ENSOLUM

August 15, 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
Rojo 20 21 Tank Battery
Incident Number nAPP2123554329
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 Rojo 20 21 Tank Battery (Site). The purpose of the excavation and soil sampling activities was to address impacts to soil resulting from the release of crude oil and produced water at the Site. Based on the excavation activities and laboratory analytical results from soil sampling events, BTA is submitting this *Closure Request*, describing remediation that has occurred and requesting closure for Incident Number nAPP2123554329.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit L, Section 34, Township 25 South, Range 33 East, in Lea County, New Mexico (32.08642°, -103.56457°) and is associated with oil and gas exploration and production operations on federal land managed by the Bureau of Land Management (BLM).

On August 23, 2021, a separator failure caused the liquids tank to overflow and result in the release of approximately 7 barrels (bbls) of crude oil and 20 bbls of produced water to release within the earthen tank containment, onto the surface of the well pad, and into the adjacent pasture. A vacuum truck was dispatched to the Site to recover free-standing fluids: approximately 5 bbls of crude oil and 15 bbls of produced water were recovered. BTA immediately reported the release to the New Mexico Oil Conservation Division (NMOCD) on August 23, 2021, and submitted a Release Notification Form C-141 (Form C-141) on September 14, 2021. The release was assigned Incident Number nAPP2123554329.

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-141s, 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 a recent soil boring drilled for determination of regional groundwater depth. On April 19, 2023, a boring (C-04732) was advanced to a depth of 106 feet bgs via air rotary drill rig. The borehole was located approximately 0.2 miles northwest of the Site and is depicted on Figure 1. A field geologist

logged and described soils continuously. The boring was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater beneath the Site is greater than 100 feet bgs. The borehole was properly abandoned 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 stream, located approximately 11,314 feet southwest 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 (low potential karst designation area). Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

A reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH was applied to the top 4 feet of the pasture area that was impacted by the release, per 19.15.29.13.D (1) NMAC for the top 4 feet of areas that will be reclaimed following remediation.

SITE ASSESSMENT ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

Between May 11, 2023, and May 26, 2023, Ensolum personnel were at the Site to evaluate the release extent based on information provided the Form C-141, photographs from the initial release response, and visual observations. No visible indications of the release were observed during the Site visit. Assessment soil samples SS01 through SS10 were collected within and around the inferred release extent from a depth of 0.5 feet bgs to assess for the presence or absence of impacted soil and confirm the lateral extent of the surface release. Additionally, potholes were advanced via backhoe to a depth of 4 feet bgs at the location of assessment samples SS05, SS06, and SS08 through SS10, to further assess for the presence or absence of impacted soil within the inferred release area. Soil from the potholes was field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Based on the absence of elevated field screening results, one discrete soil sample from the final pothole depth of 4 feet bgs was submitted for laboratory analysis from each pothole (SS05A, SS06A, and SS08A through SS10A). The inferred release area and soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Visual observations and field screening results for the potholes were logged on lithologic soil sampling logs which are included in Appendix B. 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 assessment soil samples SS01 through SS04, collected around the release extent, indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria and successfully defined the lateral extent of the release. Laboratory analytical results for assessment soil samples SS05/SS05A, SS06/SS06A, and SS08/SS08A through SS10/SS10A, collected at depths ranging from 0.5 feet to 4 feet bgs within the inferred release area, indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria. Laboratory analytical results for assessment sample SS07, collected near the release point at a depth of 0.5 feet bgs, indicated TPH concentrations exceeded the Site Closure Criteria. Based on laboratory analytical results for assessment sample SS07, excavation activities were warranted.

EXCAVATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

On May 31, 2023, Ensolum personnel were at the site to oversee excavation activities based on laboratory analytical results for assessment sample SS07. Excavation activities were performed utilizing a back-hoe and transport vehicles. 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 of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS05 were collected from the floor of the excavation at a depth of 1-foot bgs. Due to the shallow depth of the excavation, the sidewalls were incorporated into the floor samples. The soil samples were handled and analyzed following the same procedures as described above.

Laboratory analytical results for the excavation floor samples FS01 through FS05 indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria. The excavation extent and excavation soil sample locations are presented on Figure 3. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Appendix D.

The excavation area measured approximately 923 square feet. A total of approximately 34 cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported and properly disposed of at the OWL Landfill Services, LLC in Jal, New Mexico.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the impacted soil resulting from August 23, 2021, release event at the Site. Laboratory analytical results for the excavation soil samples indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria. Laboratory analytical results for the assessment soil samples, collected within and around the release extent, indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria and confirmed the absence of additional impacted soil. Based on the soil sample laboratory analytical results, no further remediation was required.

No visible indications of the release were observed. Initial response efforts, natural attenuation, and excavation of impacted soil have 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 nAPP2123554329. Notifications submitted to the NMOCD are included in Appendix E and the final Form C-141 is included in Appendix F.

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

Sincerely,
Ensolum, LLC

Ronni Hayes
Assistant Geologist

Daniel R. Moir, PG
Senior Managing Geologist

cc: Kelton Beaird, BTA
Nathan Sirgo, BTA
Bureau of Land Management

Appendices:

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

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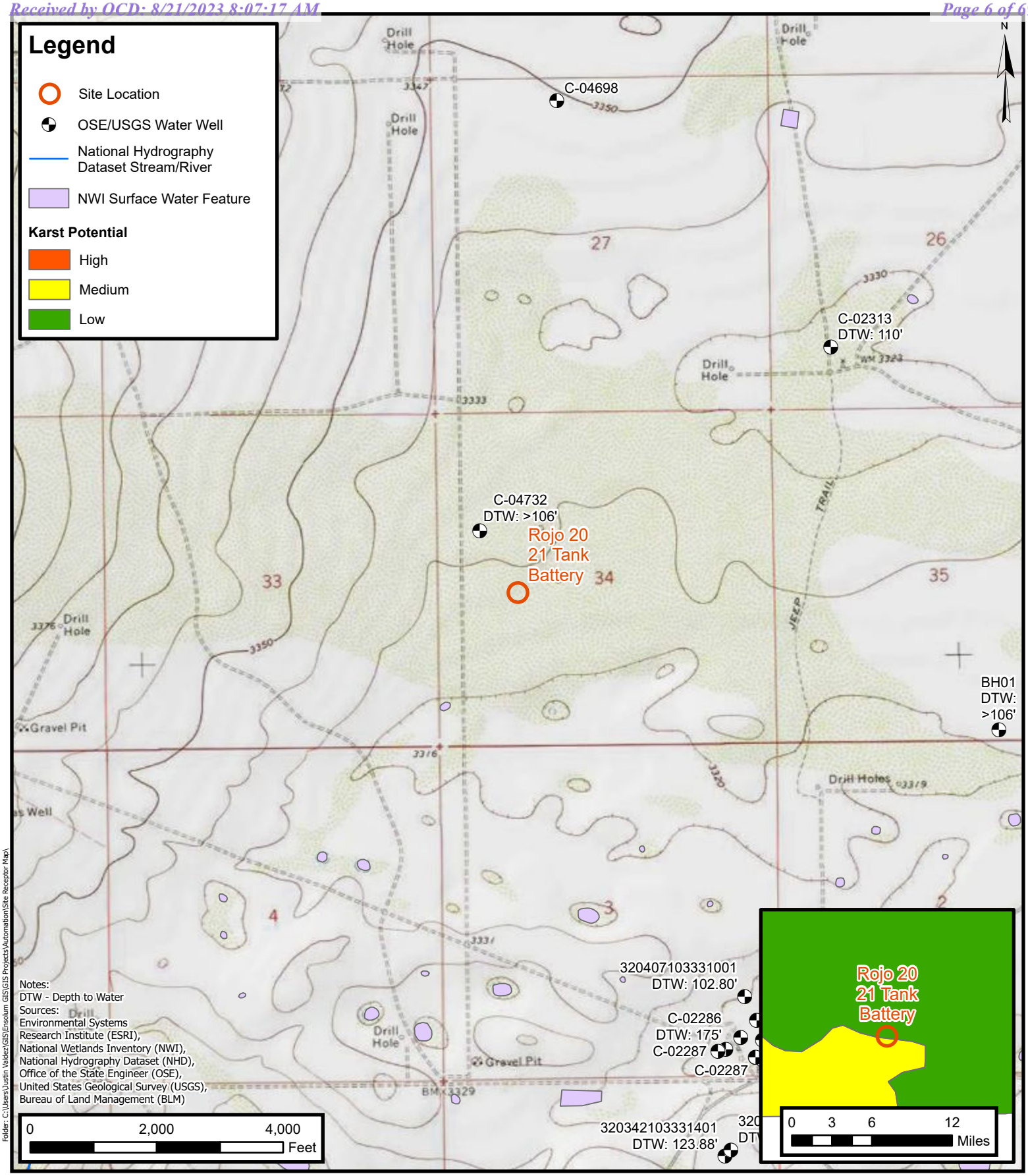
FIGURES



