, re	
			-				•	actor is included in all chloride	
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic	Descriptions
	<173.6		N	SS08	0.5	L 0.5	SP-SM	0-1' SAND, medium bro caliche, poorly sorted stain, no odor, moist	wn sand, small amount of d, medium grains, no
М	<173.6	0.8	Ν	SS08A	1	1	TD	Total Depth @ 1' bgs	
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								Sample Name: SS09	Date: 3/13/2023
		-		C				Site Name: Mesa Dolphin	
15		-		2	01			Incident Number: NAPP230373643	3
								Job Number: 03C2012020	
		LITHOL	OGI		SAMPLING	6 LOG		Logged By: MR	Method: Hydrovac
Coord	inates: 32			-				Hole Diameter: NA	Total Depth: 1'
					ith HACH Ch	nloride Test	Strips and	PID for chloride and vapor, respect	ively. Chloride test
perfor	med with	n 1:4 dilu	tion f	actor of so	il to distilled	water. A 40)% error fa	actor is included in all chloride scree	enings.
Moisture Content						-	Lithologic Descriptions		
М	<173.6	0.2	N	SS09	لـ - 0.5	L 0.5	SP-SM	0-1' SAND, medium brown s medium grains, no stain,	and, poorly sorted, no odor, moist.
М	207.2	0.3	Ν	SS09A	1	1			
					-	-	TD	Total Depth @ 1' bgs	
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								Sample Name: SS10	Date: 3/13/2023
		_						Site Name: Mesa Dolphin	
16			N	5	OL		IV	Incident Number: NAPP2303	3736433
								Job Number: 03C2012020	
		LITHOL	OGI		SAMPLING	i LOG		Logged By: MR	Method: Hydrovac
Coord	inates: 32			-				Hole Diameter: NA	Total Depth: 1'
			-					PID for chloride and vapor, r	
perfor	med with	n 1:4 dilu	tion f	actor of so	il to distilled	water. A 40)% error fa	actor is included in all chlorid	e screenings.
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologi	c Descriptions
М	207.2	0.2	N	SS10	ـــــــــــــــــــــــــــــــــــــ	L 0.5	SP-SM	0-1' SAND, medium bro medium grains, no s	own sand, poorly sorted, tain, no odor, moist.
М	<173.6	0.3	Ν	SS10A	1	1	TD	Total Depth @ 1' bgs	
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								Sample Name: SS11	Date: 3/13/2023
		_						Site Name: Mesa Dolphin	
16			N	5	OL		IV	Incident Number: NAPP2303	3736433
								Job Number: 03C2012020	
		LITHOL	OGI		SAMPLING	i LOG		Logged By: MR	Method: Hydrovac
Coord	inates: 32			-				Hole Diameter: NA	Total Depth: 1'
			-					PID for chloride and vapor, r	
perfor	med with	n 1:4 dilu	tion f	actor of so	il to distilled	water. A 40)% error fa	actor is included in all chlorid	e screenings.
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologi	c Descriptions
М	<173.6	0.0	N	SS11	ـــــــــــــــــــــــــــــــــــــ	L 0.5	SP-SM	0-1' SAND, medium bro medium grains, no s	own sand, poorly sorted, tain, no odor, moist.
Μ	<173.6	0.0	Ν	SS11A	1	- 1	TD	Total Doath @ 116	
					-	-	TD	Total Depth @ 1' bgs	
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APPENDIX C

Photographic Log

Released to Imaging: 7/20/2023 1:07:49 PM





APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation



February 15, 2023

TACOMA MORRISSEY ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD, NM 88220

RE: MESA DOLPHIN PW

Enclosed are the results of analyses for samples received by the laboratory on 02/08/23 14:45.

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



BTA - LEA COUNTY, NM

Analytical Results For:

		ENSOLUM TACOMA MORRISSEY 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:	(
Received:	02/08/2023		Sampling Date:	02/07/2023
Reported:	02/15/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN PW		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez

Sample ID: SS 01 (H230569-01)

Project Location:

BTEX 8021B	mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/11/2023	ND	2.07	104	2.00	0.347	
Toluene*	<0.050	0.050	02/11/2023	ND	2.16	108	2.00	3.81	
Ethylbenzene*	<0.050	0.050	02/11/2023	ND	2.12	106	2.00	3.27	
Total Xylenes*	<0.150	0.150	02/11/2023	ND	6.37	106	6.00	3.93	
Total BTEX	<0.300	0.300	02/11/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	108	% 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	1310	16.0	02/10/2023	ND	416	104	400	3.77	
TPH 8015M	mg/	/kg	Analyzed By: MS						S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/10/2023	ND	181	90.5	200	3.40	
DRO >C10-C28*	5170	10.0	02/10/2023	ND	190	95.0	200	2.35	QM-07
EXT DRO >C28-C36	1260	10.0	02/10/2023	ND					
Surrogate: 1-Chlorooctane	97.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	258	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM TACOMA MORRISSEY 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:	(
Received:	02/08/2023		Sampling Date:	02/07/2023
Reported:	02/15/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN PW		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, N	IM		

Sample ID: SS 02 (H230569-02)

BTEX 8021B	mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/11/2023	ND	2.07	104	2.00	0.347	
Toluene*	<0.050	0.050	02/11/2023	ND	2.16	108	2.00	3.81	
Ethylbenzene*	<0.050	0.050	02/11/2023	ND	2.12	106	2.00	3.27	
Total Xylenes*	<0.150	0.150	02/11/2023	ND	6.37	106	6.00	3.93	
Total BTEX	<0.300	0.300	02/11/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	108	% 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	1600	16.0	02/10/2023	ND	416	104	400	3.77	
TPH 8015M	mg	/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/10/2023	ND	181	90.5	200	3.40	
DRO >C10-C28*	<10.0	10.0	02/10/2023	ND	190	95.0	200	2.35	
EXT DRO >C28-C36	<10.0	10.0	02/10/2023	ND					
Surrogate: 1-Chlorooctane	103	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	124	% 49.1-14	8						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM TACOMA MORRISSEY 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	Ŷ	
Received:	02/08/2023		Sampling Date:	02/07/2023
Reported:	02/15/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN PW	1	Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY	, NM		

Sample ID: SS 03 (H230569-03)

BTEX 8021B	mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/11/2023	ND	2.07	104	2.00	0.347	
Toluene*	<0.050	0.050	02/11/2023	ND	2.16	108	2.00	3.81	
Ethylbenzene*	<0.050	0.050	02/11/2023	ND	2.12	106	2.00	3.27	
Total Xylenes*	<0.150	0.150	02/11/2023	ND	6.37	106	6.00	3.93	
Total BTEX	<0.300	0.300	02/11/2023	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	464	16.0	02/10/2023	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/10/2023	ND	181	90.5	200	3.40	
DRO >C10-C28*	<10.0	10.0	02/10/2023	ND	190	95.0	200	2.35	
EXT DRO >C28-C36	<10.0	10.0	02/10/2023	ND					
Surrogate: 1-Chlorooctane	102	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	122	% 49.1-14	8						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM TACOMA MORRISSEY 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:	(
Received:	02/08/2023		Sampling Date:	02/07/2023
Reported:	02/15/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN PW		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY, N	IM		

Sample ID: SS 04 (H230569-04)

BTEX 8021B	mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/11/2023	ND	2.07	104	2.00	0.347	
Toluene*	<0.050	0.050	02/11/2023	ND	2.16	108	2.00	3.81	
Ethylbenzene*	<0.050	0.050	02/11/2023	ND	2.12	106	2.00	3.27	
Total Xylenes*	<0.150	0.150	02/11/2023	ND	6.37	106	6.00	3.93	
Total BTEX	<0.300	0.300	02/11/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	104	% 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	02/10/2023	ND	416	104	400	3.77	
TPH 8015M	mg/	/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/10/2023	ND	181	90.5	200	3.40	
DRO >C10-C28*	<10.0	10.0	02/10/2023	ND	190	95.0	200	2.35	
EXT DRO >C28-C36	<10.0	10.0	02/10/2023	ND					
Surrogate: 1-Chlorooctane	102	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	121	% 49.1-14	8						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM TACOMA MORRISSEY 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	Y	
Received:	02/08/2023		Sampling Date:	02/07/2023
Reported:	02/15/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN PW		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY,	NM		

Sample ID: SS 05 (H230569-05)

BTEX 8021B	mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/11/2023	ND	2.07	104	2.00	0.347	
Toluene*	<0.050	0.050	02/11/2023	ND	2.16	108	2.00	3.81	
Ethylbenzene*	<0.050	0.050	02/11/2023	ND	2.12	106	2.00	3.27	
Total Xylenes*	<0.150	0.150	02/11/2023	ND	6.37	106	6.00	3.93	
Total BTEX	<0.300	0.300	02/11/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 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	32.0	16.0	02/10/2023	ND	416	104	400	3.77	
TPH 8015M	mg/	'kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/10/2023	ND	181	90.5	200	3.40	
DRO >C10-C28*	<10.0	10.0	02/10/2023	ND	190	95.0	200	2.35	
EXT DRO >C28-C36	<10.0	10.0	02/10/2023	ND					
Surrogate: 1-Chlorooctane	99.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	118 9	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM TACOMA MORRISSEY 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	Y	
Received:	02/08/2023		Sampling Date:	02/07/2023
Reported:	02/15/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN PW		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY,	NM		

Sample ID: SS 06 (H230569-06)

BTEX 8021B	mg/	kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/11/2023	ND	2.07	104	2.00	0.347	
Toluene*	<0.050	0.050	02/11/2023	ND	2.16	108	2.00	3.81	
Ethylbenzene*	<0.050	0.050	02/11/2023	ND	2.12	106	2.00	3.27	
Total Xylenes*	<0.150	0.150	02/11/2023	ND	6.37	106	6.00	3.93	
Total BTEX	<0.300	0.300	02/11/2023	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	288	16.0	02/10/2023	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	02/10/2023	ND	181	90.5	200	3.40	
DRO >C10-C28*	<10.0	10.0	02/10/2023	ND	190	95.0	200	2.35	
EXT DRO >C28-C36	<10.0	10.0	02/10/2023	ND					
Surrogate: 1-Chlorooctane	94.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	112 9	% 49.1-14	8						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM TACOMA MORRISSEY 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	Y	
Received:	02/08/2023		Sampling Date:	02/07/2023
Reported:	02/15/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN PW		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA - LEA COUNTY,	NM		

Sample ID: SS 07 (H230569-07)

BTEX 8021B	mg/	′kg	Analyze	d By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/11/2023	ND	2.07	104	2.00	0.347	
Toluene*	<0.050	0.050	02/11/2023	ND	2.16	108	2.00	3.81	
Ethylbenzene*	<0.050	0.050	02/11/2023	ND	2.12	106	2.00	3.27	
Total Xylenes*	<0.150	0.150	02/11/2023	ND	6.37	106	6.00	3.93	
Total BTEX	<0.300	0.300	02/11/2023	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	32.0	16.0	02/10/2023	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	02/10/2023	ND	181	90.5	200	3.40	
DRO >C10-C28*	<10.0	10.0	02/10/2023	ND	190	95.0	200	2.35	
EXT DRO >C28-C36	<10.0	10.0	02/10/2023	ND					
Surrogate: 1-Chlorooctane	91.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	106 9	% 49.1-14	8						

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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.
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

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager

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Received by OCD: 4/27/2023 1:49:19 PM

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Page 10 of 10



March 16, 2023

HADLIE GREEN ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD, NM 88220

RE: MESA DOLPHIN

Enclosed are the results of analyses for samples received by the laboratory on 03/13/23 12:54.

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



BTA 32.06489,-103.65264

Analytical Results For:

		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220 Fax To:	Y	
Received:	03/13/2023		Sampling Date:	03/13/2023
Reported:	03/16/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez

Sample ID: SS 01 A 1' (H231134-01)

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	03/15/2023	ND	2.04	102	2.00	3.31	
Toluene*	<0.050	0.050	03/15/2023	ND	2.01	101	2.00	3.06	
Ethylbenzene*	<0.050	0.050	03/15/2023	ND	1.95	97.6	2.00	3.62	
Total Xylenes*	<0.150	0.150	03/15/2023	ND	5.99	99.9	6.00	3.74	
Total BTEX	<0.300	0.300	03/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	106 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	03/14/2023	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	03/14/2023	ND	187	93.5	200	1.21	
DRO >C10-C28*	<10.0	10.0	03/14/2023	ND	182	91.0	200	1.09	
EXT DRO >C28-C36	<10.0	10.0	03/14/2023	ND					
Surrogate: 1-Chlorooctane	96.1	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	102 9	% 49.1-14	0						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	ľ	
Received:	03/13/2023		Sampling Date:	03/13/2023
Reported:	03/16/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06489,-103.	.65264		

Sample ID: SS 02 A 1' (H231134-02)