Folder: C:\Users\Justin Valdez\GIS\Ensolum GIS\GIS Projects\Automation\Site Receptor Map\

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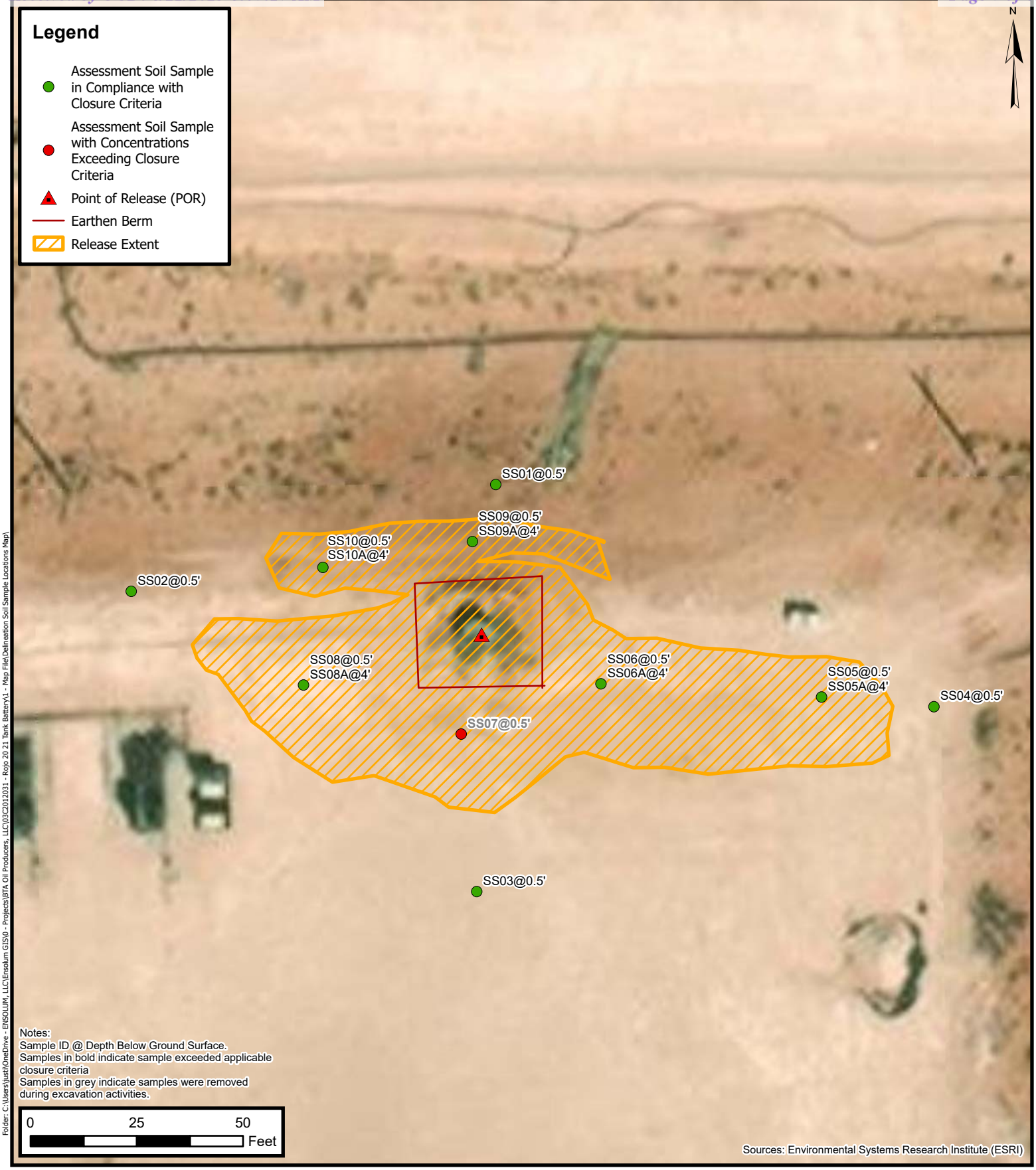
Site Receptor Map

BTA Oil Producers, LLC
Rojo 20 21 Tank Battery
Incident Number: nAPP2123554329
Unit L, Sec 34, T25S, R33E
Lea County, New Mexico

FIGURE 1



Folder: C:\Users\just\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\BTA Oil Producers, LLC\03C2012031 - Rojo 20 21 Tank Battery\1 - Map File\Delineation Soil Sample Locations Map\

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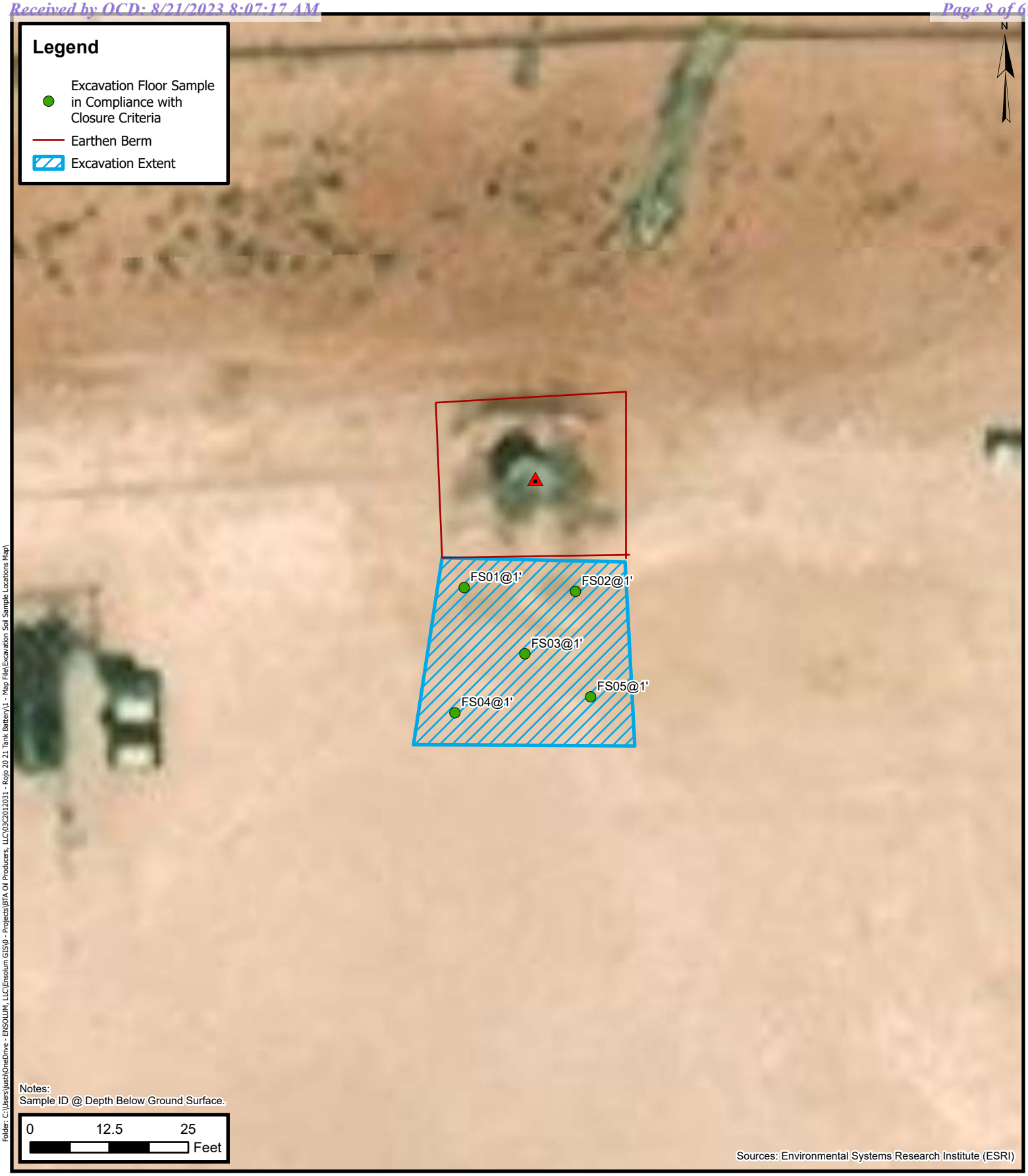
Assessment Soil Sample Locations