BTEX 8021B	mg,	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/15/2023	ND	2.04	102	2.00	3.31	
Toluene*	<0.050	0.050	03/15/2023	ND	2.01	101	2.00	3.06	
Ethylbenzene*	<0.050	0.050	03/15/2023	ND	1.95	97.6	2.00	3.62	
Total Xylenes*	<0.150	0.150	03/15/2023	ND	5.99	99.9	6.00	3.74	
Total BTEX	<0.300	0.300	03/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	108	% 71.5-13	4						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/14/2023	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	03/14/2023	ND	187	93.5	200	1.21	
DRO >C10-C28*	<10.0	10.0	03/14/2023	ND	182	91.0	200	1.09	
EXT DRO >C28-C36	<10.0	10.0	03/14/2023	ND					
Surrogate: 1-Chlorooctane	93.0	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	97.6	% 49.1-14	8						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	Y	
Received:	03/13/2023		Sampling Date:	03/13/2023
Reported:	03/16/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06489,-103.6	65264		

Sample ID: SS 03 A 1' (H231134-03)

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	03/15/2023	ND	2.04	102	2.00	3.31	
Toluene*	<0.050	0.050	03/15/2023	ND	2.01	101	2.00	3.06	
Ethylbenzene*	<0.050	0.050	03/15/2023	ND	1.95	97.6	2.00	3.62	
Total Xylenes*	<0.150	0.150	03/15/2023	ND	5.99	99.9	6.00	3.74	
Total BTEX	<0.300	0.300	03/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	108	% 71.5-13	4						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/14/2023	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	03/14/2023	ND	187	93.5	200	1.21	
DRO >C10-C28*	<10.0	10.0	03/14/2023	ND	182	91.0	200	1.09	
EXT DRO >C28-C36	<10.0	10.0	03/14/2023	ND					
Surrogate: 1-Chlorooctane	92.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	96.8	% 49.1-14	8						

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Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	Y	
Received:	03/13/2023		Sampling Date:	03/13/2023
Reported:	03/16/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06489,-103.6	65264		

Sample ID: SS 08 0.5' (H231134-04)

BTEX 8021B	mg/	'kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/15/2023	ND	2.04	102	2.00	3.31	
Toluene*	<0.050	0.050	03/15/2023	ND	2.01	101	2.00	3.06	
Ethylbenzene*	<0.050	0.050	03/15/2023	ND	1.95	97.6	2.00	3.62	
Total Xylenes*	<0.150	0.150	03/15/2023	ND	5.99	99.9	6.00	3.74	
Total BTEX	<0.300	0.300	03/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	108 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	03/14/2023	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	03/14/2023	ND	187	93.5	200	1.21	
DRO >C10-C28*	<10.0	10.0	03/14/2023	ND	182	91.0	200	1.09	
EXT DRO >C28-C36	<10.0	10.0	03/14/2023	ND					
Surrogate: 1-Chlorooctane	87.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	92.0	% 49.1-14	8						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	Y	
Received:	03/13/2023		Sampling Date:	03/13/2023
Reported:	03/16/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06489,-103.0	65264		

Sample ID: SS 08 A 1' (H231134-05)

BTEX 8021B	mg/	′kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/15/2023	ND	2.04	102	2.00	3.31	
Toluene*	<0.050	0.050	03/15/2023	ND	2.01	101	2.00	3.06	
Ethylbenzene*	<0.050	0.050	03/15/2023	ND	1.95	97.6	2.00	3.62	
Total Xylenes*	<0.150	0.150	03/15/2023	ND	5.99	99.9	6.00	3.74	
Total BTEX	<0.300	0.300	03/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	104 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	03/14/2023	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	03/14/2023	ND	187	93.5	200	1.21	
DRO >C10-C28*	<10.0	10.0	03/14/2023	ND	182	91.0	200	1.09	
EXT DRO >C28-C36	<10.0	10.0	03/14/2023	ND					
Surrogate: 1-Chlorooctane	91.5	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	95.2	% 49.1-14	8						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	Y	
Received:	03/13/2023		Sampling Date:	03/13/2023
Reported:	03/16/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06489,-103.6	65264		

Sample ID: SS 09 0.5' (H231134-06)

BTEX 8021B	mg/	′kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/15/2023	ND	2.04	102	2.00	3.31	
Toluene*	<0.050	0.050	03/15/2023	ND	2.01	101	2.00	3.06	
Ethylbenzene*	<0.050	0.050	03/15/2023	ND	1.95	97.6	2.00	3.62	
Total Xylenes*	<0.150	0.150	03/15/2023	ND	5.99	99.9	6.00	3.74	
Total BTEX	<0.300	0.300	03/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	109 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/14/2023	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	03/14/2023	ND	187	93.5	200	1.21	
DRO >C10-C28*	<10.0	10.0	03/14/2023	ND	182	91.0	200	1.09	
EXT DRO >C28-C36	<10.0	10.0	03/14/2023	ND					
Surrogate: 1-Chlorooctane	90.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	94.2	% 49.1-14	8						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	ľ	
Received:	03/13/2023		Sampling Date:	03/13/2023
Reported:	03/16/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06489,-103.	.65264		

Sample ID: SS 09 A 1' (H231134-07)

BTEX 8021B	mg/	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/15/2023	ND	2.04	102	2.00	3.31	
Toluene*	<0.050	0.050	03/15/2023	ND	2.01	101	2.00	3.06	
Ethylbenzene*	<0.050	0.050	03/15/2023	ND	1.95	97.6	2.00	3.62	
Total Xylenes*	<0.150	0.150	03/15/2023	ND	5.99	99.9	6.00	3.74	
Total BTEX	<0.300	0.300	03/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	108	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	03/14/2023	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	03/14/2023	ND	187	93.5	200	1.21	
DRO >C10-C28*	<10.0	10.0	03/14/2023	ND	182	91.0	200	1.09	
EXT DRO >C28-C36	<10.0	10.0	03/14/2023	ND					
Surrogate: 1-Chlorooctane	102	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	109	% 49.1-14	8						

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*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	ľ	
Received:	03/13/2023		Sampling Date:	03/13/2023
Reported:	03/16/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06489,-103.	.65264		

Sample ID: SS 10 0.5' (H231134-08)