BTA Oil Producers, LLC
Rojo 20 21 Tank Battery
Incident Number: nAPP2123554329
Unit L, Sec 34, T25S, R33E
Lea County, New Mexico

FIGURE 2



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Excavation Soil Sample Locations

BTA Oil Producers, LLC
Rojo 20 21 Tank Battery
Incident Number: nAPP2123554329
Unit L, Sec 34, T25S, R33E
Lea County, New Mexico

FIGURE 3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Rojo 20 21 Tank Battery
BTA Oil Producers, LLC
Lea County, New Mexico

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 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Assessment Soil Samples										
SS01	05/11/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SS02	05/11/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SS03	05/11/2023	0.5	<0.050	<0.300	<10.0	18.2	<10.0	18.2	18.2	64.0
SS04	05/11/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SS05	05/11/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SS05A	05/26/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS06	05/11/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SS06A	05/26/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS07	05/11/2023	0.5	<0.050	<0.300	<10.0	11,600	2,610	**11,600**	**14,210**	1,010
SS08	05/11/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
SS08A	05/26/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SS09*	05/11/2023	0.5	<0.050	<0.300	<10.0	10.9	<10.0	10.9	10.9	96
SS09A	05/26/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
SS10*	05/26/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SS10A	05/26/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
Excavation Floor Soil Samples										
FS01	05/31/2023	1	<0.050	<0.300	<10.0	84.9	<10.0	84.9	84.9	32.0
FS02	05/31/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS03	05/31/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS04	05/31/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS05	05/31/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0

Notes:
bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
NMAC: New Mexico Administrative Code
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.
Grey text represents samples that have been excavated

GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
* indicates sample was collected in area to be reclaimed after remediation is complete; reclamation standard in the top 4 feet for TPH is 100 mg/kg and chloride is 600 mg/kg

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APPENDIX A

Referenced Well Records

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	Sample Name: C-04732	Date: 04/19/2023
	Site Name: Rojo 18 ELL	
	Incident Number: nAPP2222753156	
	Job Number: 03C2012007	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: J.falcomata	Method: Air Rotary
Coordinates: 32.089035, -103.566486	Hole Diameter: 5"	Total Depth: 106'

Comments: Soil boring was advanced to a total depth of 106' bgs. No water was observed within the soil boring after at least 72 hours. On 04/24/2023 the soil boring was plugged and abandoned using hydrated bentonite chips.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
								Note: Driller injected well with a water and soap mixture @ 55' to help stabilize well and prevent cave in. Due to collapse, well cased @ 102' with 2" polypipe casing.
Dry	-	-	N	-	-	10	SP-SM	(10') SAND: fine grained - medium grained, trace amounts small gravel, poorly graded, tan, no odor, non plastic non cohesive
Dry	-	-	N	-	-	20	SP-SM	(20') SAND: fine grained, silty, poorly graded, medium brown, no odor, non plastic, non cohesive.
Dry	-	-	N	-	-	30	SP-SM	(30') SAND: fine - medium grained, silty, trace amount small gravel, poorly graded, light brown, no odor, non plastic, non cohesive
Dry	-	-	N	-	-	40	SP-SM	(40') SAND: fine grained, silty, poorly graded, light to orangish brown, no odor, non plastic, non cohesive
Dry	-	-	N	-	-	50	SP-SM	(50') SAND: fine grained, silty, poorly graded, light to orangish brown, no odor, non plastic, non cohesive
Wet	-	-	N	-	-	60	SP-SM	(60') SAND: fine grained, silty, poorly graded, orangish brown, wet from injection, no odor, non plastic, non cohesive
Wet	-	-	N	-	-	70	SP-SM	(70') SAND: fine grained, silty, poorly graded, medium brown, wet from injection, no odor, non plastic, non cohesive
Wet	-	-	N	-	-	80	SP-SM	(80') SAND: fine grained, silty, poorly graded, medium brown, wet from injection, no odor, non plastic, non cohesive
Wet	-	-	N	-	-	90	SP-SM	(90') SAND: fine grained, silty, poorly graded, orangish brown, wet from injection, no odor, non plastic, non cohesive
Wet	-	-	N	-	-	100	SP-SM	(100') SAND: fine grained, silty, poorly graded, tan, wet from injection, no odor, non plastic, non cohesive
Wet	-	-	N	-	-	106	SP-SM	AA

Total Depth @ 106 feet bgs

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APPENDIX B

Lithologic Soil Sampling Logs

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	Sample Name: SS05	Date: 05/26/23
	Site Name: Rojo 20 21 Tank Battery	
	Incident Number: nAPP2123554329	
	Job Number: 03C2012031	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: DN	Method: Backhoe
Coordinates: 32.08642, -103.56457	Hole Diameter: NA	Total Depth: 4'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride tests performed with 1:4 dilution factor of soil to distilled water and 40% correction factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SP	0'-2' SAND, brown, poorly sorted, fine grains, dry, no odor, no staining.
D	<173	0.2	N	SS05	0.5	0.5		
D	<173	0.1	N	SS05A		1		
D	<173	0.3	N	SS05B		2	CCHE	2'-4' CALICHE, light brown, poorly sorted, sub-rounded grains, no odor, dry, no staining.
D	<173	0.1	N	SS05C		3		
D	<173	0.2	N	SS05D	4	4		
							TD	Total Depth @ 4' bgs

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	Sample Name: SS06	Date: 05/26/23
	Site Name: Rojo 20 21 Tank Battery	
	Incident Number: nAPP2123554329	
	Job Number: 03C2012031	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: DN	Method: Backhoe
Coordinates: 32.08642, -103.56457	Hole Diameter: NA	Total Depth: 4'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride tests performed with 1:4 dilution factor of soil to distilled water and 40% correction factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SP	0'-2' SAND, brown, poorly sorted, fine grains, dry, no odor, no staining.
D	151.2	0.7	N	SS06	0.5	0.5		
D	<173	0.2	N	SS06A		1		
D	<173	0.0	N	SS06B		2	CCHE	2'-4' CALICHE, light brown, poorly sorted, sub-rounded grains, no odor, dry, no staining, with some silt.
D	<173	0.4	N	SS06C		3		
D	<173	0.4	N	SS06D	4	4		
							TD	Total Depth @ 4' bgs