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	03/15/2023	ND	2.04	102	2.00	3.31	
Toluene*	<0.050	0.050	03/15/2023	ND	2.01	101	2.00	3.06	
Ethylbenzene*	<0.050	0.050	03/15/2023	ND	1.95	97.6	2.00	3.62	
Total Xylenes*	<0.150	0.150	03/15/2023	ND	5.99	99.9	6.00	3.74	
Total BTEX	<0.300	0.300	03/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	108	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	03/14/2023	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	03/14/2023	ND	187	93.5	200	1.21	
DRO >C10-C28*	<10.0	10.0	03/14/2023	ND	182	91.0	200	1.09	
EXT DRO >C28-C36	<10.0	10.0	03/14/2023	ND					
Surrogate: 1-Chlorooctane	84.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	88.2	% 49.1-14	8						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	ſŶ	
Received:	03/13/2023		Sampling Date:	03/13/2023
Reported:	03/16/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06489,-103.	65264		

Sample ID: SS 10 A 1' (H231134-09)

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	03/15/2023	ND	2.04	102	2.00	3.31	
Toluene*	<0.050	0.050	03/15/2023	ND	2.01	101	2.00	3.06	
Ethylbenzene*	<0.050	0.050	03/15/2023	ND	1.95	97.6	2.00	3.62	
Total Xylenes*	<0.150	0.150	03/15/2023	ND	5.99	99.9	6.00	3.74	
Total BTEX	<0.300	0.300	03/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	108	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/14/2023	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	03/14/2023	ND	187	93.5	200	1.21	
DRO >C10-C28*	<10.0	10.0	03/14/2023	ND	182	91.0	200	1.09	
EXT DRO >C28-C36	<10.0	10.0	03/14/2023	ND					
Surrogate: 1-Chlorooctane	87.3	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	91.9	% 49.1-14	8						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	ľ	
Received:	03/13/2023		Sampling Date:	03/13/2023
Reported:	03/16/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06489,-103.	.65264		

Sample ID: SS 11 0.5' (H231134-10)

BTEX 8021B	mg,	′kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/15/2023	ND	2.04	102	2.00	3.31	
Toluene*	<0.050	0.050	03/15/2023	ND	2.01	101	2.00	3.06	
Ethylbenzene*	<0.050	0.050	03/15/2023	ND	1.95	97.6	2.00	3.62	
Total Xylenes*	<0.150	0.150	03/15/2023	ND	5.99	99.9	6.00	3.74	
Total BTEX	<0.300	0.300	03/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	107	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	′kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/14/2023	ND	400	100	400	3.92	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/14/2023	ND	182	90.9	200	5.18	
DRO >C10-C28*	<10.0	10.0	03/14/2023	ND	155	77.6	200	0.136	
EXT DRO >C28-C36	<10.0	10.0	03/14/2023	ND					
Surrogate: 1-Chlorooctane	102	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	107	% 49.1-14	8						

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Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	Y	
Received:	03/13/2023		Sampling Date:	03/13/2023
Reported:	03/16/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06489,-103.	.65264		

Sample ID: SS 11 A 1' (H231134-11)

BTEX 8021B	mg/	′kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/15/2023	ND	2.04	102	2.00	3.31	
Toluene*	<0.050	0.050	03/15/2023	ND	2.01	101	2.00	3.06	
Ethylbenzene*	<0.050	0.050	03/15/2023	ND	1.95	97.6	2.00	3.62	
Total Xylenes*	<0.150	0.150	03/15/2023	ND	5.99	99.9	6.00	3.74	
Total BTEX	<0.300	0.300	03/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	106 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	03/14/2023	ND	400	100	400	3.92	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/14/2023	ND	182	90.9	200	5.18	
DRO >C10-C28*	<10.0	10.0	03/14/2023	ND	155	77.6	200	0.136	
EXT DRO >C28-C36	<10.0	10.0	03/14/2023	ND					
Surrogate: 1-Chlorooctane	92.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	94.8	% 49.1-14	8						

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

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

Received by OCD: 4/27/2023 1:49:19 PM

Relinquished By: Relinquished By: Relinquished By: Circle One) Sampler - UPS - Bus - Other:	Company Name: Ensolum, LLC Project Manager: Hadlie Gree Address: 3123 N341 Partice City: Cartsbad Project Xame: Mesa Dolph Project Name: Mesa Dolph Project Sampler Name: FOR UBUSE ONLY FOR UBUSE ONLY FOR UBUSE ONLY FOR UBUSE ONLY Sampler Name: SSO 1A SSO 3A	101 East Marian (575) 393-232
formance of services hereunder by Candidal regardless of whether such claim is too pafe: 30,000 Received By: Time: 0,000 Received By: 0,000 Received Received By: 0,000 Received By: 0,0	reen Parks Hwy State: NM Z Fax #: Project Owner: Project Owner: Phinn Depth (feet) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	aboratories 101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476
See hereunder by Codeval, regulates of Whether such dame based upon any of the andre and the subscription of the second data is based upon any of the andre and the second data is an emailed. Please provide Email a Temp. "C	P.O. #: P.O. #: Company: B TA Oil Attn: Bob Hall Address: I04 S Recos St City: Midland State: TX Zip: T9701 Phone #: 432.312.323 Fax #: Fax #: IX PRESERV. SAMPLING ISLUDGE I ACID/BASE: OTHER: 3/3/23 0935 I 005 I	
Verbal Result: Yes Yes Mo AddTPhone #: All Results are emailed. Please provide Email address: Mo AddTPhone #: All Results are emailed. Please provide Email address: Mo About Solution: Com MarcunO ensolum.com Mo About Solum.com Mo About Solum.com Namarks: Incl dent #: NAPP1303736433 All Solum.com TEMP Solum.com Temarks: Standard Bacteria (only) Sample Condition Temp. °C Turnaround Time: Standard Bacteria (only) Sample Condition Turnaround Time: Rush Cool Intact Observed Temp. °C Thermometer ID #113 Images to celey.keene@cardinallabsnm.com Iges to celey.keene@cardinallabsnm.com Solution Images to celey.keene@cardinallabsnm.com	ANALTSIS REQUES	CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 14 of 15