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	Sample Name: SS08	Date: 05/26/23
	Site Name: Rojo 20 21 Tank Battery	
	Incident Number: nAPP2123554329	
	Job Number: 03C2012031	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: DN	Method: Backhoe
Coordinates: 32.08642, -103.56457	Hole Diameter: NA	Total Depth: 4'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride tests performed with 1:4 dilution factor of soil to distilled water and 40% correction factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SP	0'-1' SAND, brown, poorly sorted, fine grains, dry, no odor, no staining.
D	218.4	5.3	N	SS08	0.5	0.5		
D	<173	0.3	N	SS08A		1	SP	1'-4' SAND, brown, poorly sorted, fine grains, dry, with sub-rounded small gravel grains. No odor, no staining
D	<173	0.3	N	SS08B		2		
D	<173	0.1	N	SS08C		3		
D	<173	0.6	N	SS08D	4	4		
							TD	Total Depth @ 4' bgs

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	Sample Name: SS09	Date: 05/26/23
	Site Name: Rojo 20 21 Tank Battery	
	Incident Number: nAPP2123554329	
	Job Number: 03C2012031	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: DN	Method: Backhoe
Coordinates: 32.08642, -103.56457	Hole Diameter: NA	Total Depth: 4'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride tests performed with 1:4 dilution factor of soil to distilled water and 40% correction factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SP	0'-2' SAND, brown, poorly sorted, fine grains, dry, no odor, no staining.
D	184.8	0.3	N	SS09	0.5	0.5		
D	173	0.2	N	SS09A		1		
D	358.4	0.1	N	SS09B		2	CCHE	2'-4' CALICHE, light brown, poorly sorted, sub-rounded grains, no odor, dry, no staining, with some silt.
D	246.4	0.4	N	SS09C		3		
D	173	0.1	N	SS09D	4	4		
							TD	Total Depth @ 4' bgs

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	Sample Name: SS10	Date: 05/26/23
	Site Name: Rojo 20 21 Tank Battery	
	Incident Number: nAPP2123554329	
	Job Number: 03C2012031	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: DN	Method: Backhoe
Coordinates: 32.08642, -103.56457	Hole Diameter: NA	Total Depth: 4'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride tests performed with 1:4 dilution factor of soil to distilled water and 40% correction factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SP	0'-2' SAND, brown, poorly sorted, fine grains, dry, no odor, no staining.
D	<173	0.1	N	SS10	0.5	0.5		
D	<173	0.1	N	SS10A		1		
D	<173	0.1	N	SS10B		2	CCHE	2'-4' CALICHE, light brown, poorly sorted, sub-rounded grains, no odor, dry, no staining, with some silt.
D	<173	0.1	N	SS10C		3		
D	<173	0.8	N	SS10D	4	4		
							TD	Total Depth @ 4' bgs

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APPENDIX C

Photographic Log

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Photographic Log
BTA Oil Producers LLC
Rojo 20 21 Tank Battery
Incident Number: nAPP2123554329

Photograph: 1 Date: 5/11/2023
Description: Initial assessment activities
View: Southwest

Photograph: 2 Date: 5/26/2023
Description: Delineation activities
View: Northeast

Photograph: 3 Date: 5/26/2023
Description: Delineation activities
View: Northeast

Photograph: 4 Date: 5/31/2023
Description: Excavation activities
View: Southeast

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APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

CARDINAL Laboratories

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

May 17, 2023

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: ROJO 20 21 TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 05/12/23 14:35.

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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
HADLIE GREEN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/12/2023	Sampling Date:	05/11/2023
Reported:	05/17/2023	Sampling Type:	Soil
Project Name:	ROJO 20 21 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012031	Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.08642,-103.56457		

Sample ID: SS 01 0.5' (H232403-01)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/15/2023	ND	2.11	106	2.00	2.73	
Toluene*	<0.050	0.050	05/15/2023	ND	2.17	109	2.00	0.935	
Ethylbenzene*	<0.050	0.050	05/15/2023	ND	2.13	107	2.00	0.976	
Total Xylenes*	<0.150	0.150	05/15/2023	ND	6.57	110	6.00	0.0201	
Total BTEX	<0.300	0.300	05/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	05/16/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/15/2023	ND	185	92.6	200	3.93	
DRO >C10-C28*	<10.0	10.0	05/15/2023	ND	194	96.9	200	0.0656	
EXT DRO >C28-C36	<10.0	10.0	05/15/2023	ND					

Surrogate: 1-Chlorooctane *98.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *126 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
HADLIE GREEN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/12/2023	Sampling Date:	05/11/2023
Reported:	05/17/2023	Sampling Type:	Soil
Project Name:	ROJO 20 21 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012031	Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.08642,-103.56457		

Sample ID: SS 02 0.5' (H232403-02)

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	05/15/2023	ND	2.11	106	2.00	2.73	
Toluene*	<0.050	0.050	05/15/2023	ND	2.17	109	2.00	0.935	
Ethylbenzene*	<0.050	0.050	05/15/2023	ND	2.13	107	2.00	0.976	
Total Xylenes*	<0.150	0.150	05/15/2023	ND	6.57	110	6.00	0.0201	
Total BTEX	<0.300	0.300	05/15/2023	ND					

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

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	05/16/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/15/2023	ND	185	92.6	200	3.93	
DRO >C10-C28*	<10.0	10.0	05/15/2023	ND	194	96.9	200	0.0656	
EXT DRO >C28-C36	<10.0	10.0	05/15/2023	ND					

Surrogate: 1-Chlorooctane *98.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *127 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
HADLIE GREEN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/12/2023	Sampling Date:	05/11/2023
Reported:	05/17/2023	Sampling Type:	Soil
Project Name:	ROJO 20 21 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012031	Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.08642,-103.56457		

Sample ID: SS 03 0.5' (H232403-03)

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	05/15/2023	ND	2.11	106	2.00	2.73	
Toluene*	<0.050	0.050	05/15/2023	ND	2.17	109	2.00	0.935	
Ethylbenzene*	<0.050	0.050	05/15/2023	ND	2.13	107	2.00	0.976	
Total Xylenes*	<0.150	0.150	05/15/2023	ND	6.57	110	6.00	0.0201	
Total BTEX	<0.300	0.300	05/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	05/16/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/15/2023	ND	185	92.6	200	3.93	
DRO >C10-C28*	**18.2**	10.0	05/15/2023	ND	194	96.9	200	0.0656	
EXT DRO >C28-C36	<10.0	10.0	05/15/2023	ND					

Surrogate: 1-Chlorooctane *88.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *109 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
HADLIE GREEN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/12/2023	Sampling Date:	05/11/2023
Reported:	05/17/2023	Sampling Type:	Soil
Project Name:	ROJO 20 21 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012031	Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.08642,-103.56457		

Sample ID: SS 04 0.5' (H232403-04)

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	05/15/2023	ND	2.11	106	2.00	2.73	
Toluene*	<0.050	0.050	05/15/2023	ND	2.17	109	2.00	0.935	
Ethylbenzene*	<0.050	0.050	05/15/2023	ND	2.13	107	2.00	0.976	
Total Xylenes*	<0.150	0.150	05/15/2023	ND	6.57	110	6.00	0.0201	
Total BTEX	<0.300	0.300	05/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	05/16/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/15/2023	ND	215	108	200	1.05	
DRO >C10-C28*	<10.0	10.0	05/15/2023	ND	201	100	200	1.17	
EXT DRO >C28-C36	<10.0	10.0	05/15/2023	ND					

Surrogate: 1-Chlorooctane *98.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *99.2 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
HADLIE GREEN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/12/2023	Sampling Date:	05/11/2023
Reported:	05/17/2023	Sampling Type:	Soil
Project Name:	ROJO 20 21 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012031	Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.08642,-103.56457		

Sample ID: SS 05 0.5' (H232403-05)

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	05/15/2023	ND	2.11	106	2.00	2.73	
Toluene*	<0.050	0.050	05/15/2023	ND	2.17	109	2.00	0.935	
Ethylbenzene*	<0.050	0.050	05/15/2023	ND	2.13	107	2.00	0.976	
Total Xylenes*	<0.150	0.150	05/15/2023	ND	6.57	110	6.00	0.0201	
Total BTEX	<0.300	0.300	05/15/2023	ND					

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

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	05/16/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/15/2023	ND	215	108	200	1.05	
DRO >C10-C28*	<10.0	10.0	05/15/2023	ND	201	100	200	1.17	
EXT DRO >C28-C36	<10.0	10.0	05/15/2023	ND					

Surrogate: 1-Chlorooctane *95.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *93.8 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
HADLIE GREEN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/12/2023	Sampling Date:	05/11/2023
Reported:	05/17/2023	Sampling Type:	Soil
Project Name:	ROJO 20 21 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012031	Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.08642,-103.56457		

Sample ID: SS 06 0.5' (H232403-06)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/15/2023	ND	2.11	106	2.00	2.73	
Toluene*	<0.050	0.050	05/15/2023	ND	2.17	109	2.00	0.935	
Ethylbenzene*	<0.050	0.050	05/15/2023	ND	2.13	107	2.00	0.976	
Total Xylenes*	<0.150	0.150	05/15/2023	ND	6.57	110	6.00	0.0201	
Total BTEX	<0.300	0.300	05/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	05/16/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/15/2023	ND	215	108	200	1.05	
DRO >C10-C28*	<10.0	10.0	05/15/2023	ND	201	100	200	1.17	
EXT DRO >C28-C36	<10.0	10.0	05/15/2023	ND					

Surrogate: 1-Chlorooctane *113 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *113 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
HADLIE GREEN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/12/2023	Sampling Date:	05/11/2023
Reported:	05/17/2023	Sampling Type:	Soil
Project Name:	ROJO 20 21 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012031	Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.08642,-103.56457		

Sample ID: SS 07 0.5' (H232403-07)

BTEX 8021B mg/kg Analyzed By: JH/ S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/15/2023	ND	2.11	106	2.00	2.73	
Toluene*	<0.050	0.050	05/15/2023	ND	2.17	109	2.00	0.935	
Ethylbenzene*	<0.050	0.050	05/15/2023	ND	2.13	107	2.00	0.976	
Total Xylenes*	<0.150	0.150	05/15/2023	ND	6.57	110	6.00	0.0201	
Total BTEX	<0.300	0.300	05/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *136 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1010**	16.0	05/16/2023	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS S-06

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<100	100	05/16/2023	ND	215	108	200	1.05	
DRO >C10-C28*	**11600**	100	05/16/2023	ND	201	100	200	1.17	
EXT DRO >C28-C36	**2610**	100	05/16/2023	ND					

Surrogate: 1-Chlorooctane *103 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *327 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
HADLIE GREEN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/12/2023	Sampling Date:	05/11/2023
Reported:	05/17/2023	Sampling Type:	Soil
Project Name:	ROJO 20 21 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012031	Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.08642,-103.56457		

Sample ID: SS 08 0.5' (H232403-08)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/15/2023	ND	2.11	106	2.00	2.73	
Toluene*	<0.050	0.050	05/15/2023	ND	2.17	109	2.00	0.935	
Ethylbenzene*	<0.050	0.050	05/15/2023	ND	2.13	107	2.00	0.976	
Total Xylenes*	<0.150	0.150	05/15/2023	ND	6.57	110	6.00	0.0201	
Total BTEX	<0.300	0.300	05/15/2023	ND					

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

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	05/16/2023	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	05/15/2023	ND	215	108	200	1.05	
DRO >C10-C28*	<10.0	10.0	05/15/2023	ND	201	100	200	1.17	
EXT DRO >C28-C36	<10.0	10.0	05/15/2023	ND					

Surrogate: 1-Chlorooctane *108 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *110 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
HADLIE GREEN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	05/12/2023	Sampling Date:	05/11/2023
Reported:	05/17/2023	Sampling Type:	Soil
Project Name:	ROJO 20 21 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012031	Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.08642,-103.56457		

Sample ID: SS 09 0.5' (H232403-09)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/15/2023	ND	2.11	106	2.00	2.73	
Toluene*	<0.050	0.050	05/15/2023	ND	2.17	109	2.00	0.935	
Ethylbenzene*	<0.050	0.050	05/15/2023	ND	2.13	107	2.00	0.976	
Total Xylenes*	<0.150	0.150	05/15/2023	ND	6.57	110	6.00	0.0201	
Total BTEX	<0.300	0.300	05/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	05/16/2023	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	05/15/2023	ND	215	108	200	1.05	
DRO >C10-C28*	**10.9**	10.0	05/15/2023	ND	201	100	200	1.17	
EXT DRO >C28-C36	<10.0	10.0	05/15/2023	ND					

Surrogate: 1-Chlorooctane *109 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *109 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC	**BILL TO**
Project Manager: Hadlie Green	P.O. #:
Address: 3122 National Parks Hwy	Company: BTA Oil
City: Carlsbad State: NM Zip: 88220	Attn: Kevin Jones
Phone #: 432-557-8895 Fax #:	Address: 104 S Pecos St
Project #: 03C2012031 Project Owner: BTA Oil Producers	City: Midland
Project Name: Rojo 20 21 Tank Battery	State: TX Zip: 79701
Project Location: 32.08642, -103.56457	Phone #: 432-312-2203
Sampler Name: Ronni Hayes	Fax #:

Lab I.D. (FOR LAB USE ONLY)	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	BTEX	TPH	Cl⁻
H232403																		
1	SS01	0.5'	G	1			X					X		5/11/23	1015	X	X	X
2	SS02	↓	↓	↓			↓					↓		↓	1020	↓	↓	↓
3	SS03	↓	↓	↓			↓					↓		↓	1025	↓	↓	↓
4	SS04	↓	↓	↓			↓					↓		↓	1030	↓	↓	↓
5	SS05	↓	↓	↓			↓					↓		↓	1035	↓	↓	↓
6	SS06	↓	↓	↓			↓					↓		↓	1040	↓	↓	↓
7	SS07	↓	↓	↓			↓					↓		↓	1045	↓	↓	↓
8	SS08	↓	↓	↓			↓					↓		↓	1050	↓	↓	↓
9	SS09	↓	↓	↓			↓					↓		↓	1055	↓	↓	↓

RH 5/11/23

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

Relinquished By: [signature]	Date: 5-12-23 Time: 1435	Received By: Tamara Oldaker	Verbal Result: ☐ Yes ☐ No Add'l Phone #: All Results are emailed. Please provide Email address:
Relinquished By:	Date: Time:	Received By:	REMARKS:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 4.4 Corrected Temp. °C 3.8	Sample Condition Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No; CHECKED BY: (Initials) [initials]	Turnaround Time: Standard ☒ Rush ☐; Thermometer ID #113 Correction Factor -0.5°C; Bacteria (only) Sample Condition Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.2 10/07/21

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

CARDINAL Laboratories

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

June 05, 2023

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: ROJO 20 21 TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 06/02/23 8:34.