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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Project Manager: Hadile Company Name: Ensolum, LLC Phone #: 432.557.8895 Project #: 0302012020 Ha31134 Sampler Name: Project Location: Project Name: Address: Relinquished By: FOR LAB USE ONLY Relinquished By: LEASE NOTE: Liability and Da nalyses. All claims. Lab I.D. Sampler - UPS - Bus - Other: Delivered By: (Circle One) ice. In no event shall Cardinal be liable for incidental or con Carlsbad E 3122 Natil Parks Hwy including those for negligence and any other cause whatsoever shall be deemed 32. Mesa 101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476 32.06489 Sample I.D. SSILA Green Observed Temp. CA. 32 -103.652.64 Car Dolphin Fax #: Project Owner: State: Time 254 Bate: 3/3/33 Date: Depth ected Temp. *C 1.7: (feet) Time: Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com ZN nder by C Evennesua Zip: (G)RAB OR (C)OMP **Received By:** Received By # CONTAINERS 2140012 88220 GROUNDWATER unless made in writing and re Cool Intact WASTEWATER Sample Condition MATRIX × SOIL OIL SLUDGE ns, loss of use, P.O. #: State: Fax #: City: Attn: Phone #: 432.312.2203 Company: Address: 104 S Revos St OTHER PRESERV eived by Cardinal within 30 days ACID/BASE upon any of the above ICE / COOL Midland CHECKED BY: BILL TO loss of profits incu (Initials) OTHER BTA OIL Bob Hall Zip: 3/13/23 DATE SAMPLING ed by client, its subsidiaries 1970 affer 0905 All Results are emailed. Please provide Email address: tmorrissey@ensolum.com horeen@ensolum.com REMARKS: Verbal Result: Turnaround Time: TIME Thermometer ID #113 Incident pletion of the applicable TEMP 2 0 4 X BTEX # Chlorides 5 NAPP230373643 Standard 0.0 TPH R NO NO TR ANALYSIS Add'l Phone #: Bacteria (only) Sample Condition Cool Intact Ves Yes REQUEST S Corrected Temp. °C Observed Temp. °C

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City:



March 17, 2023

HADLIE GREEN ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD, NM 88220

RE: MESA DOLPHIN

Enclosed are the results of analyses for samples received by the laboratory on 03/15/23 14:30.

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



BTA 32.06489,-103.65264

Analytical Results For:

		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	Y	
Received:	03/15/2023		Sampling Date:	03/14/2023
Reported:	03/17/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez

Sample ID: FS01 1' (H231181-01)

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	03/15/2023	ND	2.14	107	2.00	1.24	
Toluene*	<0.050	0.050	03/15/2023	ND	2.14	107	2.00	1.48	
Ethylbenzene*	<0.050	0.050	03/15/2023	ND	2.23	112	2.00	1.26	
Total Xylenes*	<0.150	0.150	03/15/2023	ND	6.89	115	6.00	0.941	
Total BTEX	<0.300	0.300	03/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	108 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/16/2023	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	03/16/2023	ND	174	87.1	200	1.59	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	173	86.4	200	1.35	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	104 9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	116 9	% 49.1-14	8						

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*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	Y	
Received:	03/15/2023		Sampling Date:	03/14/2023
Reported:	03/17/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06489,-103.	65264		

Sample ID: FS02 1' (H231181-02)

BTEX 8021B	mg/	′kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/15/2023	ND	2.14	107	2.00	1.24	
Toluene*	<0.050	0.050	03/15/2023	ND	2.14	107	2.00	1.48	
Ethylbenzene*	<0.050	0.050	03/15/2023	ND	2.23	112	2.00	1.26	
Total Xylenes*	<0.150	0.150	03/15/2023	ND	6.89	115	6.00	0.941	
Total BTEX	<0.300	0.300	03/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	107 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	03/16/2023	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	03/16/2023	ND	174	87.1	200	1.59	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	173	86.4	200	1.35	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	95.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	105 9	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	Y	
Received:	03/15/2023		Sampling Date:	03/14/2023
Reported:	03/17/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06489,-103.	65264		

Sample ID: FS03 1' (H231181-03)

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	03/15/2023	ND	2.14	107	2.00	1.24	
Toluene*	<0.050	0.050	03/15/2023	ND	2.14	107	2.00	1.48	
Ethylbenzene*	<0.050	0.050	03/15/2023	ND	2.23	112	2.00	1.26	
Total Xylenes*	<0.150	0.150	03/15/2023	ND	6.89	115	6.00	0.941	
Total BTEX	<0.300	0.300	03/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	107	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	′kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/16/2023	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	03/16/2023	ND	174	87.1	200	1.59	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	173	86.4	200	1.35	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	96.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	106	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	Y	
Received:	03/15/2023		Sampling Date:	03/14/2023
Reported:	03/17/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06489,-103.	65264		

Sample ID: FS04 1' (H231181-04)

BTEX 8021B	mg,	kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/15/2023	ND	2.14	107	2.00	1.24	
Toluene*	<0.050	0.050	03/15/2023	ND	2.14	107	2.00	1.48	
Ethylbenzene*	<0.050	0.050	03/15/2023	ND	2.23	112	2.00	1.26	
Total Xylenes*	<0.150	0.150	03/15/2023	ND	6.89	115	6.00	0.941	
Total BTEX	<0.300	0.300	03/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	109	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	'kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	03/16/2023	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	03/16/2023	ND	174	87.1	200	1.59	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	173	86.4	200	1.35	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	98.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	109	% 49.1-14	8						

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*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	ľY	
Received:	03/15/2023		Sampling Date:	03/14/2023
Reported:	03/17/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06489,-103.	65264		

Sample ID: FS05 1' (H231181-05)

BTEX 8021B	mg/	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/15/2023	ND	2.14	107	2.00	1.24	
Toluene*	<0.050	0.050	03/15/2023	ND	2.14	107	2.00	1.48	
Ethylbenzene*	<0.050	0.050	03/15/2023	ND	2.23	112	2.00	1.26	
Total Xylenes*	<0.150	0.150	03/15/2023	ND	6.89	115	6.00	0.941	
Total BTEX	<0.300	0.300	03/15/2023	ND					
Surrogate: 4-Bromofluorobenzene (PID	109 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	03/16/2023	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	03/16/2023	ND	174	87.1	200	1.59	
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	173	86.4	200	1.35	
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND					
Surrogate: 1-Chlorooctane	95.2	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	106 9	% 49.1-14	8						

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*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	Y	
Received:	03/15/2023		Sampling Date:	03/14/2023
Reported:	03/17/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06489,-103.	65264		

Sample ID: FS06 1' (H231181-06)

BTEX 8021B	mg,	/kg	Analyze	d By: JH								
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier			
Benzene*	<0.050	0.050	03/15/2023	ND	2.14	107	2.00	1.24				
Toluene*	<0.050	0.050	03/15/2023	ND	2.14	107	2.00	1.48				
Ethylbenzene*	<0.050	0.050	03/15/2023	ND	2.23	112	2.00	1.26				
Total Xylenes*	<0.150	0.150	03/15/2023	ND	6.89	115	6.00	0.941				
Total BTEX	<0.300	0.300	03/15/2023	ND								
Surrogate: 4-Bromofluorobenzene (PID	107	% 71.5-13	4									
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: GM								
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier			
Chloride	16.0	16.0	03/16/2023	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	03/16/2023	ND	174	87.1	200	1.59				
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	173	86.4	200	1.35				
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND								
Surrogate: 1-Chlorooctane	Surrogate: 1-Chlorooctane 100 % 48.2-		4									
Surrogate: 1-Chlorooctadecane	111 9	% 49.1-14	8									