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

Cardinal Laboratories is 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,

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
HADLIE GREEN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/02/2023	Sampling Date:	05/31/2023
Reported:	06/05/2023	Sampling Type:	Soil
Project Name:	ROJO 20 21 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012031	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.08642,-103.56457		

Sample ID: FS 01 1' (H232792-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/02/2023	ND	2.19	109	2.00	4.37	
Toluene*	<0.050	0.050	06/02/2023	ND	2.26	113	2.00	6.78	
Ethylbenzene*	<0.050	0.050	06/02/2023	ND	2.49	124	2.00	1.28	
Total Xylenes*	<0.150	0.150	06/02/2023	ND	7.45	124	6.00	1.63	
Total BTEX	<0.300	0.300	06/02/2023	ND					

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

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	06/02/2023	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2023	ND	180	90.1	200	2.71	
DRO >C10-C28*	**84.9**	10.0	06/02/2023	ND	171	85.4	200	3.35	
EXT DRO >C28-C36	<10.0	10.0	06/02/2023	ND					

Surrogate: 1-Chlorooctane *101 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *107 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

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

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
HADLIE GREEN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/02/2023	Sampling Date:	05/31/2023
Reported:	06/05/2023	Sampling Type:	Soil
Project Name:	ROJO 20 21 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012031	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.08642,-103.56457		

Sample ID: FS 02 1' (H232792-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/02/2023	ND	2.19	109	2.00	4.37	
Toluene*	<0.050	0.050	06/02/2023	ND	2.26	113	2.00	6.78	
Ethylbenzene*	<0.050	0.050	06/02/2023	ND	2.49	124	2.00	1.28	
Total Xylenes*	<0.150	0.150	06/02/2023	ND	7.45	124	6.00	1.63	
Total BTEX	<0.300	0.300	06/02/2023	ND					

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

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/02/2023	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2023	ND	180	90.1	200	2.71	
DRO >C10-C28*	<10.0	10.0	06/02/2023	ND	171	85.4	200	3.35	
EXT DRO >C28-C36	<10.0	10.0	06/02/2023	ND					

Surrogate: 1-Chlorooctane *98.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *101 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

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

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
HADLIE GREEN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/02/2023	Sampling Date:	05/31/2023
Reported:	06/05/2023	Sampling Type:	Soil
Project Name:	ROJO 20 21 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012031	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.08642,-103.56457		

Sample ID: FS 03 1' (H232792-03)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/02/2023	ND	2.19	109	2.00	4.37	
Toluene*	<0.050	0.050	06/02/2023	ND	2.26	113	2.00	6.78	
Ethylbenzene*	<0.050	0.050	06/02/2023	ND	2.49	124	2.00	1.28	
Total Xylenes*	<0.150	0.150	06/02/2023	ND	7.45	124	6.00	1.63	
Total BTEX	<0.300	0.300	06/02/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	06/02/2023	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2023	ND	180	90.1	200	2.71	
DRO >C10-C28*	<10.0	10.0	06/02/2023	ND	171	85.4	200	3.35	
EXT DRO >C28-C36	<10.0	10.0	06/02/2023	ND					

Surrogate: 1-Chlorooctane *104 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *107 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

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

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
HADLIE GREEN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/02/2023	Sampling Date:	05/31/2023
Reported:	06/05/2023	Sampling Type:	Soil
Project Name:	ROJO 20 21 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012031	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.08642,-103.56457		

Sample ID: FS 04 1' (H232792-04)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/02/2023	ND	2.19	109	2.00	4.37	
Toluene*	<0.050	0.050	06/02/2023	ND	2.26	113	2.00	6.78	
Ethylbenzene*	<0.050	0.050	06/02/2023	ND	2.49	124	2.00	1.28	
Total Xylenes*	<0.150	0.150	06/02/2023	ND	7.45	124	6.00	1.63	
Total BTEX	<0.300	0.300	06/02/2023	ND					

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

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	06/02/2023	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2023	ND	180	90.1	200	2.71	
DRO >C10-C28*	<10.0	10.0	06/02/2023	ND	171	85.4	200	3.35	
EXT DRO >C28-C36	<10.0	10.0	06/02/2023	ND					

Surrogate: 1-Chlorooctane *99.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *103 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

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

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
HADLIE GREEN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/02/2023	Sampling Date:	05/31/2023
Reported:	06/05/2023	Sampling Type:	Soil
Project Name:	ROJO 20 21 TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C2012031	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.08642,-103.56457		

Sample ID: FS 05 1' (H232792-05)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/02/2023	ND	2.19	109	2.00	4.37	
Toluene*	<0.050	0.050	06/02/2023	ND	2.26	113	2.00	6.78	
Ethylbenzene*	<0.050	0.050	06/02/2023	ND	2.49	124	2.00	1.28	
Total Xylenes*	<0.150	0.150	06/02/2023	ND	7.45	124	6.00	1.63	
Total BTEX	<0.300	0.300	06/02/2023	ND					

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

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	06/02/2023	ND	416	104	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/02/2023	ND	180	90.1	200	2.71	
DRO >C10-C28*	<10.0	10.0	06/02/2023	ND	171	85.4	200	3.35	
EXT DRO >C28-C36	<10.0	10.0	06/02/2023	ND					

Surrogate: 1-Chlorooctane *98.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *103 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

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

CARDINAL Laboratories

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

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

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

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC	BILL TO
Project Manager: Hadlie Green	P.O. #:
Address: 3122 National Parks Hwy	Company: BTA Oil
City: Carlsbad State: NM Zip: 88220	Attn: Kevin Jones
Phone #: 432 557 8895 Fax #:	Address: 104 S. Pecos St
Project #: 03C2012031 Project Owner:	City: Midland
Project Name: Rojo 2021 Tank Battery	State: TX Zip: 79701
Project Location: 32.0364 2, -103.56457	Phone #:
Sampler Name: Dmitry N. Kanorov	Fax #:

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX	GRO + DRO	CHLORIDES
H232792																		
1	FS01	1	C	1			X					X		5/31/23	1320	X	X	X
2	FS02														1330			
3	FS03														1340			
4	FS04														1350			
5	FS05	↓	↓	↓			↓					↓		↓	1400	↓	↓	↓

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

Relinquished By: DN	Date: 6/2/23 Time: 0708	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: 6-2-23 Time: 0834	Received By: Rodriguez	All Results are emailed. Please provide Email address: hgreen@ensolum.com, dn.kanorov@ensolum.com
			REMARKS:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C = 0.4 Corrected Temp. °C = 1.0	Sample Condition Cool: ☐ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) SR
			Turnaround Time: Standard ☒ Rush ☐ Thermometer ID #113 Correction Factor -0.5°C
			Bacteria (only) Sample Condition Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.2 10/07/21

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

CARDINAL Laboratories

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

June 22, 2023

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: ROJO 20 21 TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 05/31/23 13:00.

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

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

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

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

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

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

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: ROJO 20 21 TANK BATTERY Project Number: 03C2012031 Project Manager: HADLIE GREEN Fax To:	Reported: 22-Jun-23 16:24

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS 05 A 4'	H232756-01	Soil	26-May-23 09:50	31-May-23 13:00
SS 06 A 4'	H232756-02	Soil	26-May-23 10:30	31-May-23 13:00
SS 08 A 4'	H232756-03	Soil	26-May-23 11:10	31-May-23 13:00
SS 09 A 4'	H232756-04	Soil	26-May-23 11:50	31-May-23 13:00
SS 10 0.5'	H232756-05	Soil	26-May-23 12:00	31-May-23 13:00
SS 10 A 4'	H232756-06	Soil	26-May-23 12:40	31-May-23 13:00

06/22/23 - Client changed the sample IDs (see COC). This is the revised report and will replace the one sent on 06/02/23.

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: ROJO 20 21 TANK BATTERY Project Number: 03C2012031 Project Manager: HADLIE GREEN Fax To:	Reported: 22-Jun-23 16:24

SS 05 A 4'

H232756-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**32.0**		16.0	mg/kg	4	3053147	AC	01-Jun-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*105 %*	*71.5-134*		*3053138*	JH/	*01-Jun-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3053133	MS	01-Jun-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3053133	MS	01-Jun-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3053133	MS	01-Jun-23	8015B	
Surrogate: 1-Chlorooctane			*87.2 %*	*48.2-134*		*3053133*	MS	*01-Jun-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*91.5 %*	*49.1-148*		*3053133*	MS	*01-Jun-23*	*8015B*	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: ROJO 20 21 TANK BATTERY Project Number: 03C2012031 Project Manager: HADLIE GREEN Fax To:	Reported: 22-Jun-23 16:24

SS 06 A 4'