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	Y	
Received:	03/15/2023		Sampling Date:	03/14/2023
Reported:	03/17/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06489,-103.	65264		

Sample ID: FS07 1' (H231181-07)

BTEX 8021B	mg,	/kg	Analyze	d By: JH									
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier				
Benzene*	<0.050	0.050	03/15/2023	ND	2.14	107	2.00	1.24					
Toluene*	<0.050	0.050	03/15/2023	ND	2.14	107	2.00	1.48					
Ethylbenzene*	<0.050	0.050	03/15/2023	ND	2.23	112	2.00	1.26					
Total Xylenes*	<0.150	0.150	03/15/2023	ND	6.89	115	6.00	0.941					
Total BTEX	<0.300	0.300	03/15/2023	ND									
Surrogate: 4-Bromofluorobenzene (PID	107	% 71.5-13	4										
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: GM			/ True Value OC RPD Oualifie						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier				
Chloride	32.0	16.0	03/16/2023	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	03/16/2023	ND	174	87.1	200	1.59					
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	173	86.4	200	1.35					
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND									
Surrogate: 1-Chlorooctane	Surrogate: 1-Chlorooctane 96.1 % 48.2-1		4										
Surrogate: 1-Chlorooctadecane	107 :	% 49.1-14	8										

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	ľY	
Received:	03/15/2023		Sampling Date:	03/14/2023
Reported:	03/17/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06489,-103.	65264		

Sample ID: FS08 1' (H231181-08)

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	03/16/2023	ND	1.72	86.2	2.00	12.4					
Toluene*	<0.050	0.050	03/16/2023	ND	1.72	85.9	2.00	16.7					
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.72	86.0	2.00	14.5					
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.24	87.3	6.00	14.8					
Total BTEX	<0.300	0.300	03/16/2023	ND									
Surrogate: 4-Bromofluorobenzene (PID	106 9	% 71.5-13	4										
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: GM									
Analyte	Result	Reporting Limit	Analyzed	Method Blank E		% Recovery	True Value QC	RPD	Qualifier				
Chloride	16.0	16.0	03/16/2023	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	03/16/2023	ND	174	87.1	200	1.59					
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	173	86.4	200	1.35					
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND									
Surrogate: 1-Chlorooctane 96.		% 48.2-13	4										
Surrogate: 1-Chlorooctadecane	107 9	% 49.1-14	8										

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	ſY	
Received:	03/15/2023		Sampling Date:	03/14/2023
Reported:	03/17/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06489,-103.	65264		

Sample ID: FS09 1' (H231181-09)

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	03/16/2023	ND	1.72	86.2	2.00	12.4					
Toluene*	<0.050	0.050	03/16/2023	ND	1.72	85.9	2.00	16.7					
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.72	86.0	2.00	14.5					
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.24	87.3	6.00	14.8					
Total BTEX	<0.300	0.300	03/16/2023	ND									
Surrogate: 4-Bromofluorobenzene (PID	104	% 71.5-13	4										
Chloride, SM4500Cl-B	mg,	′kg	Analyze	d By: GM									
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier				
Chloride	32.0	16.0	03/16/2023	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	03/16/2023	ND	174	87.1	200	1.59					
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	173	86.4	200	1.35					
EXT DRO >C28-C36 <10.0		10.0	03/16/2023	ND									
Surrogate: 1-Chlorooctane	93.8	% 48.2-13	4										
Surrogate: 1-Chlorooctadecane	105	% 49.1-14	8										

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



		ENSOLUM HADLIE GREEN 3122 NATIONAL PARKS HW CARLSBAD NM, 88220 Fax To:	Y	
Received:	03/15/2023		Sampling Date:	03/14/2023
Reported:	03/17/2023		Sampling Type:	Soil
Project Name:	MESA DOLPHIN		Sampling Condition:	Cool & Intact
Project Number:	03C2012020		Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.06489,-103.	65264		

Sample ID: FS10 1' (H231181-10)

BTEX 8021B	mg,	/kg	Analyze	d By: JH/										
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier					
Benzene*	<0.050	0.050	03/16/2023	ND	1.72	86.2	2.00	12.4						
Toluene*	<0.050	0.050	03/16/2023	ND	1.72	85.9	2.00	16.7						
Ethylbenzene*	<0.050	0.050	03/16/2023	ND	1.72	86.0	2.00	14.5						
Total Xylenes*	<0.150	0.150	03/16/2023	ND	5.24	87.3	6.00	14.8						
Total BTEX	<0.300	0.300	03/16/2023	ND										
Surrogate: 4-Bromofluorobenzene (PID	107	% 71.5-13	4											
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: GM				True Value QC RPD Qualifie 400 3.77						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier					
Chloride	32.0	16.0	03/16/2023	ND	416	104	400	3.77						
TPH 8015M	mg/	/kg	Analyze	d By: MS	: MS									
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier					
GRO C6-C10*	<10.0	10.0	03/16/2023	ND	174	87.1	200	1.59						
DRO >C10-C28*	<10.0	10.0	03/16/2023	ND	173	86.4	200	1.35						
EXT DRO >C28-C36	<10.0	10.0	03/16/2023	ND										
Surrogate: 1-Chlorooctane	97.0	% 48.2-13	4											
Surrogate: 1-Chlorooctadecane	107	% 49.1-14	8											