H232756-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**32.0**		16.0	mg/kg	4	3053147	AC	01-Jun-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*106 %*	*71.5-134*		*3053138*	JH/	*01-Jun-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3053133	MS	01-Jun-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3053133	MS	01-Jun-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3053133	MS	01-Jun-23	8015B	
Surrogate: 1-Chlorooctane			*83.5 %*	*48.2-134*		*3053133*	MS	*01-Jun-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*91.9 %*	*49.1-148*		*3053133*	MS	*01-Jun-23*	*8015B*	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: ROJO 20 21 TANK BATTERY Project Number: 03C2012031 Project Manager: HADLIE GREEN Fax To:	Reported: 22-Jun-23 16:24

SS 08 A 4'

H232756-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**48.0**		16.0	mg/kg	4	3053147	AC	01-Jun-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*106 %*	*71.5-134*		*3053138*	JH/	*01-Jun-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3053133	MS	01-Jun-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3053133	MS	01-Jun-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3053133	MS	01-Jun-23	8015B	
Surrogate: 1-Chlorooctane			*78.9 %*	*48.2-134*		*3053133*	MS	*01-Jun-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*87.7 %*	*49.1-148*		*3053133*	MS	*01-Jun-23*	*8015B*	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: ROJO 20 21 TANK BATTERY Project Number: 03C2012031 Project Manager: HADLIE GREEN Fax To:	Reported: 22-Jun-23 16:24

SS 09 A 4'

H232756-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**112**		16.0	mg/kg	4	3053147	AC	01-Jun-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*107 %*	*71.5-134*		*3053138*	JH/	*01-Jun-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3053133	MS	01-Jun-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3053133	MS	01-Jun-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3053133	MS	01-Jun-23	8015B	
Surrogate: 1-Chlorooctane			*86.6 %*	*48.2-134*		*3053133*	MS	*01-Jun-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*93.0 %*	*49.1-148*		*3053133*	MS	*01-Jun-23*	*8015B*	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: ROJO 20 21 TANK BATTERY Project Number: 03C2012031 Project Manager: HADLIE GREEN Fax To:	Reported: 22-Jun-23 16:24

SS 10 0.5'

H232756-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**64.0**		16.0	mg/kg	4	3053147	AC	01-Jun-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*108 %*	*71.5-134*		*3053138*	JH/	*01-Jun-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3053133	MS	01-Jun-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3053133	MS	01-Jun-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3053133	MS	01-Jun-23	8015B	
Surrogate: 1-Chlorooctane			*74.2 %*	*48.2-134*		*3053133*	MS	*01-Jun-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*80.1 %*	*49.1-148*		*3053133*	MS	*01-Jun-23*	*8015B*	

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CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: ROJO 20 21 TANK BATTERY Project Number: 03C2012031 Project Manager: HADLIE GREEN Fax To:	Reported: 22-Jun-23 16:24

SS 10 A 4'

H232756-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**48.0**		16.0	mg/kg	4	3053147	AC	01-Jun-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3053138	JH/	01-Jun-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*104 %*	*71.5-134*		*3053138*	JH/	*01-Jun-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3053133	MS	01-Jun-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3053133	MS	01-Jun-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3053133	MS	01-Jun-23	8015B	
Surrogate: 1-Chlorooctane			*89.1 %*	*48.2-134*		*3053133*	MS	*01-Jun-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*98.4 %*	*49.1-148*		*3053133*	MS	*01-Jun-23*	*8015B*	

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CARDINAL Laboratories

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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: ROJO 20 21 TANK BATTERY Project Number: 03C2012031 Project Manager: HADLIE GREEN Fax To:	Reported: 22-Jun-23 16:24

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3053147 - 1:4 DI Water										
Blank (3053147-BLK1)				Prepared & Analyzed: 31-May-23						
Chloride	ND	16.0	mg/kg							
LCS (3053147-BS1)				Prepared & Analyzed: 31-May-23						
Chloride	384	16.0	mg/kg	400		96.0	80-120			
LCS Dup (3053147-BSD1)				Prepared & Analyzed: 31-May-23						
Chloride	400	16.0	mg/kg	400		100	80-120	4.08	20	

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CARDINAL Laboratories

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Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: ROJO 20 21 TANK BATTERY Project Number: 03C2012031 Project Manager: HADLIE GREEN Fax To:	Reported: 22-Jun-23 16:24

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3053138 - Volatiles										
Blank (3053138-BLK1)				Prepared: 31-May-23 Analyzed: 01-Jun-23						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0536*		mg/kg	*0.0500*		*107*	*71.5-134*			
LCS (3053138-BS1)				Prepared: 31-May-23 Analyzed: 01-Jun-23						
Benzene	2.04	0.050	mg/kg	2.00		102	81.4-118			
Toluene	2.10	0.050	mg/kg	2.00		105	88.7-121			
Ethylbenzene	2.03	0.050	mg/kg	2.00		102	86.1-120			
m,p-Xylene	4.29	0.100	mg/kg	4.00		107	88.2-124			
o-Xylene	2.04	0.050	mg/kg	2.00		102	84.9-118			
Total Xylenes	6.33	0.150	mg/kg	6.00		105	87.3-122			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0529*		mg/kg	*0.0500*		*106*	*71.5-134*			
LCS Dup (3053138-BSD1)				Prepared: 31-May-23 Analyzed: 01-Jun-23						
Benzene	2.21	0.050	mg/kg	2.00		111	81.4-118	8.36	15.8	
Toluene	2.28	0.050	mg/kg	2.00		114	88.7-121	8.54	15.9	
Ethylbenzene	2.21	0.050	mg/kg	2.00		111	86.1-120	8.51	16	
m,p-Xylene	4.61	0.100	mg/kg	4.00		115	88.2-124	7.05	16.2	
o-Xylene	2.17	0.050	mg/kg	2.00		108	84.9-118	6.28	16.7	
Total Xylenes	6.77	0.150	mg/kg	6.00		113	87.3-122	6.80	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0526*		mg/kg	*0.0500*		*105*	*71.5-134*			

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*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: ROJO 20 21 TANK BATTERY Project Number: 03C2012031 Project Manager: HADLIE GREEN Fax To:	Reported: 22-Jun-23 16:24

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3053133 - General Prep - Organics										
Blank (3053133-BLK1)				Prepared: 31-May-23 Analyzed: 01-Jun-23						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*44.1*		mg/kg	*49.6*		*89.0*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*51.9*		mg/kg	*50.0*		*104*	*49.1-148*			
LCS (3053133-BS1)				Prepared: 31-May-23 Analyzed: 01-Jun-23						
GRO C6-C10	157	10.0	mg/kg	200		78.6	78.5-124			
DRO >C10-C28	164	10.0	mg/kg	200		81.9	72.5-126			
Total TPH C6-C28	321	10.0	mg/kg	400		80.2	77.6-123			
Surrogate: 1-Chlorooctane	*40.7*		mg/kg	*49.6*		*82.2*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*44.1*		mg/kg	*50.0*		*88.2*	*49.1-148*			
LCS Dup (3053133-BSD1)				Prepared: 31-May-23 Analyzed: 01-Jun-23						
GRO C6-C10	160	10.0	mg/kg	200		80.2	78.5-124	2.02	17.7	
DRO >C10-C28	163	10.0	mg/kg	200		81.4	72.5-126	0.535	21	
Total TPH C6-C28	323	10.0	mg/kg	400		80.8	77.6-123	0.725	18.5	
Surrogate: 1-Chlorooctane	*40.6*		mg/kg	*49.6*		*81.9*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*42.3*		mg/kg	*50.0*		*84.7*	*49.1-148*			

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Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC	**BILL TO**
Project Manager: Hadlie Green	P.O. #:
Address: 601 N. Marienfeld St. STE 400	Company: BTA Oil
City: Midland State: TX Zip: 79701	Attn: Kevin Jones
Phone #: 432-557-8895 Fax #:	Address: 104 S Pecos St
Project #: 03C2012031 Project Owner:	City: Midland
Project Name: Rojo 20 21 Tank Battery	State: TX, Zip: 79701
Project Location: 32.08642, -103.56457	Phone #: 432-312-2203
Sampler Name: Dmitry Nikanorov	Fax #:

ANALYSIS REQUEST: BTEX, TPH, CHLORIDES

FOR LAB USE ONLY Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME
H232756		*Sent 22-23													
1	SS05 ~~DA~~	4	G	1			X					X		5/26/23	0950
2	SS06 ~~DA~~	4													1030
3	SS08 ~~DA~~	4													1110
4	SS09 ~~DA~~	4													1150
5	SS10	0.5													1200
6	SS10 ~~DA~~	4													1240

DN

Relinquished By: DN	Date: 5-31-23 Time: 1300	Received By: SRodriguez	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: hgreen@ensolum.com tmorrissey@ensolum.com dnikanorov@ensolum.com
			REMARKS: *customer requested sample ID changes. SRodriguez 6/22/23
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 3.1 Corrected Temp. °C 2.5	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) SR
Turnaround Time: Standard ☑ Rush ☐	Thermometer ID #113 Correction Factor -0.5°C - SR 5/31/23	Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No	Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.2 10/07/21

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

ENSOLUM

APPENDIX E

NMOCD Notifications

From: Enviro, OCD, EMNRD
To: Hadlie Green
Cc: Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD
Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 05/22/2023
Date: Friday, May 19, 2023 2:25:29 PM
Attachments: image005.jpg
image006.png
image007.png
image008.png
image009.png

[**EXTERNAL EMAIL**]

Hadlie,

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

JH

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

From: Hadlie Green <hgreen@ensolum.com>
Sent: Thursday, May 18, 2023 11:37 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; Nathan Sirgo <nsirgo@btaoil.com>; Kevin Jones (kjones@btaoil.com) <kjones@btaoil.com>; Kelton Beaird <KBeaird@btaoil.com>
Subject: [EXTERNAL] BTA - Sampling Notification - Week of 05/22/2023

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 May 22, 2023.

- Harroun Ranch #005 / nAPP2200455573
  - Sampling Date: 5/23/2023 @ 9:00 AM MST

- Harroun East Tank Battery / nAPP2204151142
  - Sampling Date: 5/22/2023 @ 9:00 AM MST
- Harroun East Tank Battery / nAPP2202845563
  - Sampling Date: 5/22/2023 @ 9:00 AM MST
- Mesa Dolphin CTB / nAPP2313555368
  - Sampling Date: 5/25/2023 @ 9:00 AM MST
- Mesa 2H Production Facility / nAPP2115531696
  - Sampling Date: 5/25/2023 @ 9:00 AM MST
- Rojo 20 21 Tank Batery / nAPP2123554329
  - Sampling Date: 5/26/2023 @ 9:00 AM MST
- Rojo 38 41 Tank Battery / nAPP2123555001
  - Sampling Date: 5/26/2023 @ 9:00 AM MST
- Mesa 8105 JV-P 004H / nOY1831160155 /nCH1903550822 / nRM2004549559
  - Sampling Date: 5/24-24/2023 @ 9:00 AM MST

Thank you,

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

ENSOLUM

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	**nAPP2123554329**
District RP	
Facility ID	
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)* **nAPP2123554329**
Contact mailing address: **104 S. Pecos St., Midland, TX 79701**	

Location of Release Source

Latitude: **32.08642** Longitude: **-103.56457**
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: **Rojo 20 21 Tank Battery**	Site Type: **Tank Battery**
Date Release Discovered: **8/23/2021**	API# *(if applicable)* Nearest well: **Rojo 7811 34 27 Fed #020H API #30-025-47460**

Unit Letter	Section	Township	Range	County
L	**34**	**25S**	**33E**	**Lea**

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) **7 BBL**	Volume Recovered (bbls) **5 BBL**
☒ Produced Water	Volume Released (bbls) **20 BBL**	Volume Recovered (bbls) **15 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)

Cause of Release

Separator failure directed oil to the compressor which bypassed the compressor and filled the liquids tank. The tank overflowed inside the earthen containment and spilled oil onto the tank battery pad.

Calculation of spill volume attached.

Page 2

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2123554329
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? **The spill volume was greater than 25 BBL, which the NMOCD Rules define as a major release.**

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Yes, Notice of Release was filed online via the Permitting Portal by Bob Hall on 8/23/2021.

Initial Response

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

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

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

ADDITIONAL NOTES:
The impacted soil has been stockpiled. Site has been sampled for lab analysis. Report of site observations attached.

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

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

Printed Name: **Bob Hall** Title: **Environmental Manager**

Signature: BC Hall Date: **9/14/2021**

email: **bhall@btaoil.com** Telephone: **432-682-3753**

OCD Only

Received by: Ramona Marcus Date: 9/15/2021

NAPP2123554329

Location Rojo 20 21 Tank Battery
API #
Spill Date 8/23/2021

Spill Dimensions

ENTER - Length of Spill	50	**feet**
ENTER - Width of Spill	90	**feet**
ENTER - Saturation Depth of Spill	3	**inches**
ENTER - Porosity Factor	0.03	**decimal**

Oil Cut - Well Test / Vessel Throughput or Contents

Oil	5
Water	15
Calculated Oil Cut	0.25

Volume Recovered in Truck / Containment

ENTER - Recovered Oil	5	**BBL**
ENTER - Recovered Water	15	**BBL**

Calculated Values	*calculated*	
Release of Oil in Soil - Unrecovered	2	***BBL***
Release of Water in Soil - Unrecovered	5	***BBL***
Unrecovered Total Release	6	***BBL***

Calculated Values	*calculated*	
Total Release of Oil	7	***BBL***
Total Release of Water	20	***BBL***
Total Release	26	***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 ft^3 / BBL

X

Oil Cut
(or Water Cut)

Daily Progress Report

18202799903

Reference Number:	20210826-18202799903
Form Name:	Daily Progress Report
Submitter Name:	Jace Caraway (jace.caraway) | jace.caraway
Submission Date:	Aug 26, 2021 8:24:03 AM MDT
Location:	2501 S Permian Pavilion Ave, Artesia, NM 88210, USA Aug 26, 2021 8:23:52 AM MDT [View Map]

MAIN PAGE

Section 1

Client Name	BTA
Project Name	Rojo 20-21
Type of Form	Progress Reports
RXSoil Personnel	Jace Caraway
Date/Time	Aug 26, 2021 8:10:00 AM MDT
Task	Site assessment and grab stockpile sample
Percentage Complete	100
Picture 1	

Picture 2

Picture 3

SIGNATURE

Final Page

Other Notes - Visitors, unexpected occurrences, weather, etc.	Rojo 20-21 scrape looks very good. Few wet spots in some areas. Scape zone measures 50x90. Stock pile is 17x12 and close to 4ft high. Took a composite sample from stock pile and will be taking to lab.
Safety Discussion	Heat

Team Leader Signature

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
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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: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 48807
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rmarcus	None	9/15/2021

Incident ID	nAPP2123554329
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (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
☒ Depth to water determination
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
☒ Boring or excavation logs
☒ Photographs including date and GIS information
☒ Topographic/Aerial maps
☒ Laboratory data including chain of custody

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2123554329
District RP	
Facility ID	
Application ID	

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

Printed Name: _Kelton Beaird_____ Title: _Environmental Manager_____

Signature:_____ Date: ___8/15/2023_____

Email: _kbeaird@btaoil.com_____ Telephone: ____432-312-2203_____

OCD Only

Received by: Shelly Wells_____ Date: 8/21/2023_____

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2123554329
District RP	
Facility ID	
Application ID	

Closure

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

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

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

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

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

☒ Description of remediation activities

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

Printed Name: Kelton Beaird Title: Environmental Manager

Signature: Date: 8/15/2023

Email: kbeaird@btaoil.com Telephone: 432-312-2203

OCD Only

Received by: Shelly Wells Date: 8/21/2023

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: Nelson Velez Date: 12/05/2023

Printed Name: Nelson Velez Title: Environmental Specialist – Adv

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1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
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Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 254590

CONDITIONS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 254590
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	12/5/2023