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

QR-04	The RPD for the BS/BSD was outside of historical limits.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1	Relinquished By:	Refirmuished By:	PLEASE NOTE: Liability and Damages. Cardinal's liability and analyses. All claims including those for negligence and any ob- service. In no event shall Cardinal be liable for inclental or con	0	~ ~	L (6	ຐ	4	w	ىع	-	18181				on:	Project Name: Mo	Project #: 03C2	Phone #: 432.5	city: Carisbad	Address: 3122	Project Manager:	Company Name: Ensolum, LLC	101
Delivered By: (Circle One)	S		amages. Cardinal's liability and lose for negligence and any off nal be fiable for incidental or co	FSIO	FSON	1.051	FSOL	ES05	FS04	FS03	FSOZ	FSOI		Sample I.D.	10.	Meredith	0	Mesa Dolphin	0302012020	432.557.8895	2	National P	Hadlic Gree	solum, LLC	101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476
OPPART 2 North	Date: Time:	Pate: SISA3	t client's exclusive remedy vor her cause whatsoever shall be resequental damages, include one of services hereunder by	*								1,		Depth (feet)		Roberts	-103.65264	10	Project Owner:	Fax #:	State: NM	Parks Hwy	D		Hobbs, NM 882 AX (575) 393-24
Sample Condition	Received By:	Received By:	PLEASE NOTE: Liability and Damages. Cadenal's liability and clent's exclusive removes or waive an using movies on writing and received by Cardinal within 30 days after completion of the applic analyses. All claims including those for negligence and any other cause whatspeever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applic service. In no event shall Cardinal be liable for incidental or counce of analyses, including without limitation, usiness biterruptions, loss of use, or loss of profils incurred by client, its subsidiaries, service. In no event shall Cardinal be liable for incidental or counce of analyses, including without for cardinal regardless, of whether such claim is based upon any of the above stated reasons or otherwise.									CIX	# (GF W/ SC OI	L	MATRIX		4		••		Zip: 88220				40 76
ndition CHECKED BY: act (Initials)		KiOnku	e in writing and received by Cardinal within 30 interruptions, loss of use, or loss of profils incu er such claim is based upon any of the above	d in contract or toxt, shall be limited to the								X		UDGE THER : CID/BASE: E / COOL	PRESERV.	Fax #:	Phone #: 432.	State: \ X Zip:	1410	Address: 104 > YeLos	Attn: Dob	pany:	P.O. #:	BILL	
BY: Turnaround Time:) Thermometer ID #1	Incid	All Results are horeen@e	0 days after completion of th ocurred by client, its subsidiari ve stated reasons or otherwise	amount paid by the client for the	1535	1530	1/25	1010	1	10	1500	SIA123 1423	-	TIME	SAMPLING		432.512.2205		nd	Peros ST	2	1.10		10	
1d Time:	ent	orrissey	able	the	e							->	_	BTEY Chlorides					_						
Standard Rush	#: NAPP2	Source to the		4								->	<	TPH										-	
Bacteria (only) Cool Intact Yes Nc No	· NAPP2303736433		Add'I Phone #:												-										ANALVSIS REOLIEST
Bacteria (only) Sample Condition Cool Intact Observed Temp. °C U Yes Ves No No Corrected Temp. °C		nnoberts@ensolum.com																						-	IFST

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APPENDIX E

NMOCD Notifications

Released to Imaging: 7/20/2023 1:07:49 PM

From:	Enviro, OCD, EMNRD
То:	Hadlie Green
Cc:	Bratcher, Michael, EMNRD; Nobui, Jennifer, EMNRD
Subject:	RE: [EXTERNAL] BTA - Sampling Notification - Week of 03/06/2023
Date:	Thursday, March 2, 2023 9:10:14 AM
Attachments:	image006.png
	image007.png
	image008.png
	image009.png

[**EXTERNAL EMAIL**]

Hadlie,

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

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: Hadlie Green <hgreen@ensolum.com>
Sent: Thursday, March 2, 2023 6:56 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; Bob Hall <bhall@btaoil.com>
Subject: [EXTERNAL] BTA - Sampling Notification - Week of 03/06/2023

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

All,

BTA anticipates collecting confirmation samples at the following locations the week of March 6, 2023.

- Mesa Dolphin Produced Water Poly Line/ nAPP2303736433
- Mesa B East NGL Water Transfer Line/ nAPP2235558643

Thank you,



Hadlie Green Staff Geologist 432-557-8895 hgreen@ensolum.com Ensolum, LLC

From:	Enviro, OCD, EMNRD
To:	Hadlie Green
Subject:	RE: [EXTERNAL] BTA - Sampling Notification - Week of 03/13/2023
Date:	Wednesday, March 8, 2023 5:17:29 PM
Attachments:	image002.png
	image003.png
	image004.png
	image005.png

[**EXTERNAL EMAIL**]

No problem! Thank you for the clarification.

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: Hadlie Green <hgreen@ensolum.com>
Sent: Wednesday, March 8, 2023 4:17 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Nobui, Jennifer, EMNRD
Jennifer.Nobui@emnrd.nm.gov>
Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 03/13/2023

Hi,

My apologies, I didn't change the week date in the text itself. These sampling activities are scheduled for next week, March 13, 2023.

Thank you,



From: Enviro, OCD, EMNRD <<u>OCD.Enviro@emnrd.nm.gov</u>>
Sent: Wednesday, March 8, 2023 5:15 PM
To: Hadlie Green <<u>hgreen@ensolum.com</u>>
Cc: Bratcher, Michael, EMNRD <<u>mike.bratcher@emnrd.nm.gov</u>>; Nobui, Jennifer, EMNRD
<<u>Jennifer.Nobui@emnrd.nm.gov</u>>
Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 03/13/2023

[**EXTERNAL EMAIL**]

Hadlie,

Please be aware that notification requirements are **two business days**, per rule. Were you intending on giving notification for next week 3/13/2023? This, and all correspondence, should be included in the closure report to insure 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: Hadlie Green <<u>hgreen@ensolum.com</u>>
Sent: Wednesday, March 8, 2023 1:48 PM
To: Enviro, OCD, EMNRD <<u>OCD.Enviro@emnrd.nm.gov</u>>
Cc: Tacoma Morrissey <<u>tmorrissey@ensolum.com</u>>; Bob Hall <<u>bhall@btaoil.com</u>>
Subject: [EXTERNAL] BTA - Sampling Notification - Week of 03/13/2023

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

BTA anticipates collecting confirmation samples at the following locations the week of March 6, 2023.

- Mesa Dolphin Produced Water Poly Line/ nAPP2303736433
- Mesa B East NGL Water Transfer Line/ nAPP2235558643
- Mesa B West Burned Poly Line / nAPP2303737335

Thank you,



APPENDIX F

Final C-141

District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

Incident ID	nAPP2303736433
District RP	
Facility ID	fAPP2303735385
Application ID	

Release Notification

Responsible Party

Responsible Party: BTA Oil Producers, LLC	OGRID: 260297		
Contact Name: Bob Hall	Contact Telephone: 432-682-3753		
Contact email: bhall@btaoil.com	Incident # (assigned by OCD) nAPP2303736433		
Contact mailing address: 104 S. Pecos St., Midland, TX 79701			

Location of Release Source

Latitude: 32.06489 Longitude: -103.65264

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Mesa Dolphin – Poly Line Weld Leak	Site Type: Tank Battery
Date Release Discovered: 1/30/2023	API# (<i>if applicable</i>) Nearest well:

Unit Letter	Section	Township	Range	County
D	11	26S	32E	Lea

Surface Owner: State Federal Tribal Private (Name:)

Nature and Volume of Release

Crude Oil	rial(s) Released (Select all that apply and attach calculations or specific Volume Released (bbls)	Volume Recovered (bbls)
Produced Water	Volume Released (bbls) 23 BBL	Volume Recovered (bbls) 18 BBL
	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)
•	ly line used for produced water. Flowback cre e immediately. Leak stopped after line press	

used to recover 18 BW.

(Spill Calculation Spreadsheet attached.)

ceived by OCD: 4/27/2023 orm C-141	3 1:49:19 PM State of New Mexico			Pagea73 0
age 2	Oil Conservation Division	L	Incident ID	nAPP2303736433
	On Conservation Division		District RP	(40000000000000000000000000000000000000
			Facility ID	fAPP2303735385
		JL.	Application ID	
Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible	party consider t	his a major release	?
🗌 Yes 🗌 No				
	notice given to the OCD? By whom? To whom? NOR filed on 1/3/2023 via the NMOCD Permitting		hat means (phone,	email, etc)?
	Initial Respo	nse		
The responsible	party must undertake the following actions immediately unless	s they could create a	ı safety hazard that wou	ld result in injury
The source of the rele	ease has been stopped.			
The impacted area ha	as been secured to protect human health and the en	vironment.		
Released materials ha	ave been contained via the use of berms or dikes, a	absorbent pads.	or other containme	nt devices.
_	ecoverable materials have been removed and man			
has begun, please attach within a lined containmen I hereby certify that the info regulations all operators are public health or the environ failed to adequately investig	fAC the responsible party may commence remedia a narrative of actions to date. If remedial efforts int area (see $19.15.29.11(A)(5)(a)$ NMAC), please a rimation given above is true and complete to the best of required to report and/or file certain release notification ment. The acceptance of a C-141 report by the OCD do gate and remediate contamination that pose a threat to gr if a C-141 report does not relieve the operator of response	s have been succ attach all inform my knowledge ar ns and perform co bes not relieve the roundwater, surfac	cessfully completed nation needed for cl and understand that pur prective actions for re- operator of liability s ce water, human healt	d or if the release occurred losure evaluation. rsuant to OCD rules and cleases which may endanger should their operations have th or the environment. In
Printed Name: Bob Hal	I Title: Environmental Manager			
Signature: Bbl	Da	ite: 2/14/2023	ł	
email: bhall@btaoil.co	om Telephone: 432-682-3753			
OCD Only				
Received by: Joce	Plyn Harimon Date			

Location Mesa Dolphin - Poly Line Weld Leak API # Spill Date 1/30/2023

Spill Dimensions

ENTER - Length of Spill ENTER - Width of Spill ENTER - Saturation Depth of Spill

ENTER -	Porosity	Factor
---------	----------	--------

69	feet
69	feet
0.5	inches



0.01 99.99 0.0001

Oil Cut - Well Test / Vessel Throughput or Contents
Oil
Water
Calculated Oil Cut

Volume Recovered in Truck / Containment ENTER - Recovered Oil ENTER - Recovered Water

18 BBL	0	BBL
	18	BBL

Calculated Values
Release of Oil in Soil - Unrecovered
Release of Water in Soil - Unrecovered
Unrecovered Total Release

		0	BBL
		5	BBL
		5	BBL
			-

calculated

Calculated Values Total Release of Oil Total Release of Water Total Release

calculated	
0	BBL
23	BBL
23	BBL

Types of Soil	Porosity Factor
Gravel	0.25
Sand	0.20
Clay/silt/sand Mix	0.15
Clay	0.05
Caliche	0.03
Unknown	0.25

(Length X Width X Depth X 1 ft/12 in) X Porosity 5.615 ft³ / BBL

Х

Oil Cut (or Water Cut)

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:
BTA OIL PRODUCERS, LLC	260297
104 S Pecos	Action Number:
Midland, TX 79701	185770
	Action Type:
	[C-141] Release Corrective Action (C-141)
	Action Type:

CONDITIONS

Created By		Condition Date
jharimon	None	2/16/2023

CONDITIONS

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Action 185770

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Oil Conservation Division

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Incident ID	nAPP2303736433	
District RP		
Facility ID	fAPP2303735385	
Application ID		

Site Assessment/Characterization

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

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

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- \square Depth to water determination
- Determination of water sources and significant watercourses within ¹/₂-mile of the lateral extents of the release
- \boxtimes Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

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

Form C-141 Page 4	State of New Mexic Oil Conservation Divis	-	Incident ID District RP Facility ID Application ID	nAPP2303736433 fAPP2303735385
regulations all operators are public health or the environ failed to adequately investig addition, OCD acceptance of and/or regulations.	rmation given above is true and complete required to report and/or file certain relea ment. The acceptance of a C-141 report b ate and remediate contamination that pose f a C-141 report does not relieve the opera	se notifications and perfor y the OCD does not reliev e a threat to groundwater, ator of responsibility for c	rm corrective actions for re- re the operator of liability si surface water, human health ompliance with any other for	leases which may endanger hould their operations have h or the environment. In ederal, state, or local laws
Printed Name: Bob Ha	11	Title: Environmen	tal Manager	
Signature: Bell	ball	Date:4/27/20	23	
email:bhall@btaoil.cc	m	Telephone:432-68	2-3753	
OCD Only Received by: Jocely	/n Harimon	Date:	04/28/2023	

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Application ID

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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.

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

A scaled site and sampling diagram as described in 19.15.29.11 NMAC

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

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

Description of remediation activities

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

Printed Name:Bob Hall	Title:Environmental Manager					
Signature: Blifalf	Date:4/27/2023					
email:bhall@btaoil.com	Telephone:432-682-3753					
OCD Only						
Received by: Jocelyn Harimon	Date: 04/28/2023					
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>Nelson Velez</u>	Date: 07/20/2023					
Printed Name: Nelson Velez	Title: Environmental Specialist – Adv					

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

CONDITIONS

Operator:	OGRID:
BTA OIL PRODUCERS, LLC	260297
104 S Pecos	Action Number:
Midland, TX 79701	211362
	Action Type:
	[C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	7/20/2023

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Action 211362